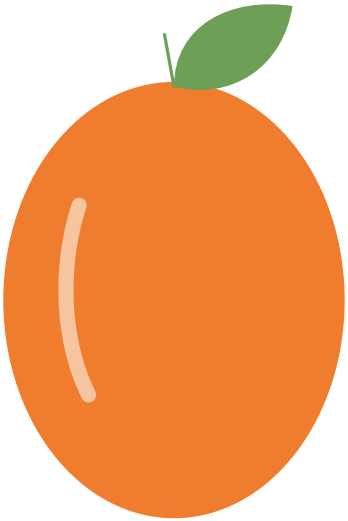


KA Chladni

Instruction manual

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kumquataudio.com

NO. 20 · INSTRUMENT

KA Chladni

A sand-ripple instrument: bring in a sound and play it, with rhythm and harmony.

KA Chladni is an instrument. Every note you play sends a ripple through a plate of sand, and the sand is the picture of the sound. Under it is a simple synth (a wave with something that rings on top), and you can bring in any sound or recording, a World, which is played in tune by the keys: as a pad, or stretched out to a thousand times slower. Hold a note and Pulse plays it again in a rhythm, with harmony. It is made so that you can load a sound and be playing something in seconds, with a few drawings to change it and no menus to find.

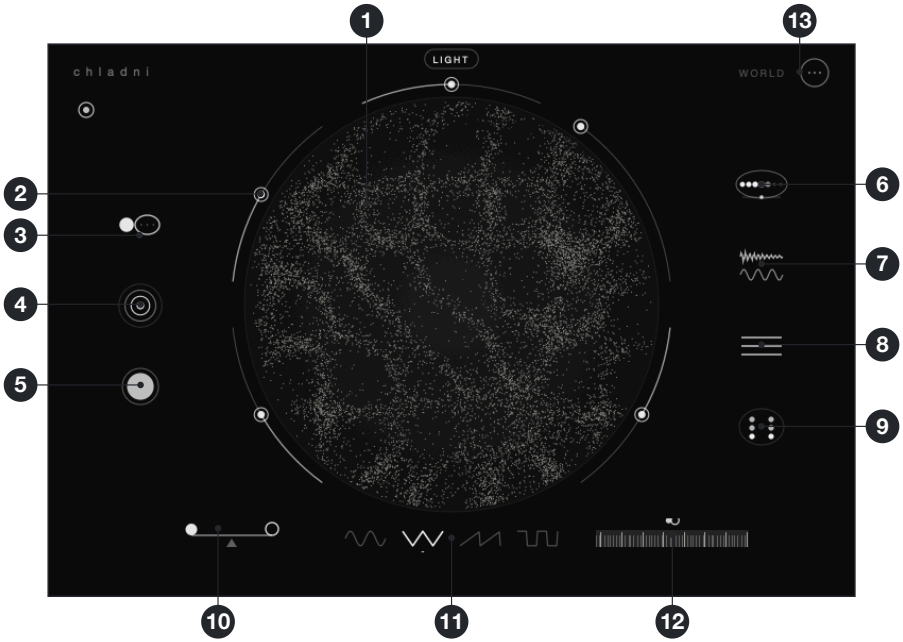


FIG. 1 The parts of KA Chladni. The numbers are explained on the next page.

Parts

fig. 1

1. **The sand**
   Every note you play sends a ripple through the sand. It is the picture of the sound: louder notes move more sand, and the sand settles back to an even spread when the sound stops.
2. **The rim**
   Five arcs round the plate: Bloom (how slowly a note fades in), Pluck (how much a note dies away by itself), Light (how bright), Drive (a little saturation) and Linger (how long it rings after you let go). Each arc has one setting for the synth and one for the world; click the lock that appears beside an arc to move the two together. Right-click an arc to give it a MIDI control.
3. **World**
   Drag up for more of the sound you dropped in. Drag sideways to stretch it, from its own speed to a thousand times slower: a smooth, endless cloud that still follows the pitch of the keys. Double-click to reset.
4. **Space**
   The reverb. Drag up for more of it, and sideways for a longer tail.
5. **Level**
   The loudness of the whole instrument. Drag up for louder.
6. **Pulse**
   A held note plays itself again in a rhythm, locked to the tempo of your song. Drag up for more (0 is off), sideways for the mix between the held notes and the rhythm. Click it to open the pulse menu.
7. **Layer**
   Something that rings on top of the wave when a note starts. Tap to change it (none, tine, bell, glass, wood), drag up for more of it.
8. **Tune**
   Puts every tone of the sound you dropped in onto a note of the scale, so it stays in tune with what you play. From halfway up it is exact; below that it eases off.
9. **Harmony**
   Opens the harmony menu: the synth and the world each get their own intervals above every key you play. Drag up or down for Purity, which takes the world's own harmony out until only its main pitch is left.
10. **Tilt**
    A seesaw between the synth and the world. Lean it to one side and that one is louder while the other is quieter. Double-click to level it.
11. **The wave**
    The wave under everything: sine, triangle, saw or square.
12. **Keys**
    Splits the keyboard into zones, each played by the synth, the world, or both.
13. **World**
    Click to open the world browser, or drop a sound, a recording or an ambience here (or anywhere on the window). The x takes it out again, back to the quiet drone.

