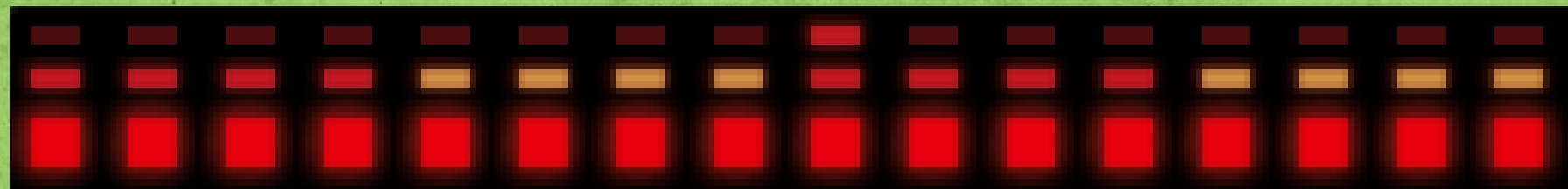


# PSYCHO DRUMMA

**machine for blinking lights and making noise**



**ABUSER MANUAL**

[www.fairlyconfusing.net](http://www.fairlyconfusing.net)

# Licence and technical information

Psychodrumma is virtual device for Native Instruments Kontakt sampler, you need full version of Kontakt 4 or newer to make it work.

You are licensed to use this device and samples which come with it, in the creation of a recorded or live sound performance, free or commercial, without paying any additional license fees or providing source attribution.

Please DO NOT: include provided samples in any music library or sample library; sell, repackage or re-distribute the samples or sampler programs.

USE AT YOUR OWN RISK! This device is provided 'as is' and there is no warranty of any kind. That is, if it makes you go nuts or blow your monitors, it's your own fault, not mine.

Note that it is experimental device, I don't promise it will produce any pleasant or coherent sounds. Also, it is an experimental manual, I can't guarantee, it will make any sense to you.

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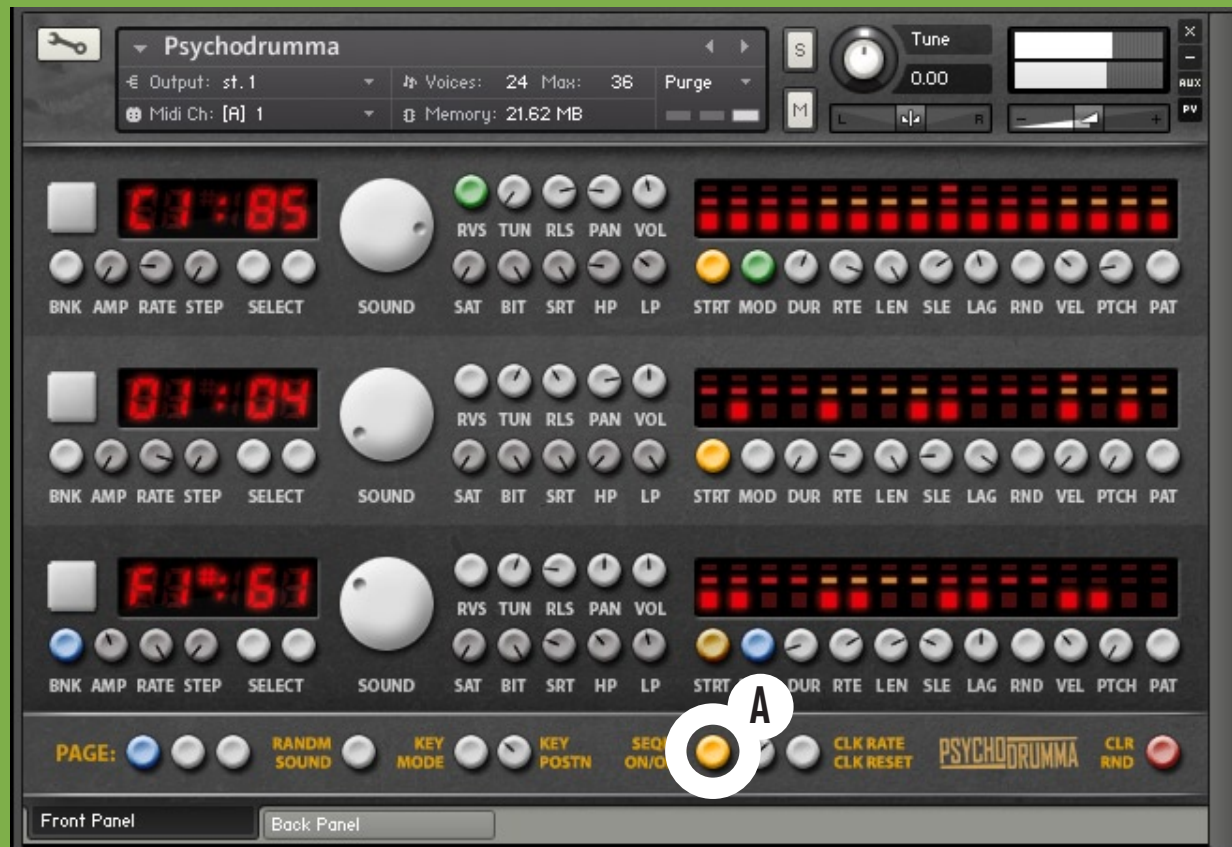


