



Soniccouture

B A L I N E S E
G A M E L A N

II

User Guide

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LIBRARY SPECIFICATIONS

- over 30 different Balinese instruments sampled
- full control over tuning, equal temperament and microtuning
- 24 bit 96 khz stereo sampling
- 14 GB library (with NCW compression)
- circa 8,000 samples
- both multiple velocity and round robin samples
- two articulations (mute and ring) on all pitched instruments



ABOUT GAMELAN



Western musicians have long been fascinated by the exotic sound of Indonesian gamelan. Claude Debussy was first captivated by a Javanese ensemble at the Paris Exposition in 1889, and since then it's been clear to many western musicians that there is something unique and magical about this ancient music. More recently gamelan has influenced an entire generation of American minimalists, as well as many popular and electronic musicians and film composers.

There are now gamelan groups across America and Europe, but access to an ensemble isn't always easy. The instruments are heavy and take up a lot of space, and you need a fair number of like-minded people to get any music happening. Soniccouture is therefore proud to present our complete professional Balinese Gamelan, in digital form, lovingly sampled in painstaking detail.



BRIEF HISTORY OF BALINESE GAMELAN

Gamelan is a very old music, significantly older than our western music tradition. The earliest image of a tuned percussion instrument is found on Borobudur temple in Java, which was built around 800 AD. In the 14th century Islam was introduced to Java and the existing Majapahit empire fell. Bali then became an exile for remaining Hindus, and the music of Bali today is a direct descendant of the music of that Majapahit period.



In the 15th century, a very large gamelan called Gong Gedé was used for ceremonies in court, as well as for ritual dances and festivals. This huge ensemble consisted of many gongs and drums and required some 40 players. In the 17th century, a gentle 7-tone gamelan appeared called Semar Pegulingan, and this music was often played outside the bedroom of the king at the palace (Semara is the Hindu love god.) By the 19th century we find a Pelegongan gamelan, which is essentially a 5-tone version with added *gender*, popular for accompanying the Legong dance.

In the early twentieth century the old royal courts were dissolved, and Balinese music underwent a radical change. The style known as Gong Kebyar became popular and has dominated Balinese music ever since. Kebyar means “flowering” or “bursting”, and the music is characterised by sudden changes in tempo and dynamics. It’s an extremely virtuosic music, and is probably Bali’s best known musical export.

Very recently there has been a renewed interest in older styles. You can now find groups that play Semar Pegulingan, Pegulongan, Gong Gedé, and other ancient music.

The tradition thus continues. Gamelan is by no means a “historical” music inside Bali. Despite the influx of western pop music, gamelan is very much alive and there are new compositions and styles evolving still.



GAMELAN SEMARA DANA

One of the gamelan ensembles sampled in this set is a relatively recent innovation called a Gamelan Semara Dana. This type of gamelan first appeared around 1985, and is essentially a Kebyar ensemble enhanced with a full 7 note Pelog scale. This means that a very wide range of music can be played on it, ranging from the classical Semar Pegulingan (7 tones) to more recent Kebyar (5 tones) styles. It also opens up possibilities for new types of gamelan compositions.

There are now more than 25 Semara Dana in Bali, and it shows signs of becoming the gamelan of the future. The gamelan sampled here is resident at LSO St.Luke's in London. It was built in 2003 by I Made Gabeleran of Blahbatuh, Bali, and is named "Semara Wertih" or "pure, sincere desire".

GAMELAN BATEL RAMAYANA

The other gamelan ensemble included in this set is the Gamelan Batel Ramayana.

The Balinese *gamelan batel Ramayana* ensemble is used primarily to accompany the shadow play of Ramayana stories, *wayang Ramayana*. This ensemble is rarely recorded and not nearly as well known as the *gender wayang* quartet which accompanies shadow play (*wayang kulit*) performances of stories from the Mahabharata.

The main instruments of the *gamelan batel* are the four *gender wayang*, the ten-key, two-octave, and suspended-key metallophones tuned in *saih gender wayang*, the Balinese equivalent of the pentatonic Javanese slendro. One pair of instruments is tuned higher than the other, and the pairs perform the same musical parts in octaves. The instruments, sometimes called *gender dasa* (ten-key gender) are played by four performers with a round-ended mallet in each hand, occasionally with unified motions but usually in a contrapuntal fashion, and the keys must be struck and damped by the same hand. The left-hand parts of the four players create a basic unison melody in the lower octave, while the right-hand parts normally interlock in figurations in the upper octave. This playing technique is considered the most difficult in Bali.

The distinction between the *gender wayang* quartet and the *gamelan batel* is that, in the latter, the four metallophones are accompanied by a percussion ensemble. In fact, the ensemble is often called "*gender wayang batel*".



The Gamelan Batel Ramayana sampled in this library are the instruments of Gamelan Seka Rat Nadi, based in Toronto.

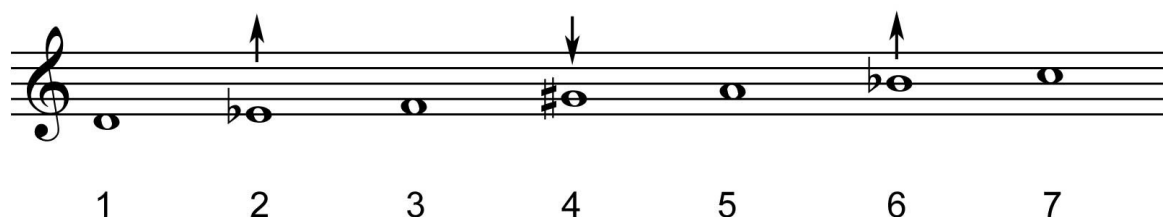


GAMELAN TUNING AND MODES

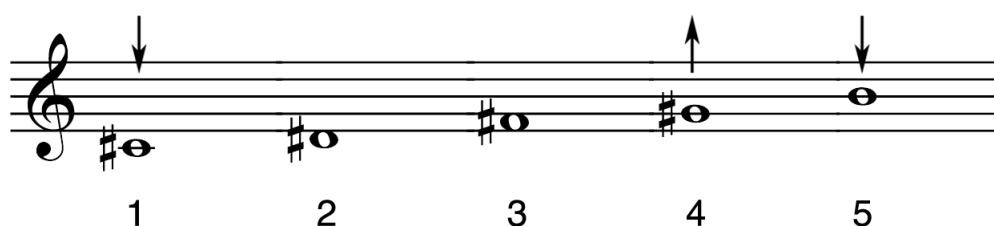
One of the most fascinating aspects of gamelan music is its tuning system, and this is no small matter. Firstly, the Balinese use tuning systems that are not readily found within our western equal temperament. Secondly, there are no standard tuning references in Bali, each gamelan ensemble is tuned to the preference of its maker and essentially only in tune with itself. (It's therefore nearly impossible to mix instruments from one gamelan with another.) Thirdly, Balinese gamelan instruments frequently appear in pairs, which are detuned to create a beat frequency when the two are played simultaneously. This detuned beating is called the *Ombak*. This detuning of similar tones extends to the octaves, which are generally stretched to accommodate the overtone behaviour of brass bars.

There are, nonetheless, tendencies towards certain types of tuning that are common across both Java and Bali. The two main scale types are called Slendro and Pelog. We can describe these two systems by saying that in general Slendro tends toward even divisions of an octave, and Pelog tends toward *uneven* divisions of an octave, a mix of small and large intervals. Most large gamelan ensembles in Bali, including Kebyar and the Semara Dana, use a Pelog scale. Smaller ensembles, such as Anklung or Batel Ramayana and Gender Wayang typically use a Slendro tuning.

The original notes of our Gamelan Semara Dana **pelog** scale are *very approximately*:

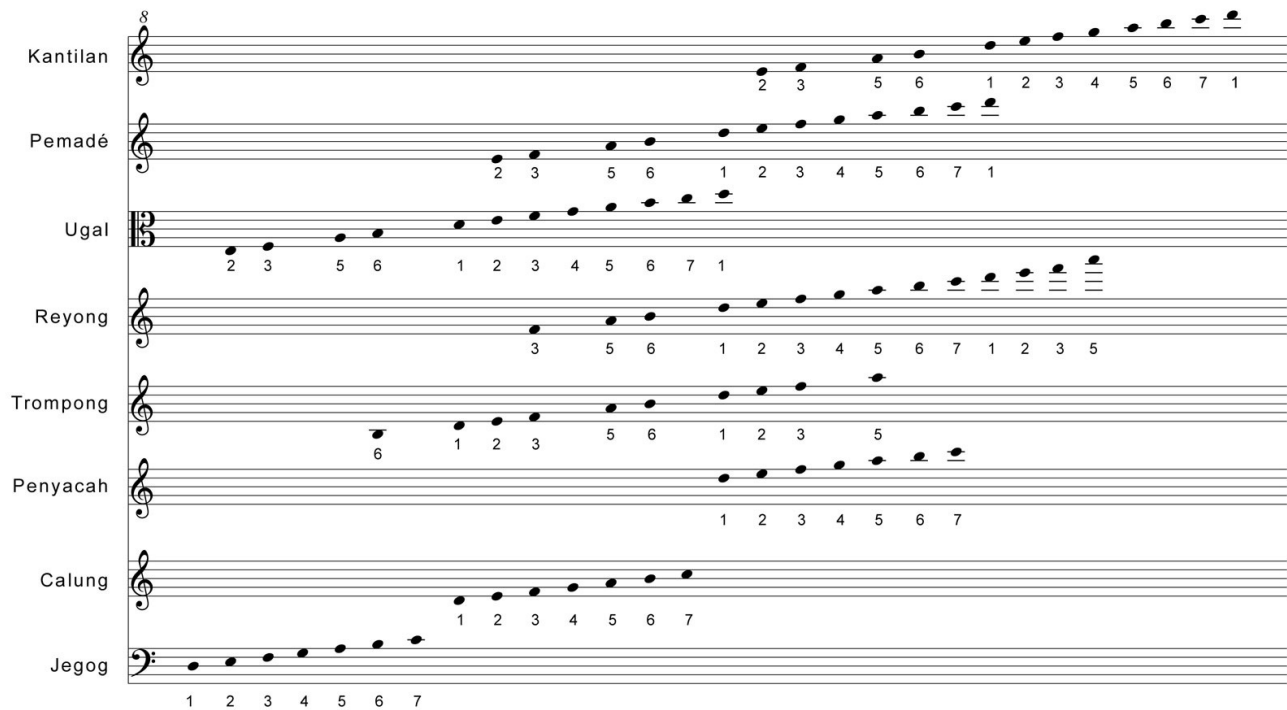


The original notes of our Gamelan Batel **slendro** scale are *very approximately*:

