

PSYCHO DRUMMA

mark II
chaos management workstation
operator's handbook

www.fairlyconfusing.net

“Psychodrama is an action method, in which clients use spontaneous dramatization, role playing and dramatic self-presentation to investigate and gain insight into their lives.”

Wikipedia

Licence and technical information

Psychodrumma is virtual drum machine/pattern and melody generating musical device for Native Instruments Kontakt sampler, you need full version of Kontakt 4 or newer to make it work.

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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. It is experimental device, there is no guarantee it will produce any pleasant or useful results.

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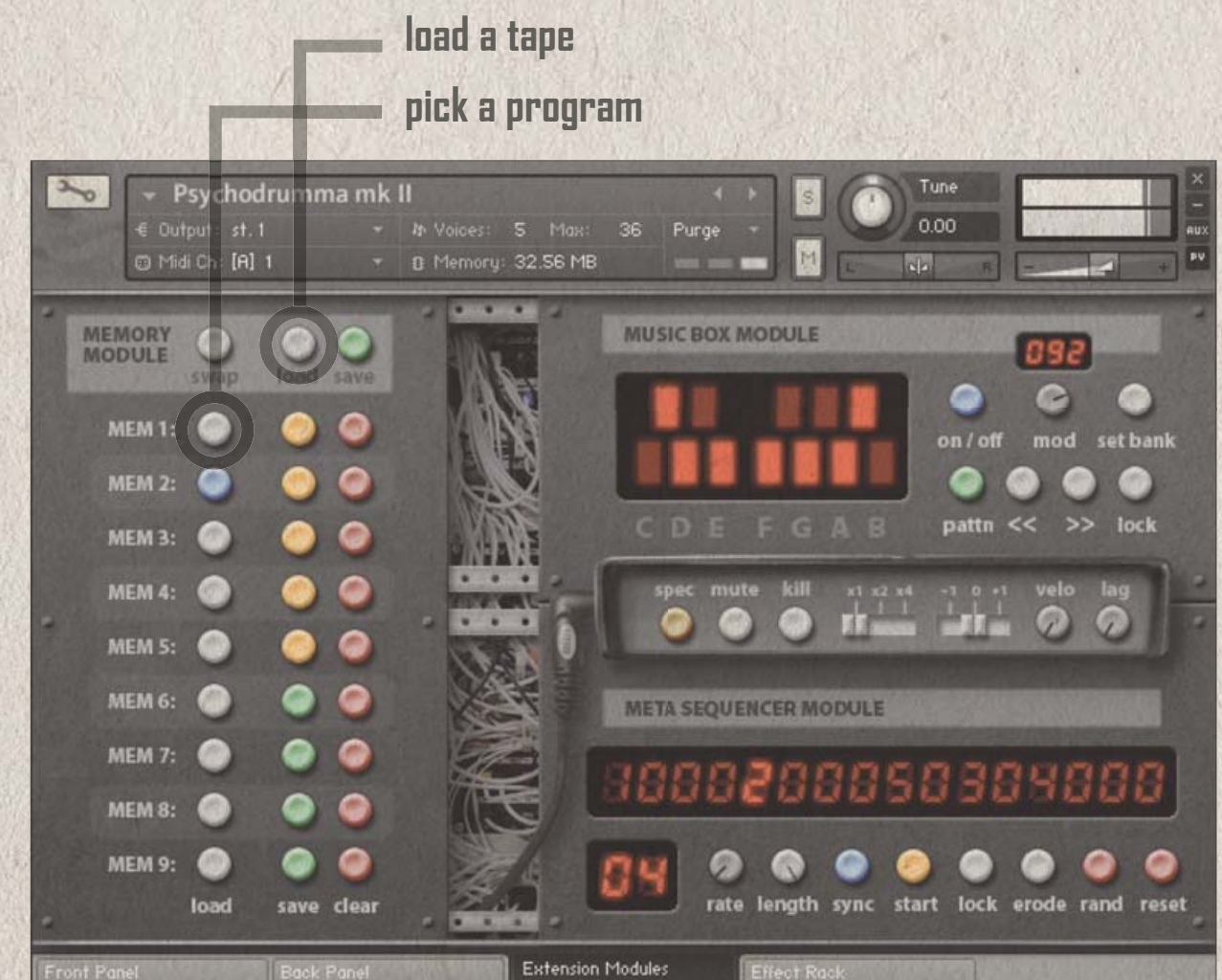
Getting the machine started

Here are the instructions on how to quickly start up the device and make it begin emitting signal.

1. Locate sequencer start button on front panel. Press it.
2. Locate 'Randomize all' button on back panel. Press it. The machine should generate pattern and start to make sounds.
3. If you'd rather prefer to use pre-programmed than generated pattern, look at extension modules panel. First pick one of the tapes and load it into the machine. Then choose a program and load it from tape to the sequencer.



start the sequencer
engage randomizer



load a tape
pick a program

About the machine

Psychodrumma mark II is experimental drum machine, tone machine and sequencer. It can be used to play back percussive sounds, generate drum or ambient patterns, generate melodies or to control external instruments.