## Having fun with Psychodrumma

Before going into details, that you possibly don't want to know, here's quick guide to Psychodrumma.

- A. Go to front panel and start the main sequencer.
- B. Go to back panel and press 'randomize all' button. Now you will hear randomly generated pattern.
- C. You can try switching sound bank and hear how different sounds work with current patterns. Or randomize again and again until you generate something interesting.
- D. Try setting 'confusion rate' to 2 and hear how the pattern evolves. It will change some of the elements every 2 bars.

If you like to stop reading here and figure everything out by yourself, you can turn on Kontakt's 'info' button, there are hints for the device controls.



## The confusing details

Psychodrumma is experimental drum machine focused mainly on creating random and randomly evolving sound sequences.

It has nine pads, each with its own set of effects and it's own simple sequencer. Each pad can playback samples from two banks of 100 sounds each.

Provided samples are eclectic selection from variety of sounds I recorded over the years: synthesized sounds, field recordings, animal sounds, unusual percussion, bass and guitar noises, voice fragments, household objects, radio noise, vinyl crackles, car engine, icy snow squeaking under heavy boots or all the above mixed and layered in one sample. You can use these samples or replace banks with your own content, which is fairly easy to do, as I will explain later.

On the front panel you can see setting for 3 pads and a row of global switches.



## Switching pages

First three buttons from the left on the bottom row are page switches. There are 9 pads organized into 3 pages, 3 pads for each page. You have to switch pages to see and control settings for next 3 pads.

## The Clock

Psychodrumma is synchronized with host's tempo. Next to main sequencer on/off button, there is 'CLOCK RATE' knob. You can set the resolution of engine clock, in engine ticks per quarter note. At default setting of 8, the clock ticks 8 times per quarter note, so sequencer will play align to 1/32 notes. The clock is used to synchronize sequencers, sound variator and randomizers. The clock will restart every time the transport start message is received, or when you press CLOCK RESET button next to CLOCK RATE knob.