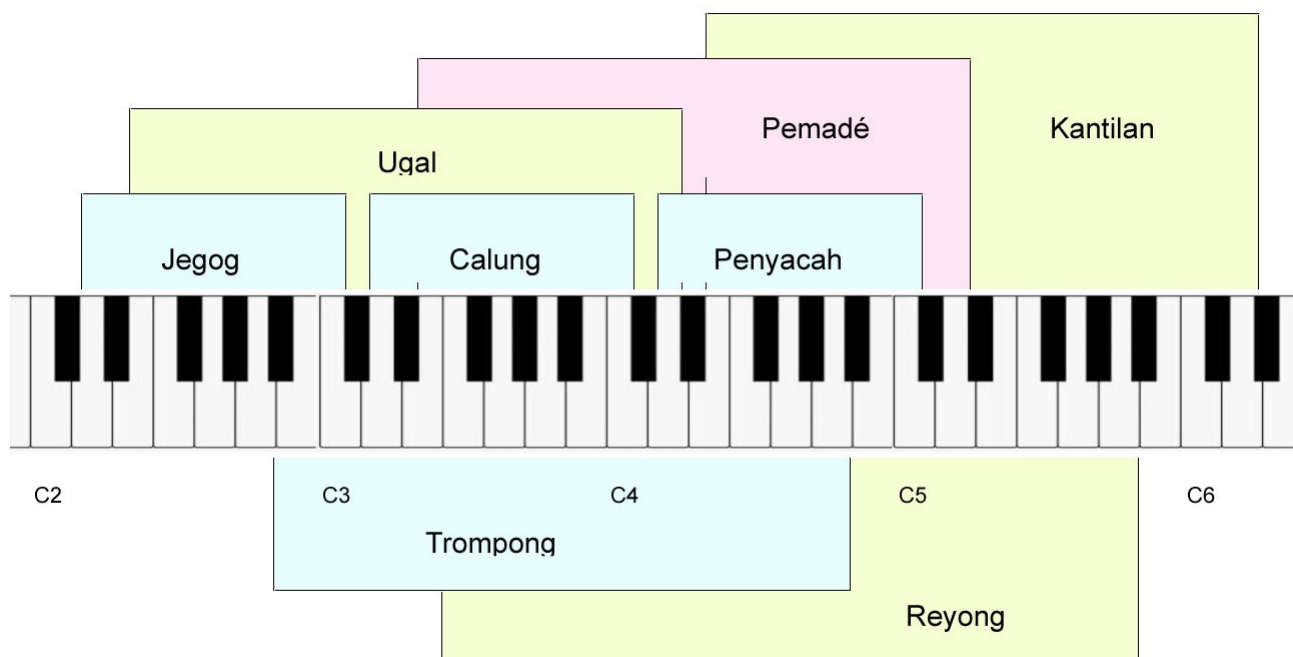


SEMARADANA INSTRUMENT RANGES

Here are the original note ranges of the Semara Dana orchestra:

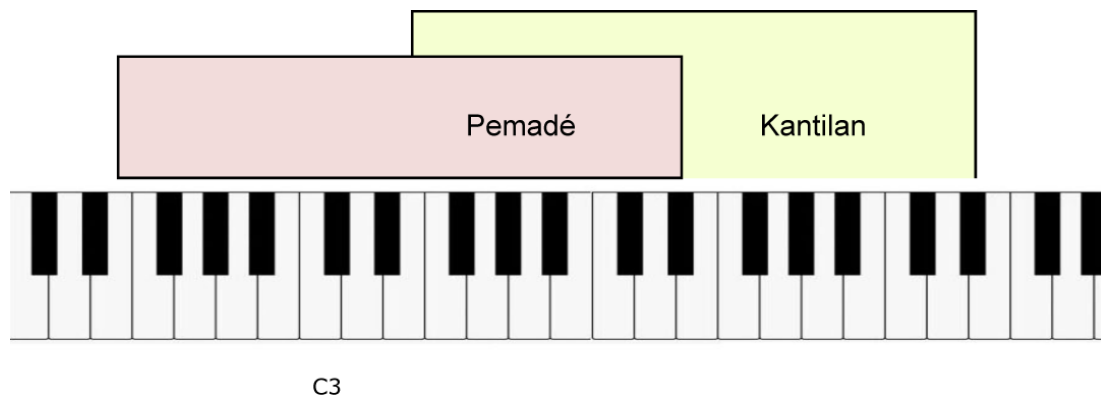


Here are the same note ranges shown on a keyboard:



BATEL RAMAYANA INSTRUMENT RANGES

Here are the original note ranges of the Gamelan Batel Gender instruments, essentially identical but separated by an octave:



MODES

Although there are several types of 7-note gamelan ensembles found in Bali, most pieces of music use just 5 notes or less at any given time. These five note modes are analogous to our major or minor scales in the west. A typical seven note ensemble like Semara Dana uses one of these five modes, or "*patutan*" :

Selisir	1	2	3		5	6	
Tembung	1	2		4	5	6	
Sunaren		2	3		5	6	7
Baro		2	3	4		6	7
Labeng	1	2	3	4	5	6	7

Selisir is a very popular mode, this is what you usually hear in Kebyar music. To imitate this, simply avoid notes 4 and 7 (G and C on the keyboard).

On our Semara Dana, 1 is mapped to D, and if you use the original tuning all the notes are on white keys.

Gamelan Batel is in a slendro tuning of five pitches and therefore usually mapped to the black keys. On our Batel instruments the 1 is C# if set to use original tuning.

Note that the default state of our instruments is NOT original tuning, but western tuning. Check the Kontakt Tuning pages to learn more about this subject.



BALINESE GAMELAN STRUCTURE

Gamelan music is usually often as having a “colotomic” structure, which refers to the cyclical gong cycle that delineates the basic form of a piece. These cycles can range from 2 to 256 beats, the beginning and end of which is marked by the large Gong. Structural points within this cycle are marked by the other gongs. For a Balinese musician, the music is always leading *towards* the next gong.

The core melody of a piece is usually played by the Calung and/or the Ugal, with important notes doubled by the Jegog. Unlike western music, the core melody is not the most prominent aspect of the music, but rather a foundation on which the rest of the music is built.

The ornate rapid patterns we hear on the higher instruments are decorating or elaborating on the core melody. These higher instruments are referred to as the gangsa, and include the Ugal, Pemadé, and Kantilan. On beats that coincide with the melody, the gangsa will usually be playing the melody note, but filling in the gaps between as well. The Reyong also provides a similarly rapid and decorative part, although it isn't considered part of the gangsa.

The two Kendang drums play fast interlocking parts, with the higher drum (Lanang) usually on the beat. The Kendang also signal changes in the music, “conducting” the rest of the ensemble in a sense.

This brief explanation is intended to give you a rough idea of how the various instruments of the gamelan work together. There are many exceptions and variations on this basic concept, but the rhythmic strata of a gamelan piece might look like this:

Beat	1	2	3	4	5	6	7	8	1
Kantilan	K	K	K	K	K	K	K	K	K
Pemadé	P	P	P	P	P	P	P	P	P
Ugal	U	U	U	U	U	U	U	U	U
Kempli	K	K	K	K	K	K	K	K	K
Calung	C	C	C	C	C	C	C	C	C
Jegog	J	J	J	J	J	J	J	J	J
Gongs	W	L	K	K	W	W	L	K	K
Kendang Lanang	X	X	X	X	X	X	X	X	X
Kendang Wadon	X	X	X	X	X	X	X	X	X



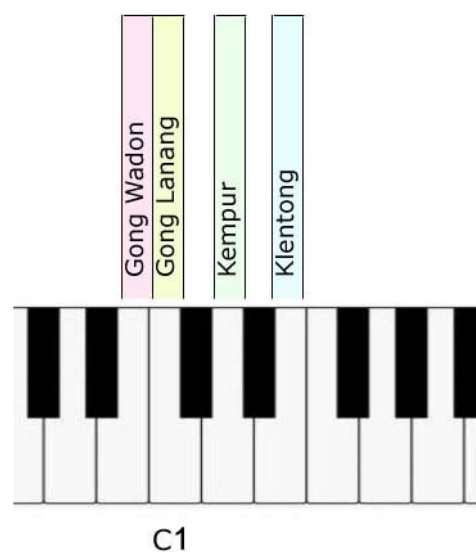
THE SEMARA DANA INSTRUMENTS

GONGS AND PERCUSSION

GONGS



The Gong Wadon, the largest gong, is usually the main gong of a rhythmic cycle, marking the beginning or end of a structural section. The other gongs mark divisions within the cycle. Our gongs are mapped as follows:

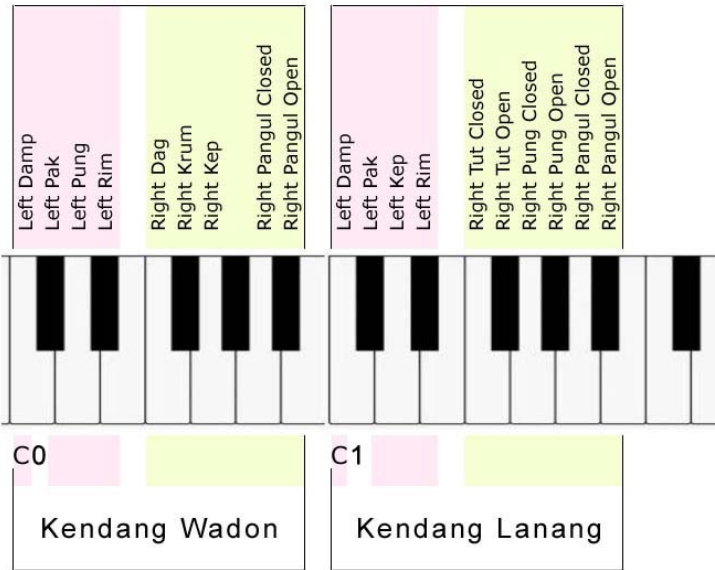


KENDANG



The two kendang drums are mapped with various types of hits, separated into the left and right hands/drum heads. The last two hits on A and A# are strikes with the pangul, a wooden drumstick.