Operation

step by step

1. Put the plug-in on an instrument track and play some notes. You will hear the synth and see the ripples.
2. Bring in a World: click the ring at the top right and choose a sound or a recording in the browser, or drop a file anywhere on the window. The keys now play it in tune.
3. Drag the World drawing sideways to stretch it into a soft cloud, and up for more of

Controls and settings

range · start

Control	Range	Starts at	What it does
World	drag up, sideways	halfway	How much of your sound is heard, and (sideways) how far it is stretched, from 1 to 1000 times slower.
Space	drag up, sideways	halfway	Reverb amount, and the length of its tail.
Level	drag up	–6 dB	The loudness of the whole instrument.
Pulse	off to full; mix	halfway	How much a held note repeats itself in a rhythm; sideways, the mix between the held notes and the rhythm.
Pulse menu	rhythm, scale, rate, style		Sixteen rhythms on two pages (Drifting and Grooves), the scale for the harmony, the rate (locked to your song) and the style.
Rhythm by note	on / off	off	Each of eight zones (the seven white notes, and the black notes together) plays its own rhythm, the same in every octave.
Harmony	a switch for each interval	none	Intervals above every key (the 8ve, 5th, 3rd, 6th, 2nd and 7th), one set for the synth and one for the world.
Purity	drag up or down	off	Takes the world's own harmony out until only its main pitch is left.
Tune	drag up or down	halfway	Puts every tone of the world onto a note of the scale.
Layer	none, tine, bell, glass, wood; amount		What rings on top of the wave when a note starts.
Wave	sine, triangle, saw, square		The wave under everything.
Tilt	synth to world	level	A seesaw: one louder, the other quieter.
Keys	up to four zones	one zone	Splits the keyboard into zones

How it works

a closer look

KA Chladni has two voices that play together: a synth (a wave, with something that rings on top of it) and the world, a sound or recording you bring in. The world is not played faster as you go up the keyboard. Its pitch is worked out, and every note moves it to that note at its own speed, so a recording of a piano stays a piano.

Stretch plays the world as an endless soft cloud: the sound is rebuilt from its own spectrum, up to a thousand times slower, and still follows the keys. Tune puts the tones of the world onto notes of the scale, so a recording that is a little off the pitch comes into tune with what you play.

Pulse plays a held note again in a rhythm locked to your song's tempo. The harmony adds intervals above every key from a scale. With Rhythm by note, each of the seven white notes and the black notes together make eight zones, and each zone plays its own rhythm, the same in every octave.

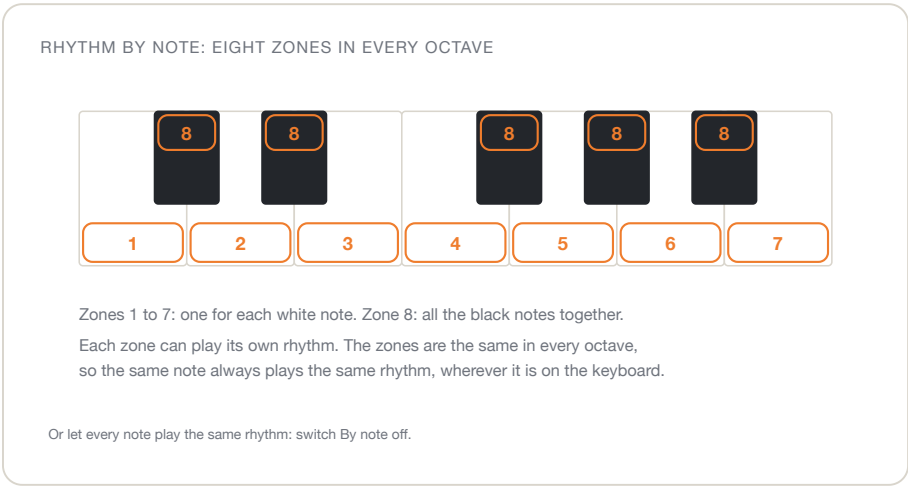


FIG. 2 The octave is cut into zones; each zone can have its own rhythm.

CARE

Care and troubleshooting

If this happens	Do this
A plug-in does not appear in the list	Restart the music software. In Logic Pro, open the Plug-in Manager, select the Kumquat plug-ins and choose Reset & Rescan Selection.
An old name is still showing	Quit Logic with Cmd+Q and open it again. If it persists, remove the old copies from /Library/Audio/Plug-Ins/Components.
My key was not accepted	Copy all of it, from KA1 to the end, with no spaces added or lost. A key for one plug-in does not unlock the others.
The pop-up help does not show	Press the “?” at the top of the window to turn it on. It is one choice for all the plug-ins.
Which part of the picture does a knob change?	Point at the knob, or hold it down while you turn it: the part of the picture it controls lights up, with the knob’s name and value.
KA Drum Gate, Silence Trim, Auto Mixer or Time Align shows a message instead of a picture	Open Logic Pro using Rosetta, put the plug-in first in the Audio FX list, select a region and press play.
The sound is late	KA De-Click, De-Verb, De-Noise, Contour, Mic Blend, Saturator (it oversamples), EQ (with the suppressor), Multiband (in Linear phase) and Limiter delay the sound a little and tell the music software, which lines everything up. Do not compensate by hand. For playing through a plug-in, the Saturator, EQ and Multiband have a Live switch that takes the delay away; the compressors, De-Esser, Delay, Reverb and Rider have no delay at all.
A window is too small or too big	Drag the corner at the bottom right. The size is remembered, and it is the same for all the plug-ins: make one bigger and the others open that big.
The Limiter pumps	Leave Release on Auto, or set 60 to 100 ms. A release of a millisecond or two is the dirtiest setting.

If something is not right, write to **audiokumquat@gmail.com** and say which plug-in, which music software, and what you were doing.

FOR YOUR OWN NOTES

Notes