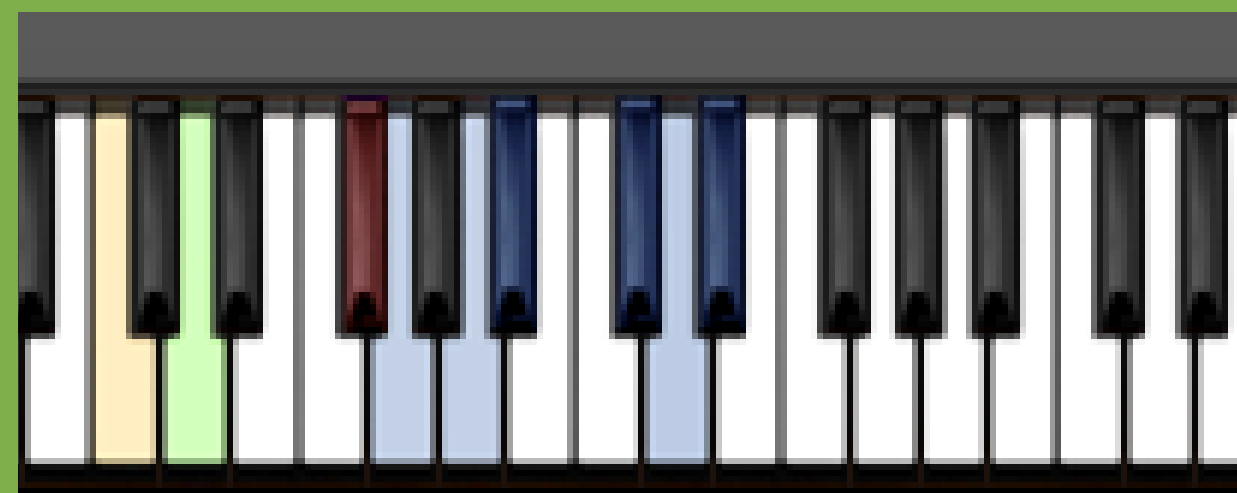
## Selecting a sound

The number on the right side of display is the sound number for the pad. You can browse through sounds with 'SELECT' buttons, which will load previous/next sound, or by dialing big 'SOUND' knob.

White rectangle on the left is trigger pad, click it to hear selected sound. It will flash whenever the pad is playing the sound.

First button on the left, named 'BNK' is bank switch. Psychodrumma comes with two banks of 100 samples each. The main bank is made of somewhat percussive sounds and the alternative bank is more focused on ambient/noise/field sounds. You can easily replace the banks contents with any samples you like. Bank samples are placed in two folders 'bank\_a' and 'bank\_b'. Files are named a00.wav, a01.wav ... a99.wav for bank A and b00.wav... for bank B. All you need to do is gather 100 samples rename them accordingly and replace samples in bank folder. For example, I've got interesting results using orchestral drum samples from Kontakt library.

When you press right side of the display, where sound number is shown, the pad will go to solo mode, only the sound of this pad can be heard. You will see other pad's displays will dim lights. It is useful for tweaking randomized patterns, where you are not sure which pad makes which sounds. Press display again to turn solo mode off.



## Selecting trigger keys

Each pad can be triggered by incoming note, in the example picture on this page, pad is set to play sound 85 on C1 note. Trigger keys for pads on current page are highlighted on the Kontakt's virtual keyboard. They are colored yellow for the first pad, green for the second and red for the third. Trigger keys for pages that are not currently selected are colored blue.

You can easily change the trigger page setting, just dial note display on the left, the same way you dial a knob. It makes it easy to match incoming notes when dealing with predefined midi loops. Note that there is no mechanism to prevent overlapping key settings, when two pads are set to one key, the first pad has priority and the other will be mute.



## Sound variator

Next to BANK SWITCH there are three knob controls for sound variator. It is a simple device which can periodically select different sounds according to engine clock. AMP stand for amplitude. For example say you have selected sound no. 10 on the pad and you set variator AMP to 7, RATE to 4 and STEP to 2. Then every 4 engine ticks variator will add 2 to the number of selected sound, until it will reach the amplitude. It will rotate sounds in this order: 10, 12, 14, 16, 10, 12...

When STEP value is less than AMPLITUDE, variator is OFF.



## Selecting random sounds

If you are not in a mood for browsing nameless sounds, press RANDOM SOUND button. It will select random sounds for all 9 pads.



## Tweaking a sound

The next section in pad controls is for tuning sound properties:

**RVS** – REVERSE BUTTON, when it's ON, the sound will play backwards.

**TUN** – TUNE KNOB, change sound base pitch, 24 semitones up or down.

**RLS** – RELEASE KNOB, controls volume envelope release.

**PAN** – PAN KNOB, sets sound panning.

**VOL** – VOLUME KNOB, makes it louder, or quieter.

**SAT** – SATURATION KNOB, sets the amount of saturation effect, makes sound louder and more distorted.

**BIT** – BITRATE KNOB, use it to reduce sample's bitrate, for low-fi effect.

**SRT** – SAMPLERATE KNOB, use it to reduce sample's samplerate, for another flavour of low-fi effect

**HP** – HI-PASS KNOB, sets cutoff frequency for hi-pass filter.

**LP** – LOW-PASS KNOB, sets cutoff frequency for low-pass filter.





## Sequencer

Each pad has its own simple 16 step sequencer. The display shows programmed sequence, sequence length and current sequence position. You can program sequence clicking on the display or browse through predefined sequences pushing PAT (pattern) button. CLR/RND (clear/randomize) toggle button in the bottom right corner of front panel will clear or randomize all sequences on current page. Note that it will only affect sequence programs, and not sequence length mode or settings.