In our instruments, the LOWEST key of the Kendang is set in the Gamelan Setup page. By default it is at C-2, the lowest MIDI key available. But you can move this to a more convenient key if you want to use it on its own. The mapping of the various Kendang hits move together, and look like this:

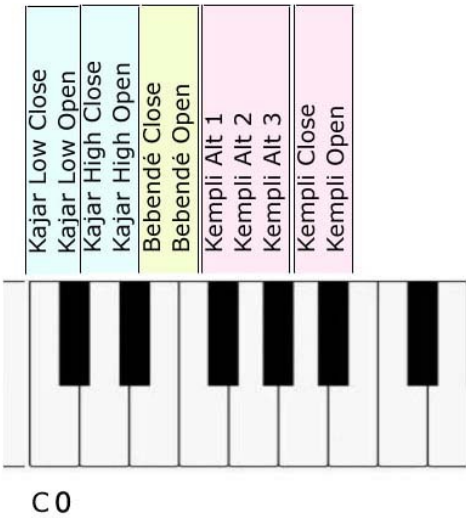


KEMPLI, BEBENDE, and KAJAR



The Kempli is used as a kind of time keeper or metronome. Most of the time it simply plays a damped sound, on the beat. It can also be played open however, so we offer that alternative with our main Kempli here. We also offer three alternate Kempli, using different mallets.

The Bebendé and Kajar are similar non-pitched damped gongs for rhythmic use, and these also include an open and damped option. Whereas the Kempli tends to play on the beat, Bebendé will usually play off the beat.



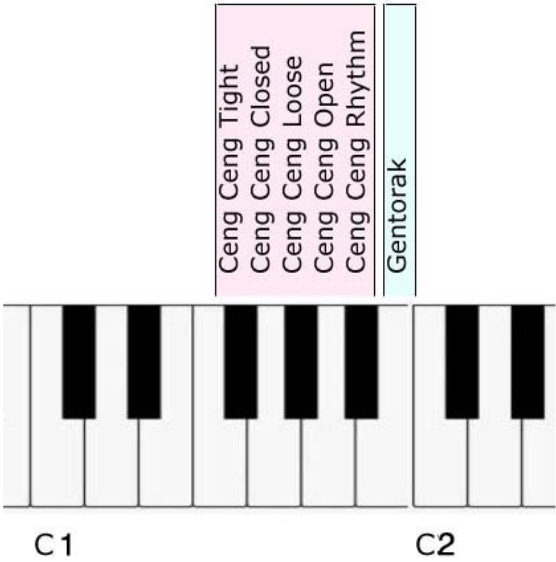
CENG CENG & GENTORAK



The Ceng Ceng is a rhythmic instrument with small cymbals that are shuffled and hit together. It has a similar function to a high-hat, and is therefore mapped a little bit like a high hat, with the tighter samples on the left end of it's range. It's also programmed as an "exclusive group" instrument, so that a tight sample will stop an open sample from sounding.

Often the Ceng Ceng plays very tightly with the Reyong part, with damped and open strokes being matched and enhancing the syncopation of those rhythms.

The Gentorak is a kind of bell-tree, which is used sparingly to accent points in the music, usually at the same time as the Gong Wadon.



METALLOPHONES (GENDER)

The metallophones are generally divided into two sections, the core melody instruments, and the “gangs” decorative instruments. All except the Ugal are generally played in pairs. Pairs of instruments are detuned, so you have a higher and lower pitched version of each.

JEGOG

The lowest of the metallophones, the Jegog generally also tends to play most slowly, usually reinforcing important notes from the Calung part.



CALUNG



The Calung usually play the “core melody” of a piece, which often tends to be much slower than the perceived speed of the music. In gamelan, the “core melody” is a kind of structural base, upon which all the other instrumental parts are layered. The higher instruments will often play much more quickly, elaborating on this core melody in various ways.

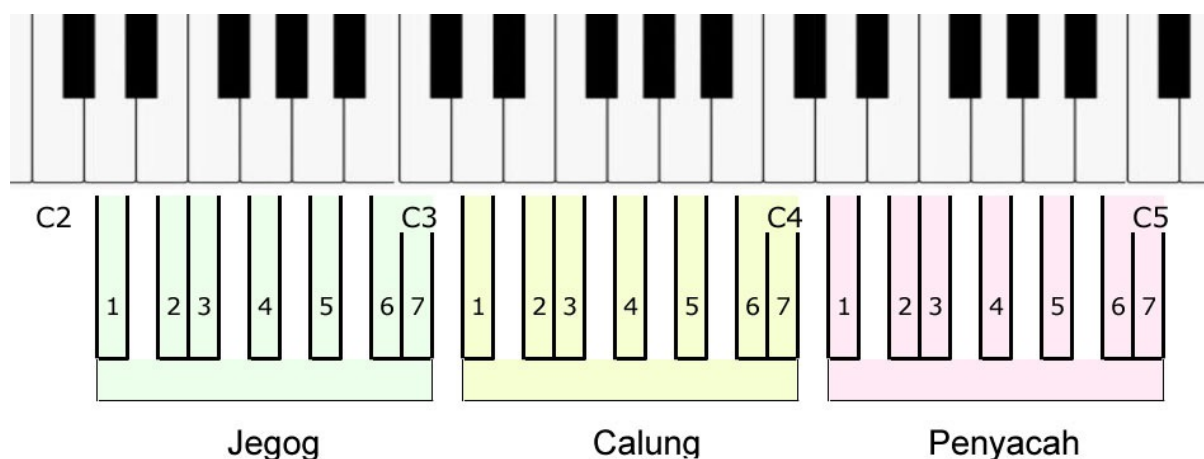


PENYACAH



Although the Penyah is a core melody instrument, it is pitched quite high and therefore helps the core melody to ring through the texture. Sometimes it doubles the rhythm of the Calung part.

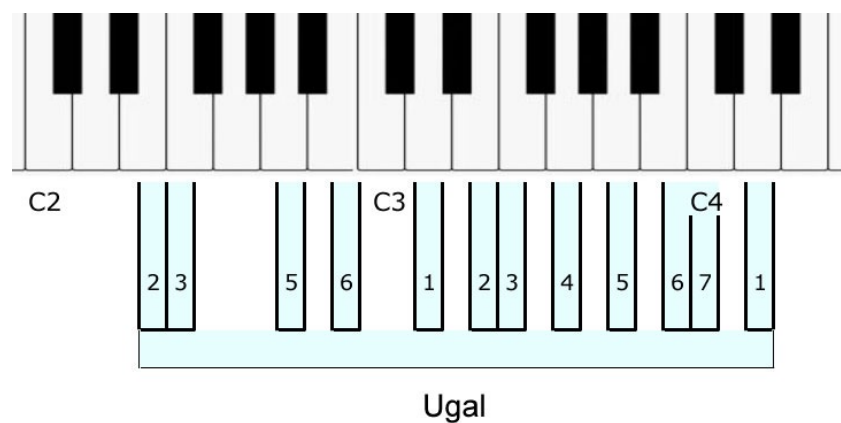
Here is a map of the original key keyboard layout for the three “colotomic”, or core melody instruments:



UGAL



The Ugal is the leader of the “gangsa” section of the gamelan, and usually plays the core melody or an elaboration of the core melody. Unlike the other gender instruments, the Ugal is not paired with a detuned partner.



PEMADE

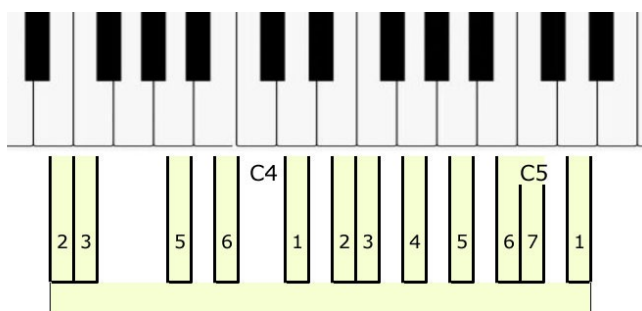
The Pemadé and Kantilan fill out the gangsa section with a texture of rapid intertwining patterns that decorate the core melody. Usually the gangsa is the fastest and most ornate content of a gamelan piece.



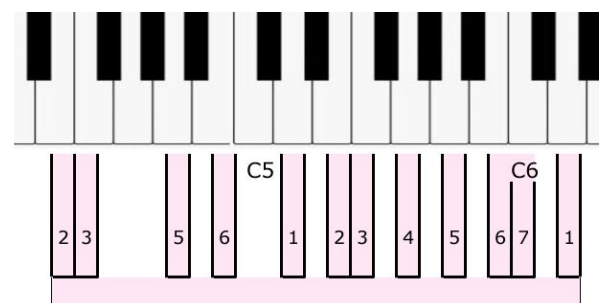
The fast passages on Pemadé and Kantilan are played using a technique called "kotekan", in which successive notes are shared between two players, enabling them to play much faster passages than would be possible for a single player.

KANTILAN

The highest pitched and most brittle sounding of the gangsa, the Kantilan sometimes plays a similar part to the Pemadé, or else elaborates further ornate patterns of it's own.



Pemade



Kantilan



KETTLE GONG INSTRUMENTS

The kettle gongs are not paired instruments, but solo melodic and decorative instruments. The Reyong is more commonly used within Gong Kebyar styles and the Trompong in older styles.

The front panel for these instruments offers random velocity and timing control, as well as attack, release, and "note off level". The playing style of these instruments requires that the gong be damped with the mallet, and this makes a small but sometimes audible sound.

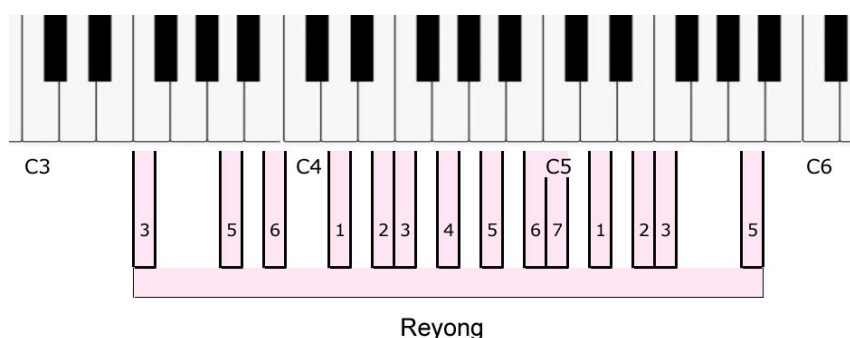
REYONG



The Reyong is very prominent in Kebyar styles, and is often played by four musicians sitting side by side, each responsible for a few notes. These intertwining patterns decorate certain passages, or are featured as a solo section for a piece. As such, Reyong parts are uniquely "chordal" in much gamelan music, although the chords occur very quickly.

Since all players play with both hands, the damping of the gongs is done with the sticks themselves, and therefore sometimes creates a little bit of sound. Our version has a "key off" level, which lets you control the amount of this damping sound.

There is also a common technique where players strike the edge of the gong in an almost non-pitched, percussive way.