STRT (start) button will activate pad sequencer, note that all sequencers will not play until main sequencer switch is ON. This way you can start/stop the whole 9 pad sequence at once.

MOD (mode) toggle button will activate sequencer modes, it can run forward, backward or in ping-pong manner.

DUR (note duration) knob will set note duration for current sound, use it to limit sample length. When set fully clockwise, to value of zero, the entire sample will be played, which can create a lot of noise when longer samples are played at higher rates.

RTE (rate) knob controls the speed of pad sequencer. It tells, how often sequencer will move to the next position. At rate of 4 for example, sequencer will move every 4 engine ticks. So at higher rates, sequencer runs slower.

LEN (length) knob controls the length of sequence, as you may wish to play shorter sequences than 16 step.

SLE (slide) knob will let you de-synchronize sequencers. Sequencers are synchronized with the engine clock. When you set slide of one of sequencers to e.g. -3, it will be triggered 3 engine clock ticks before sequencers with SLIDE value set to zero.

LAG knob has similar purpose to SLIDE, but it can only delay the sequencer and the delay time is less than one engine tick. At the maximum setting it is half engine clock tick.

RND (random) button is a LAG mode. When OFF, all notes in the current sequencer will be delayed the same value. When ON, each note will have randomly selected delay from the range of LAG knob. Use it for humanizing effect.

VEL (velocity) button will activate another humanizing effect. When set to more than zero value, each sequenced note will be played at randomized velocity, louder or quieter.

PTCH (pitch) button will activate pitch randomizer. The value is in semitones and works up and down. That is at setting of 1, sample pitch will be changed by -1, 0 or +1 semitone.





## Triggering sequences from keyboard

Each sequencer can be triggered by midi note. Sequence trigger keys are highlighted on Kontakt's virtual keyboard. Cyan keys will activate single sequences for each of 9 pads. MIDI triggered sequencers will play regardless of the state of main sequencer on/off button. The reverse colored key triggers the main sequencer, so it will make all active sequencers play at once. You can use it to automate playback of the whole sequence in host.

You can change sequence trigger keys mapping dialing the KEY POSTN knob and place the whole cluster anywhere on the keyboard. Note that there is no mechanism to prevent overlapping sequence triggers with single sound triggers. If these are mapped to the same key, single sound will have priority and sequence trigger will be inactive.

KEY MODE button will toggle sequence trigger key mode. When OFF (white) the sequence will play as long as the key is pressed. When ON (green) the sequence playback will start when you press the key and will stop when you press it again.



## Back panel switches

There are numerous controls on device's back panel.

DEVICE RESET button will reset all the device settings to default, which includes clearing all of the patterns. There is no undo, so use it carefully.

BANK SWITCH will reverse polarity of all nine pad's individual bank switches.