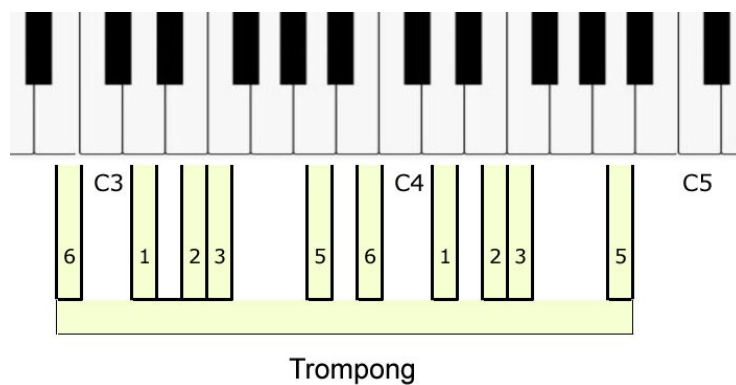


TROMPONG



Although the Trompong is physically similar to the Reyong, with less notes and slightly lower pitch, it traditionally is played by a single musician. It's not so common in modern Kebyar styles, but in older styles had a very prominent lead role as a melodic instrument.

Often it takes a similar role to the Ugal, leading the group with a elaborate version of the main melody.



THE BATEL RAMAYANA INSTRUMENTS

METALLOPHONES (GENDER)



KANTILAN & PEMADE

There are only four melodic instruments in the Batel ensemble, two Kantilan and two Pemade. These have a similar range of notes, with the Kantilan pitched one octave above the Pemade.

The gender instruments are each constructed from a wood frame and ten rectangular, bronze keys suspended by string and composite hide and wood bridges over upright, tuned bamboo resonators. An instrument spans two octaves with a pentatonic slendro scale.

These are always played in pairs, detuned the same way as other Balinese gamelan instruments, so a typical Batel Ramayana ensemble will include two Kantilan and two Pemade.

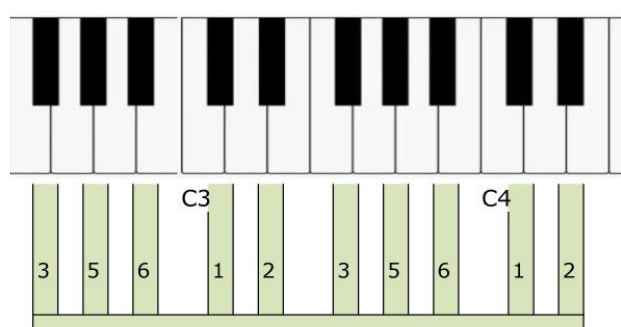


The mallets (*"Pangul"*) are slender and radially symmetrical with wooden disc heads and conical bead-like horn rattles. Their shape allows players to fit mallets between second and third fingers of loosely open hands and strike and dampen keys simultaneously with minute, rotating motions of the forearms. Because of this technique, the relative exposure of two instrumental parts, and the execution of syncopated, dynamic compositions in precise synchronicity, gamelan gender wayang is considered one of the most complex genres of Balinese music.

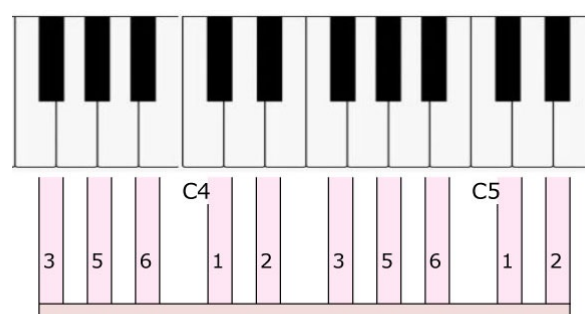
This somewhat advanced technique means that the four instruments of the gender can sound like eight, and be quite dramatic and full, despite a smaller number of players.



Keymap of Pemade and Kantilan:



Pemade



Kantilan



GONGS AND PERCUSSION

KEMPUR



The Kempur is much smaller than the large gongs used in Gong Kebyar (or those found in the Semara Dana collection). Its function is however the same as the large gong, marking large metrical sections.

KLENONG



This very small gong marks smaller divisions within the gong cycle, often simply alternating with the larger Kempur.



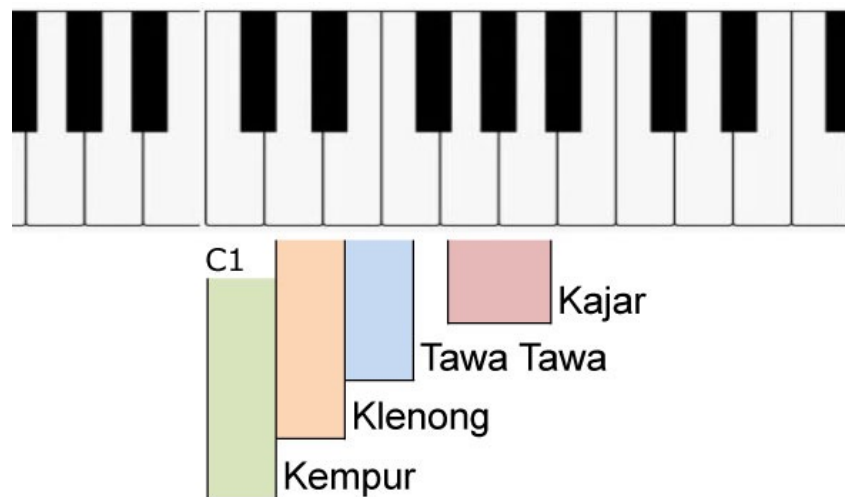
TAWA TAWA AND KAJAR



The Tawa Tawa and Kajar are used for basic rhythmic time, often alternating against each other.



Keymap of Gamelan Batel gongs:

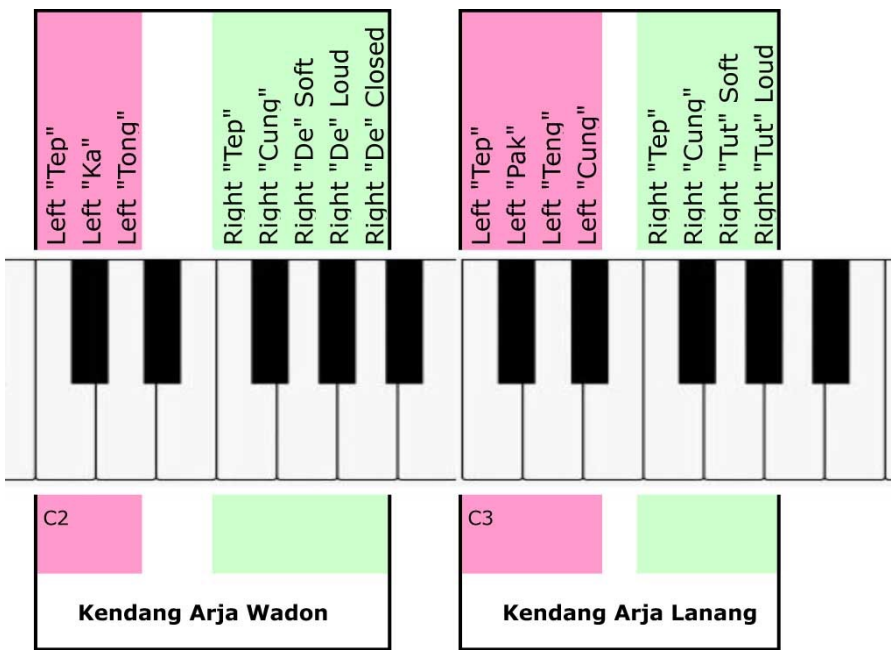




These kendang are smaller drums than those found in the Semara Dana ensemble. They are also played only with the hands and not with sticks.

The two kendang drums are mapped with various types of hits, separated into the left and right hands/drum heads.

Keymap of Kendang Arja articulations (the precise location of this range can be edited, but the key layout itself is constant) :



FURTHER READING ON GAMELAN MUSIC

If you want to learn more about Balinese gamelan, perhaps the most detailed book available is Michael Tenzer's "Balinese Gong Kebyar". This is a very thorough study, with extensive examples in western notation and two accompanying CDs. As the title suggests, it focuses primarily on Gong Kebyar style.

Lisa Gold's "Music In Bali" is also a good introduction to this music, and beautifully conveys its cultural and historical context. It also comes with a CD of audio examples of various instruments and techniques.

Michael Tenzer also has a lighter book entitled "Balinese Music", which is a good general introduction to the subject.

Finally there is the classic tome "Music in Bali" by Colin McPhee, but this is now out of print and has therefore become difficult to find and very expensive.



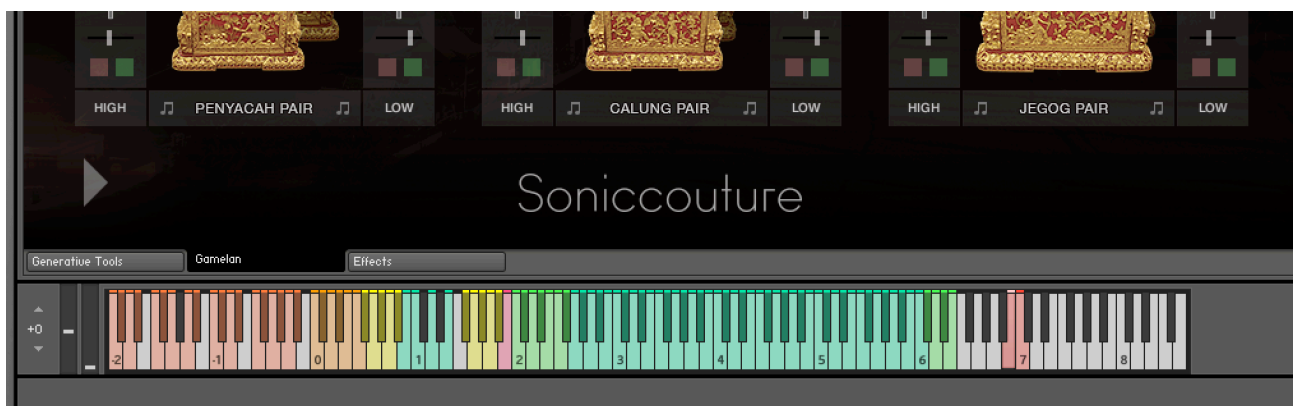
THE KONTAKT INSTRUMENTS



Note that you can hover your mouse over any control in this library to get information about its function if you have the Kontakt Info pane activated.

There are two primary Kontakt Instruments in this library, one for each gamelan ensemble, named Gamelan Semaradana, and Gamelan Batel. These two instruments are structurally the same, although they include different instruments and sample data.

Each includes three tabs, at the bottom: Generative Tools, Gamelan, and Effects.



The Gamelan page is where you define the instruments included in your ensemble, the Tuning and any synth parameters you might want to use. The Effects section of course provides some Effects to further enhance the sound. The Generative Tools page includes two MIDI generating tools to help you create unusual music, the Jammer and the Weaver.



THE GAMELAN MIXER PANEL

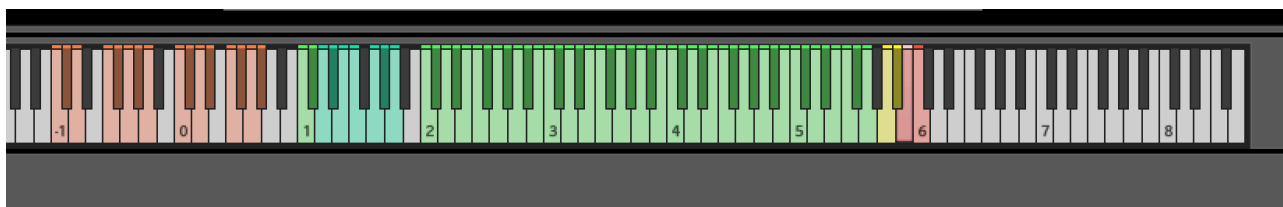
The main Gamelan panel includes an icon menu across the top. The leftmost of these is the Mixer panel and when this is selected there is a further sub menu in which you can view the sections of the ensemble (Gongs, Gangsa, and Kettles in Semaradana). Within each of these tabs you can engage or disable the various instruments of the ensemble.



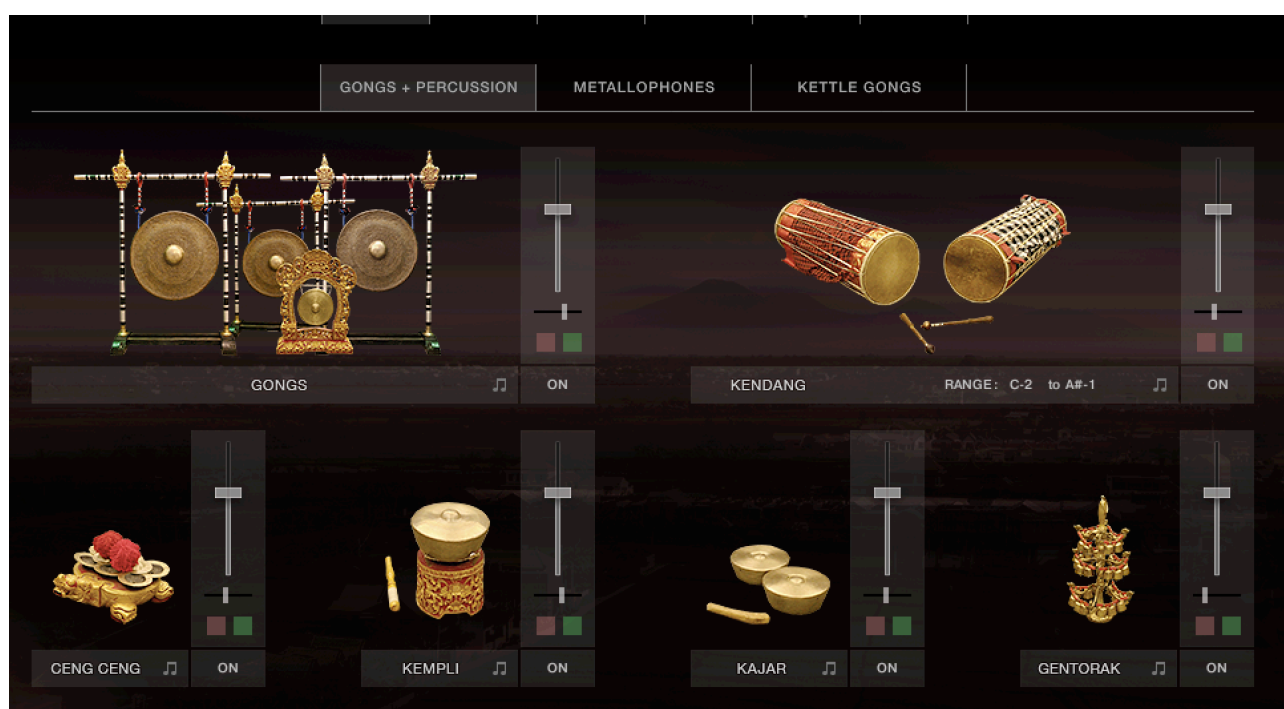
Many of the gangsa instruments are in pairs, and you can adjust the level and panning of these pairs independently. You can enable or disable each one with the switch below the fader. (The small musical notes symbol is a switch that tell that instrument to respond to the generative tools or not, more on this later.)

The range of each instrument will display on the Kontakt virtual keyboard, although of course many instruments overlap. (Melodic instruments are always green, keyswitches red, and percussion instruments yellow or orange.)





This means that, by default, you are often playing several gamelan instruments at once. This can be useful for users new to gamelan, or for simply exploring the sound quickly, turning instruments on or off while composing. If you prefer to have each instrument on it's own MIDI channel, as a multi, you can do that too.

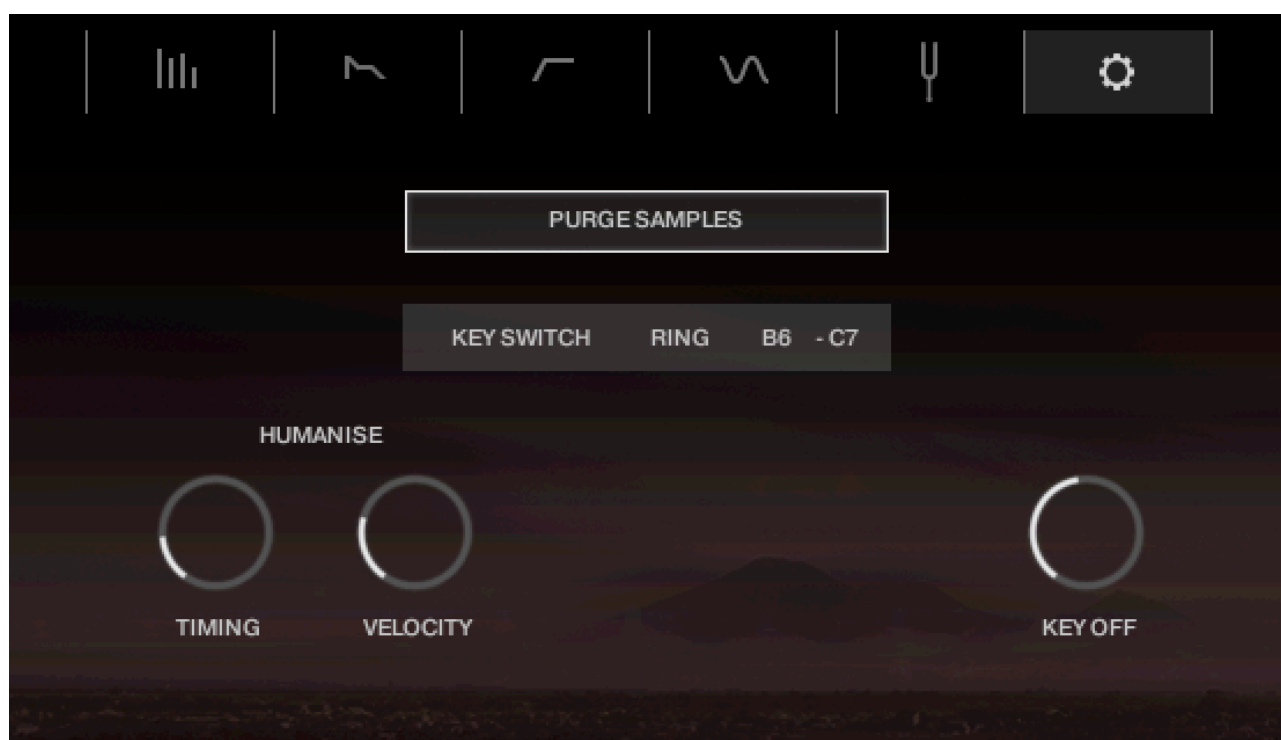


The Kendang instrument is mapped at the very bottom of the MIDI note-range by default, so that all instruments can be played at once with a single keyboard map. You'll notice that the range of the Kendang is displayed below its name, and can be adjusted if you need.



THE OPTIONS PANEL

The OPTIONS panel is the tab on the far right, the cog icon.



Here are some global adjustments you can make.

KEY OFF levels (for instruments that have release samples, not all do).

HUMANISE the VELOCITY and TIMING. Humanise is useful if you're sequencing and want to introduce a bit of randomness into an otherwise quantised sequence.

The Keyswitch (default B5 and C6) switches between muted and ringing samples. Many gamelan instruments use these two articulations to add percussive variety to the music. You can move the keyswitch to other keys if you prefer, or assign a controller to the switch instead by right-clicking on the word RING.

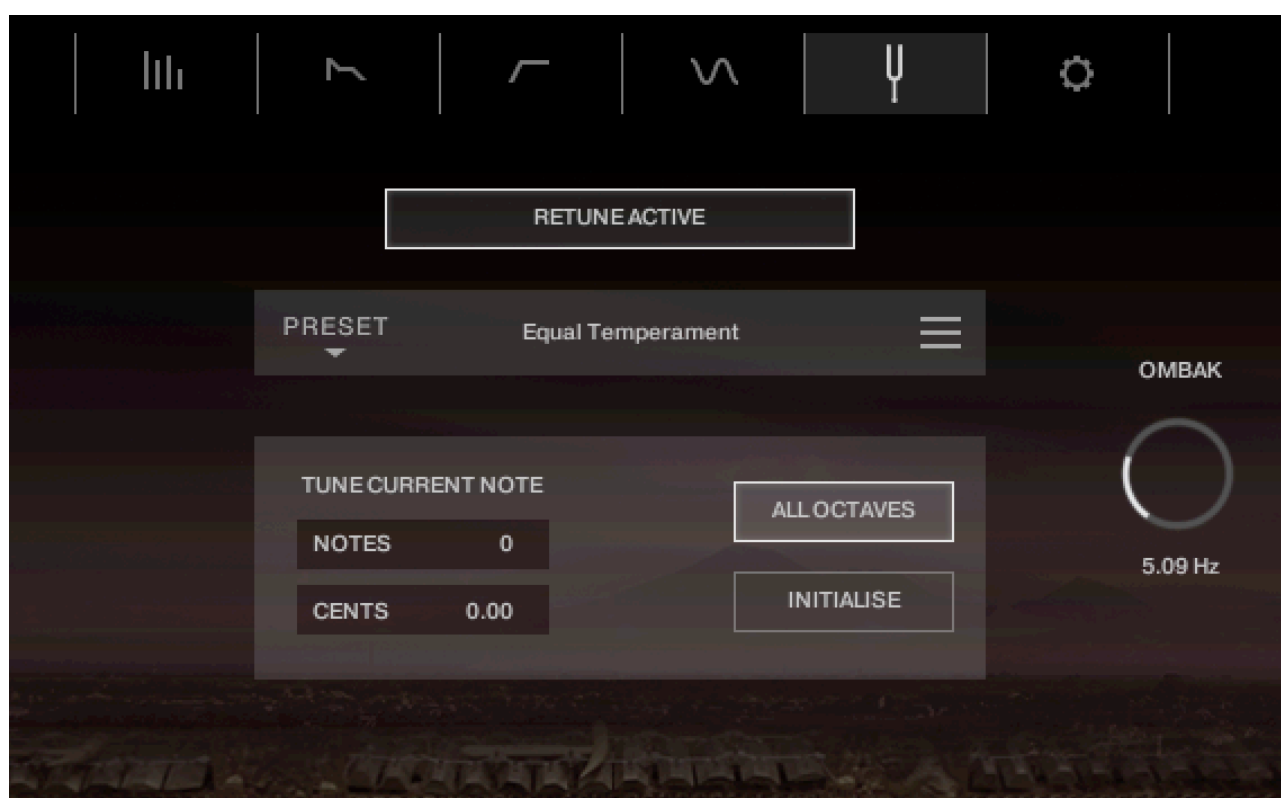
PURGE SAMPLES will remove unused samples from memory if the instrument is off. This saves memory but also takes some time, so you don't want to do this if you're automating the on/off instrument switches.