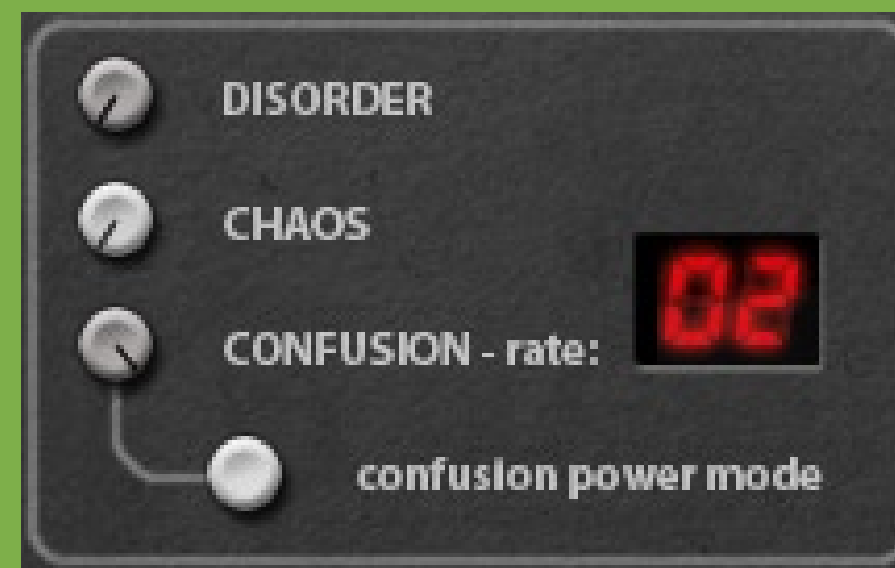
## One shot randomizers

This set of buttons will let you load random settings to all nine pads at once.

**RANDOMIZE ALL PATTERNS** will randomize sequencer's settings. It is more powerful and sophisticated routine than the sequence randomizer on front panel. It will affect all sequencer settings on all pads, with exception of **NOTE DURATION** and **PITCH**. Sequence patterns will be random or randomly selected from factory pattern bank. The algorithm will prefer some outcomes to others. For example, it's not very eager to set random **SLIDE** setting and will prefer powers of 2 for **SLIDE** and **RATE**. Generally this randomizer is focused on generating a rhythmic pattern.

**RANDOMIZE ALL SETTINGS** will randomize the remaining pad's settings with exception for **BANK SWITCH**. This routine is also tuned to generate somewhat coherent results and it is focused on affecting the sounds.

**RANDOMIZE ALL** does both of the above.



## Gradual and periodical randomizers

**CHAOS** and **DISORDER** are gradual randomizers. They will check on all settings constantly and randomize them. When turned fully counterclockwise, these randomizers are OFF, the more you turn them clockwise, the more often they will decide to randomize a setting. At minimal (counter-clockwise) setting chance of randomizing a setting is 1:400 each quarter note, at maximum setting it is 1:2. **DISORDER** will affect pattern related settings and **CHAOS** will affect sound related settings. Use them to create randomly evolving rhythmic scapes.

**CONFUSION** will periodically perform **RANDOMIZE ALL** according to the rate. At the setting of 2 it will call **RANDOMIZER** every 2 bars according to current tempo and time signature. **CONFUSION** randomizer has two modes, you can switch them with **CONFUSION POWER MODE** button. When it's ON it will **RANDOMIZE** settings of all nine pads, when OFF, it will randomly pick one pad to randomize, each time it is triggered.

If any of these randomizers is active, you will notice that Psychodrumma logo on the front panel will start to change colors.



## Compressor

This is probably the least confusing feature of Psychodrumma. The compressor. There are standard controls, on/off switch, threshold, ratio, attack and release. Each pad has its own compressor in the end of the effect chain. They are being set to the same settings by these controls. You can use the compressor to tame the dynamic range of randomized sequences.



## Under the hood

In case you'd like to customize sounds under the hood, here's how the things are organized. Each pad has its own 4 groups. First group with bank A sounds mapped over the keyboard, second group is a copy of the first one with REVERSE option on. This was apparently the only way to make reverse button work, as it seems that group reverse setting is not automatable in KONTAKT. Third group contains bank B sounds and fourth group is reversed copy of the third. Next pads are assigned to the exact copies of first pad's groups. So, groups 0-8 contain sounds for pads 1-9 bank A, groups 9-17 are copies with reverse on and groups 18-35 are organized the same way but with sounds for bank B. The group insert effects need to be in the same slots in order to work.

The easiest way of customizing the machine sounds, would be to paste zones into existing groups. Theoretically each pad could have four different sets of sounds, so you could load 3600 different samples into this device. Or much more, if you used velocity layers....

## That's all folks

Have fun making noise and watching blinking lights. You can find my other sampling and music projects at [www.fairlyconfusing.net](http://www.fairlyconfusing.net)

I'm considering adding some new features to Psychodrumma, like loading and saving presets, meta-sequencer for sequencing presets, effect rack and table based pseudo-random generator to have repeatable results from randomizers, but I don't know yet when and if it is going to happen.

SzcZ