TUNING

The TUNING panel is the second tab from the right, with the small tuning fork icon.

By default the instruments are set to equal temperament (western standard tuning). If the RETUNE ACTIVE is on, the gamelan is being retuned, and if the tuning system is initialised then this is equal temperament.



If you want to play the instruments their ORIGINAL pitch, simply turn the RETUNE ACTIVE off. In other words, RETUNE ACTIVE is by default active to retune the gamelan to western equal temperament.

Original pitch also implies original mapping (ie. only five or seven notes per octave), so for Gamelan Batel the original pitches are on black keys, and for Semara Dana the original pitches are on white keys.

When RETUNE is ACTIVE, you can change the pitch of any input MIDI note by semitones (NOTES) or cents (CENTS).

There are some example tunings in the PRESET menu at the left of the title bar. You can import or export tunings with the menu at the right of the title bar.



The INITIALISE button simply sets all NOTES and CENTS offsets to 0, putting you back in Equal Temperament.

The ALL OCTAVES button allows you to adjust all octave equivalent keys at once. For example, if you want all input C#s to be fifty cents higher turn on ALL OCTAVES, play a C# and then type 50 into the CENTS box.

You are always viewing and adjusting the last note played, and the active note will be displayed below the Retune title.

OMBAK is the Balinese term for the detuned chorusing between pairs of instruments. Here you can set it as a beat frequency, so that no matter what tuning you choose, the upper and lower instruments will be slightly detuned to create that typical Balinese shimmer. Typical OMBAK frequencies are between 3 Hz and 8 Hz. Batel is generally a little less detuned than Kebyar ensembles.

If you're interested in tunings you should visit the Scale Workshop [website](#) from Sevish. Here you can explore tunings, and download any of them in Soniccouture format to import into the Gamelan or other Soniccouture instruments.

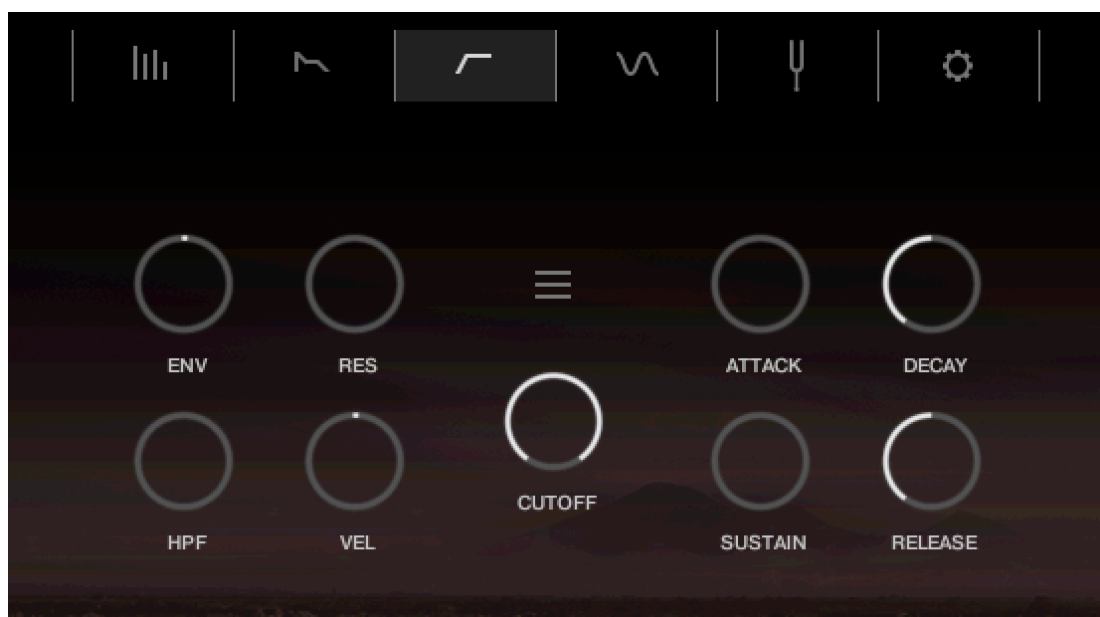


OTHER EDITORS

On the AMPLIFIER tab you have controls that adjust the Amp Envelope, Attack, Decay, Sustain and Release, as well as VELOCITY sensitivity and VELOCITY to ATTACK sensitivity.

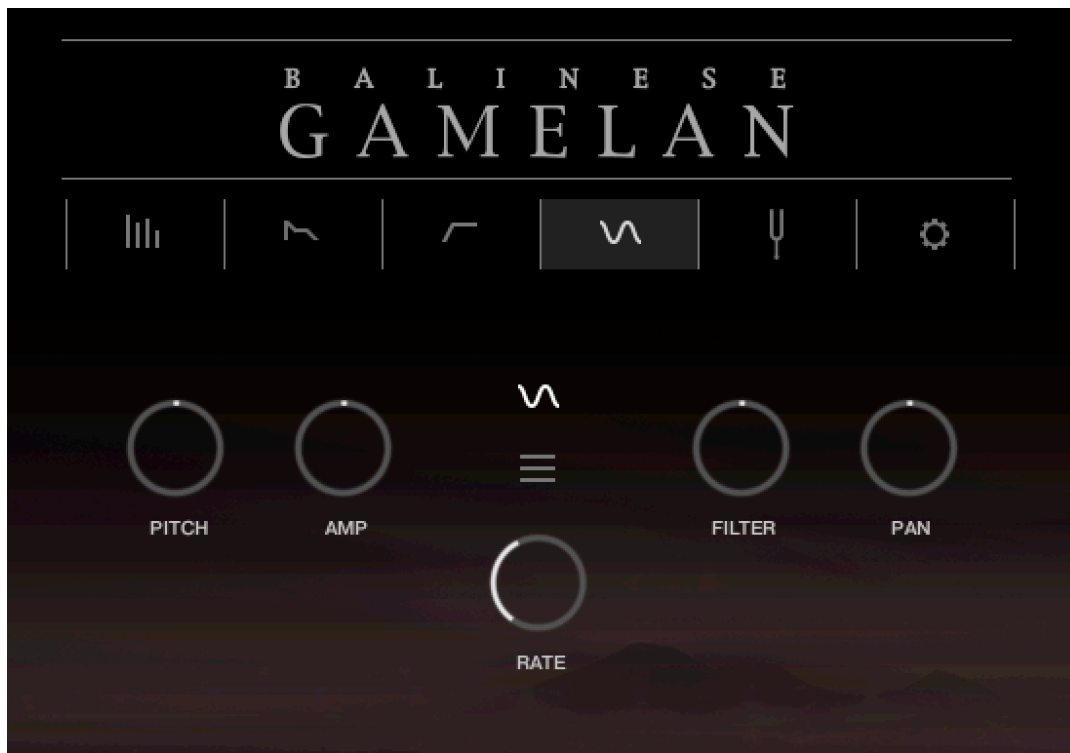


On the FILTER tab you can control the type of filter with the central menu. The CUTOFF frequency, RESonance, ENVelope depth, VELocity depth. There is a high pass filter, HPF, and controls for the Filter Envelope; Attack, Decay, Sustain, Release.



On the LFO tab you can control the waveform, as well as the RATE of the LFO. There are depth controls for PITCH, AMP, FILTER and PAN.

The menu in the centre lets you control when the LFO is retriggered, and whether to use absolute Hz values or sync to tempo values.



THE EFFECTS PANEL



The EFFECTS panel is divided into 5 sections.

Insert Effects (3)

Equaliser

Stereo

Saturation

Space



THE INSERT EFFECTS

Here you can choose up to 3 insert effects. The effect is enabled with the square power switch to the left of its name at the top of the tab, and the appropriate controls will appear below when its tab is selected.

You can select from a list of effects using the menu to the right of the effect name in the tab.



The effects are in routing order from left to right, and are before the EQ and other effects on this panel.

You can only select each type of effect once, if you select an effect already in use, then the position of those effects will be swapped.

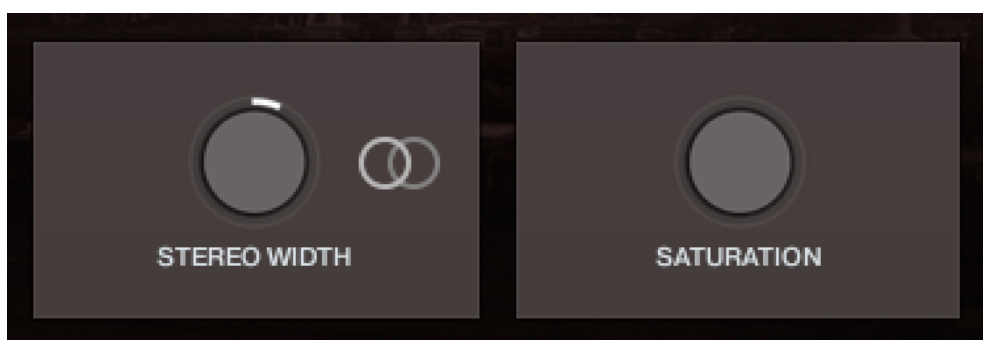


EQUALISER

This is a fairly obvious four band parametric EQ. The fader on the far right is the output level from the EQ.



Note that BELL and SHELF are drop down menus, you can choose either for the top and bottom bands. You can enable or disable the EQ with the power switch at the top left.



STEREO AND SATURATION

Here you can adjust the STEREO WIDTH (the natural recording is nominal at 12 o'clock). Moving the control left narrows the width, and to the right increases it.

There is a stereo SWAP feature, enabled with the symbol:



SATURATION will adjust the SATURATION effect.



SPACE

This is the convolution reverb section. In the middle there is a drop down menu with a selection of our impulse responses.



As usual, the power switch is at the top left.

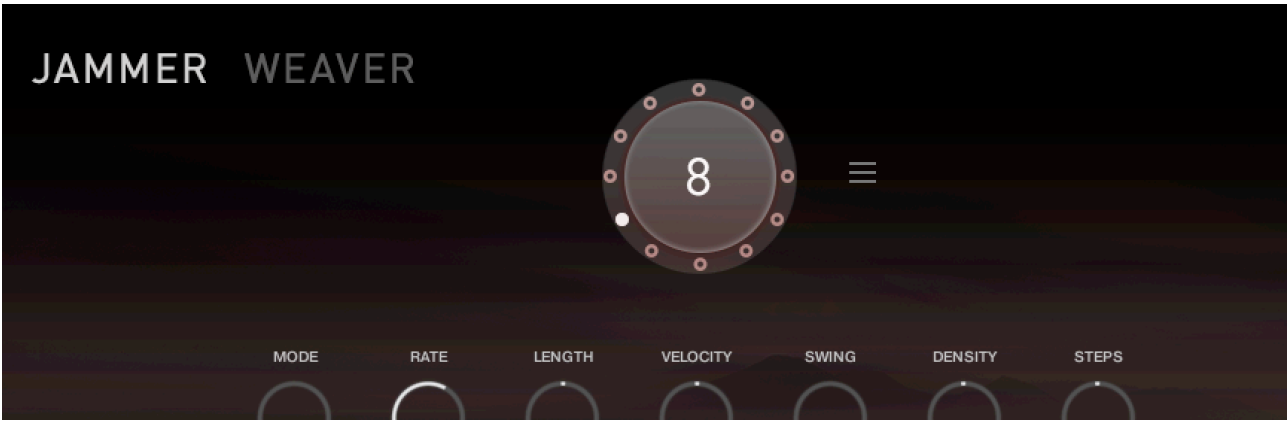
The controls below are the PREDELAY, the convolution impulse SIZE, a High Pass and Low Pass Filter, as well as the return MIX level on the large central knob.



GENERATIVE TOOLS

This panel has two options, chosen with the menu at the top left:

JAMMER



WEAVER



PLAY



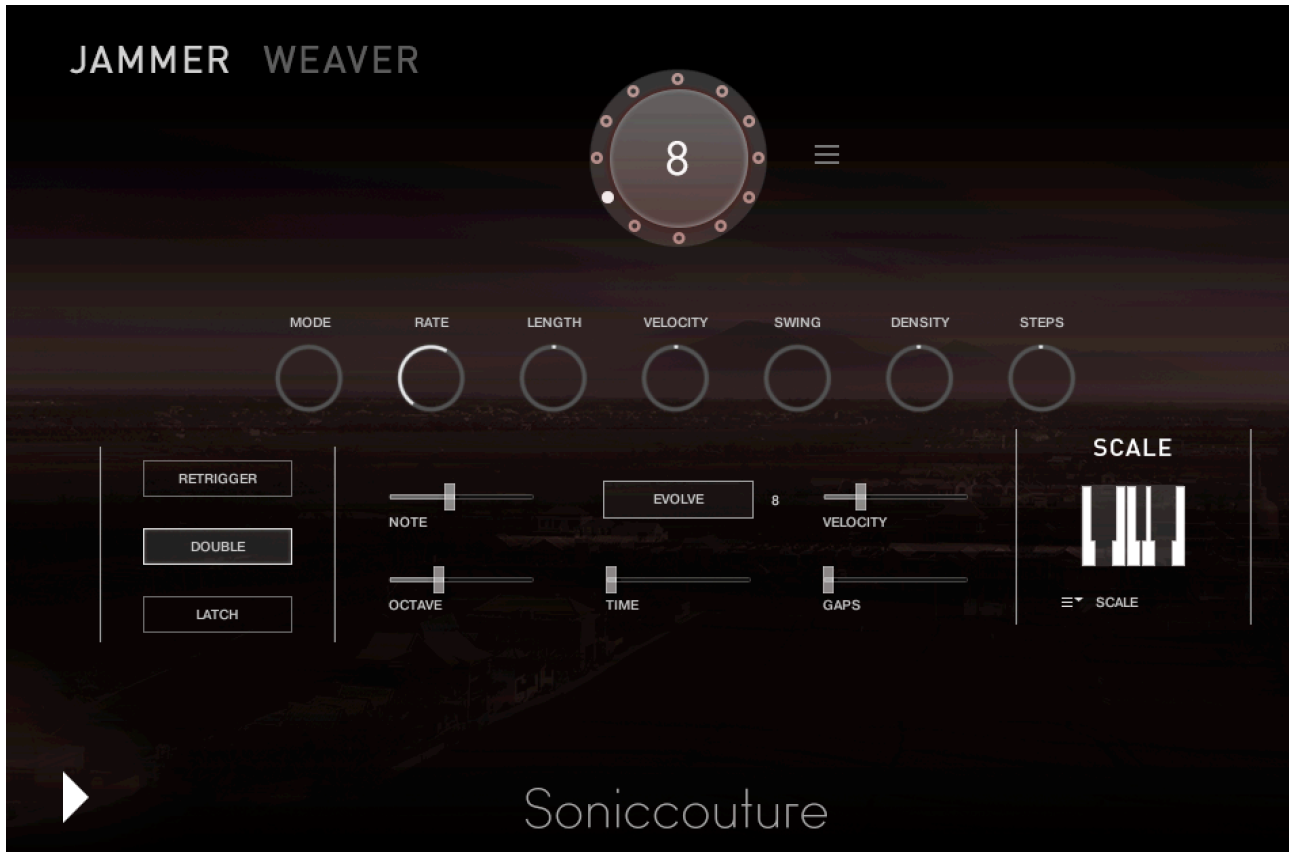
The play icon at the bottom left enables or disables the Generative Tool. This control is duplicated on the other pages for convenience.



JAMMER

The large knob in the top middle is a Preset wheel with 12 presets. You can overwrite these, copy them, import and export them, using the menu to the right of the wheel.

The seven knobs along the middle of the Jammer are global controls, these are:



MODE This sets the type of arpeggiation used to create patterns. The original Jammer mode is Random mode, but you can also choose Up, Down, or Up Down, for somewhat more traditional arpeggiator results. This controls how the notes are selected from what you are holding down.

RATE controls the speed of the Jammer, this is always related to the tempo of Kontakt or the host sequencer.

LENGTH is an offset to the duration of the created notes. In the centre position, the notes are created at the same duration set by the Rate knob, but using LENGTH you can make these longer or shorter.



VELOCITY adds or subtracts from the velocity of the notes created by the Jammer. Automating this can be useful for creating fades.

SWING adds some time to the offbeat notes to give a shuffle or swing feeling to the rhythm.

DENSITY and STEPS are controls that allow you to create Euclidean rhythms with the Jammer. If DENSITY is as big as STEPS then you won't hear anything different, since all the steps are "active". However, when DENSITY is LESS THAN STEPS, then there will be some rhythmic gaps spread equally throughout the pattern (this is the essence of Euclidean rhythm; ***distribute a determined number of onsets as evenly as possible across a determined number of steps.***) Due to the universality of rhythms created by this method, there has been a lot of interest in the algorithm over the last 15 years or so.

The next five sliders, below the knobs, are controls for the generative part of Jammer, which are essentially randomising various aspects of note generation. These are:

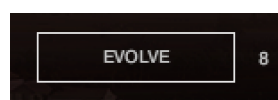
NOTE add random offsets to the pitches you give Jammer (are holding down). This is in semitones, so if it's set to "1" the Jammer will output notes plus or minus 1 from the notes you play, as well as the note you play.

OCTAVE add random octave offsets to the pitches created by Jammer. This control only ADDS octaves, it doesn't subtract octaves.

TIME add random changes to the timing of the Jammer, so that the result is less stable and rhythmic.

VELOCITY add random changes to the velocity of the output notes. This always uses the input velocity as a starting point, so if the VELOCITY range is small, it will just add small changes to your input velocity.

GAPS add random rests or silent beats into the Jammer sequence.



In the middle of this section you'll see a button titled "EVOLVE", with the number 16 to the right of it (by default). EVOLVE mode means that the Jammer is working to generate



new data constantly, the randomisers are always creating new patterns from your input notes.

If you click on EVOLVE, the button changes to display LOOP. Now the Jammer is repeating the pattern it most recently created. The length of this pattern is determined by the number to the right, so by default it repeats the last 16 generated 'notes'.

It's important to remember that the Jammer is not storing the 'notes' themselves, but rather the choice of, and offsets to, the input notes you play into it. So even in LOOP mode, the Jammer will output different notes depending on what notes you play. The pattern is stored, not the exact notes themselves. This means you can create quite complicated patterns, but play them with any chord or input notes.

There are three buttons on the left:

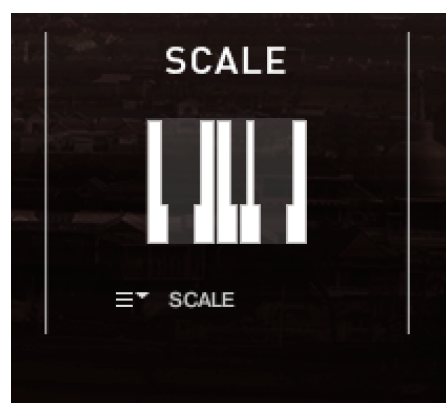


RETRIGGER will force the Jammer to start from the beginning after all notes are lifted (legato).

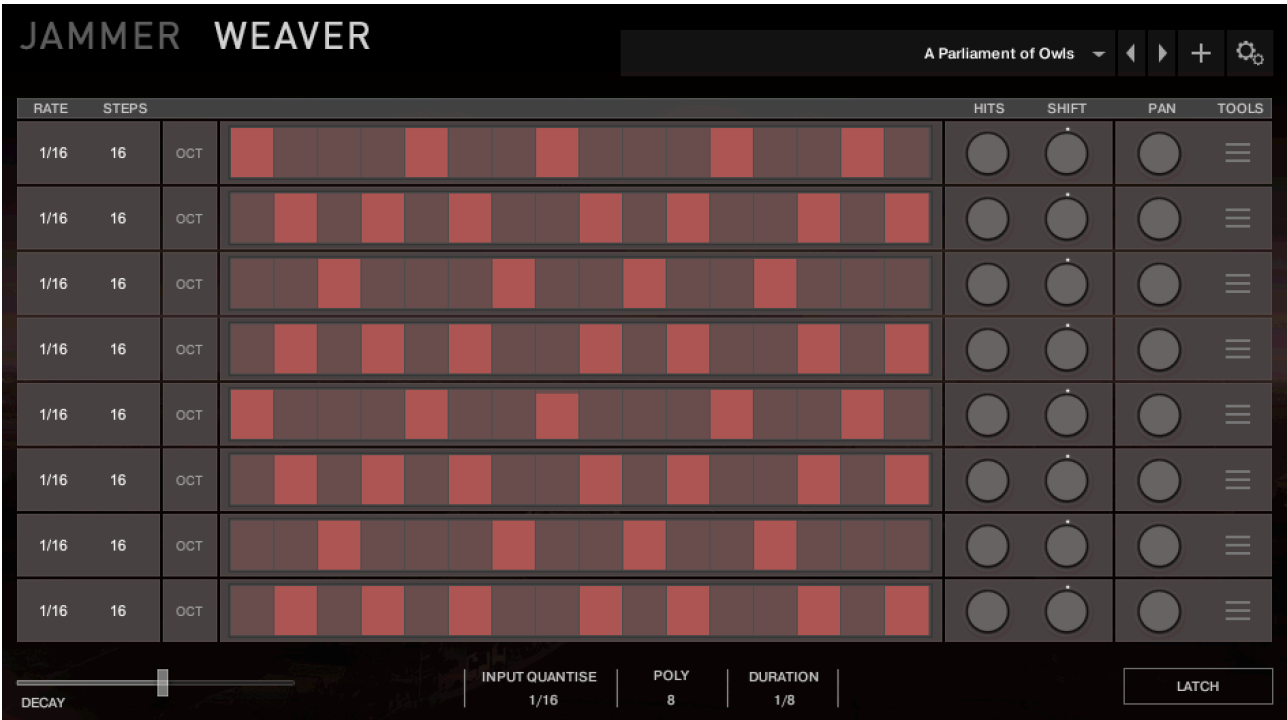
DOUBLE will trigger two notes on each step, as if you are playing with both hands simultaneously.

LATCH will tell the Jammer to hold the current notes until new notes are received.

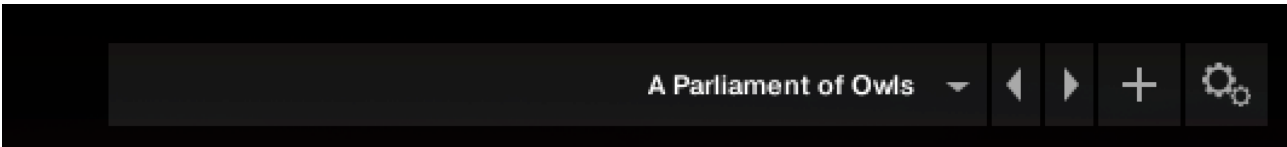
At the right is a small keyboard that represents a pitch filter. Here you can limit the output notes of the Jammer to a certain key or chord or any selection of notes you like. At the bottom of the small keyboard is a drop down menu with some popular scales, but you can click on the keyboard directly to allow or disallow any pitch as you like.



WEAVER



The WEAVER is a tool that allows you to define a rhythmic sequence to be played by an input note. More about how this works later, in the Weaver Editor section below.



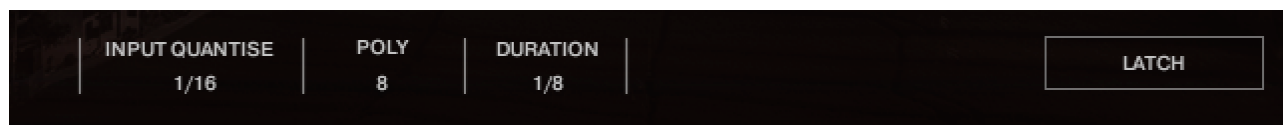
The main page has a PRESET menu at the top, you can choose these from the drop down or by stepping through them. You can store your own settings to any of these menu positions using the + button. And you can import and export presets if you need with the cog menu on the far right of the PRESET bar.

In the middle of the page is the main WEAVER editor section, we'll come back to this soon.

Below that, there is a large slider labeled DECAY. This controls the overall decay time of the sequence, since each pattern will loop. If set all the way to the right, the pattern will never decay.



At the bottom are some global controls for the WEAVER sequence.



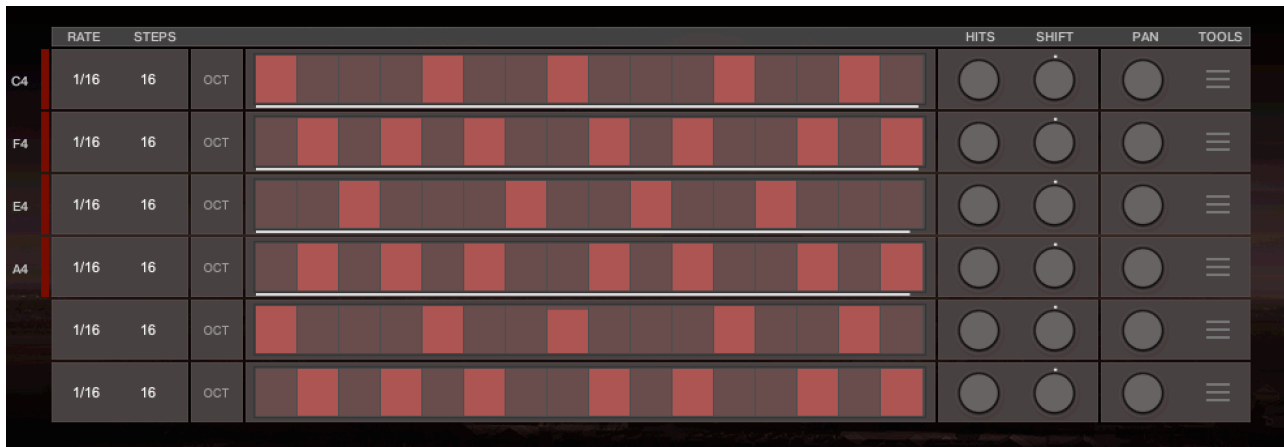
INPUT QUANTISE. This is very useful, but only works if Kontakt is running its own transport, or else is inside a running DAW. But when this is the case, none of the WEAVER patterns will trigger until they're in sync with the value set in INPUT QUANTISE. (ie. 1/16th note) This keeps your patterns really tight and in sync with the song you might be working on.

POLY is the polyphony of the WEAVER pattern. From 1 to 8. If you play more notes than that, they are ignored by the WEAVER engine.

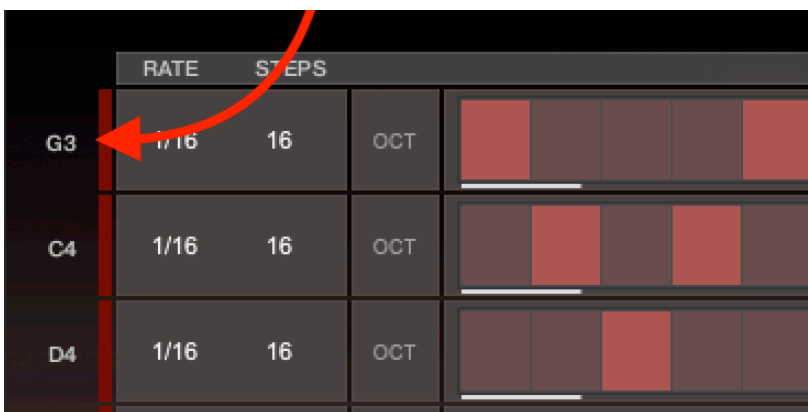
DURATION is the duration of the notes generated by WEAVER, and this can be set to a value, or else to LEGATO, in which case it will play until the next note on any given row comes along.

LATCH will hold the current notes, even if you let go of the keys.





The above display shows all 6 rows active (POLY set to 6).



Notes are assigned a row in the order they're received. You can see the notes assigned to each row at the far left when you play.

At the left of each row, you can also see the RATE and the number of STEPS for the row. Above the rows are set to 16 steps of 1/16th notes.



In the middle is the velocity steps table. You can draw in here as you like. This pattern uses the input velocity, so the maximum output velocity will be the velocity of the note that triggered the pattern.



If you ALT-drag, you can set all active steps to the same velocity.

On the right there are two EUCLID generator controls. HITS and SHIFT. Be careful with these, because they will write new data into the pattern table, and overwrite anything you may have drawn.

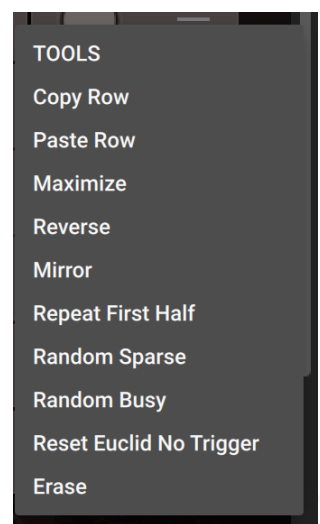
EUCLID rhythm generators basically spread a number of hits, as evenly distributed as possible, within a number of STEPS. So if you set this HITS to 5, it will try to evenly distribute those 5 hits among the 8 steps we set that row to contain. SHIFT shifts the position of the hits, left or right, in the pattern.



The PAN control introduces random panning to notes generated on that row.

POWER TIP IF YOU WANT TO SET ALL ROWS THE SAME, HOLD DOWN ALT OR OPTION WHILE ADJUSTING A PARAMETER

And lastly at the far right, there is a menu with some drop down tools to manipulate the row.



OCTAVE

When you press the OCT button on the left, you see a green table instead of the blue one. This is an octave shift table that can transpose the incoming note one or two octaves up. This is nice for adding some variation to the WEAVER pattern.

OCT																			
OCT																			
OCT																			

A NOTE ABOUT THE PRESET STORE BUTTON

When you press the preset store button, it grows a small arrow:



This is a kind of “store enable” mode. If you now choose a menu item, your preset will be stored at the menu location you store.

If you just hit the store button again, it will overwrite the preset you had selected when you started editing. So you can just click it twice quickly to store the preset where it is.



SUPPORT

If you have any problems or questions relating to the use of this product, please feel free to contact us. You can email us at :

<http://www.soniccouture.com/en/support/>

We will always endeavour to reply to any enquiry within 24 hours. We are based in the UK, so please bear in mind differences in time zones.

While you are waiting, you will find lots of answers to common questions in our FAQ.



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