The sound engine is build of nine playback modules, called pads. Each pad can play a sound from one of three factory banks. Each pad has its own simple 16 step sequencer and a set of basic sound modulators. Pad settings can be programmed manually or you can let the machine set it up in pseudo random manner. All sequencers are synchronized with host tempo and playback position according to engine clock.

Factory soundbanks contain 100 sounds each. Sample sound sources are quite diverse: synthesized sounds (digital and analog), field recordings, animal sounds, unusual percussion, bass and guitar tones and noises, voice fragments, objects (metal plates, pots, radiators, machine parts, bicycle horn, plastic tubes, firecrackers etc.), radio noise, vinyl crackles, car engine, icy snow squeaking under heavy boots or hybrid of some of the above.

The machine is equipped with memory module which can save and restore sequencers state. Sequencer states can be then sequenced with metasequencer module. Also the machine comes with effect rack and mixer, each pad output can be send to different effects.

Finally Psychodrumma is able to generate random repeatable melodies according to defined scale. It can playback the melody using factory sounds or the melody can be send out to external instrument.

Navigating the pads

There are nine pads organized into three pages. On the front panel you can see settings and controls for three pads. Below there are 'page switches', you can use those to switch between three sets of pads.



select page



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.

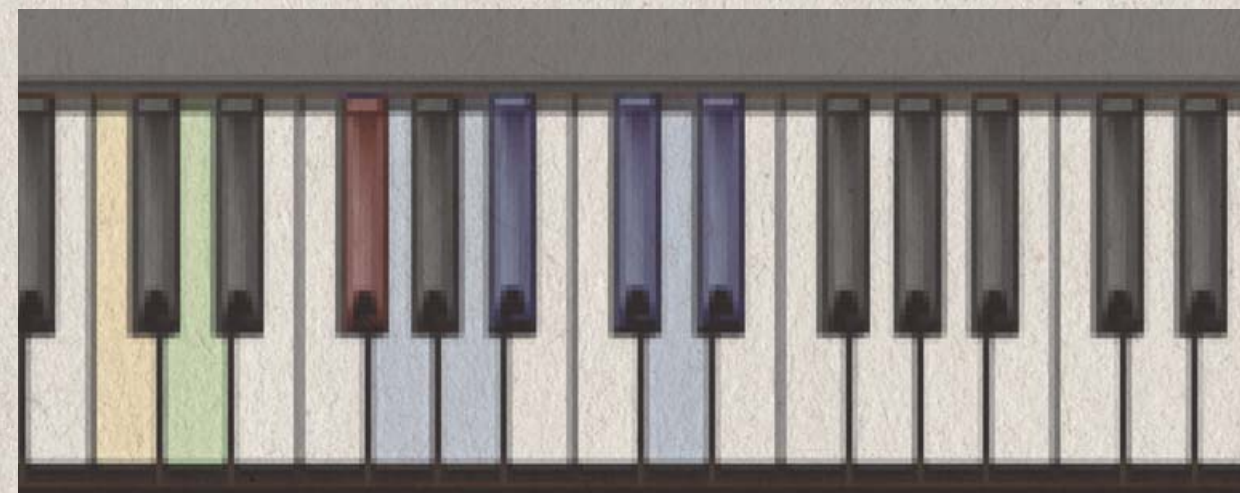
First button on the left, named 'BNK' is bank switch. Psychodrumma mk II comes with three banks of 100 samples each. The main bank is made of somewhat percussive sounds, the second one is more focused on ambient/noise/field sounds and the third is for playing melodies. You can easily replace the banks contents with any samples you like. Bank samples are placed in folders named 'bank_a', 'bank_b' and 'bank_c'. Files are named a00.wav, a01.wav ... a99.wav, b00.wav... c00.wav etc. You can replace any or all of those files with any samples you own, new samples need to have the same name as those being replaced for the machine to recognize them.

When you click on right side of the display, on sound number, the pad will go into solo mode, only the sound of this pad will be played back. You will notice that other pad's displays will dim lights. It is useful for tweaking randomized patterns, when you are not sure which pad makes which sounds. Click on the display again to turn solo mode off.



Selecting random sounds

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



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 pad's trigger note, just dial the note symbol on the left side of the display, the same way as 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 muted.



Sound variator

Next to BANK SWITCH there are three controllers for sound variator. It is simple device which can periodically select different sounds according to engine clock position. AMP stand for amplitude. For example, assume 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.



The Clock

Psychodrumma is synchronized with host 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 the distance between clock ticks is 1/32 note. The clock is used to synchronize main sequencer, metasequencer, sound variator and all 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. When you press play in the middle of the song in host, the machine clock position should update according to host song position, also it should synchronize when you loop the playback in host.

Restarting the clock will restart main sequencer and metasequencer, as well as all time triggered events. It is recommended to put clock restart automation at the beginning of the measure, unless you want to de-synchronize the machine with host.

Automating clock rate has not been tested and is not recommended, most likely the machine will de-synchronize all measure aligned events. Also in algorithmic mode the course of events is likely to be different at different clock rates.

Clock rate is not saved by memory module, all factory tapes all have been programmed on default setting.



Tweaking a sound

Next to sound selection knob, there are pad controllers 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, sets 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.

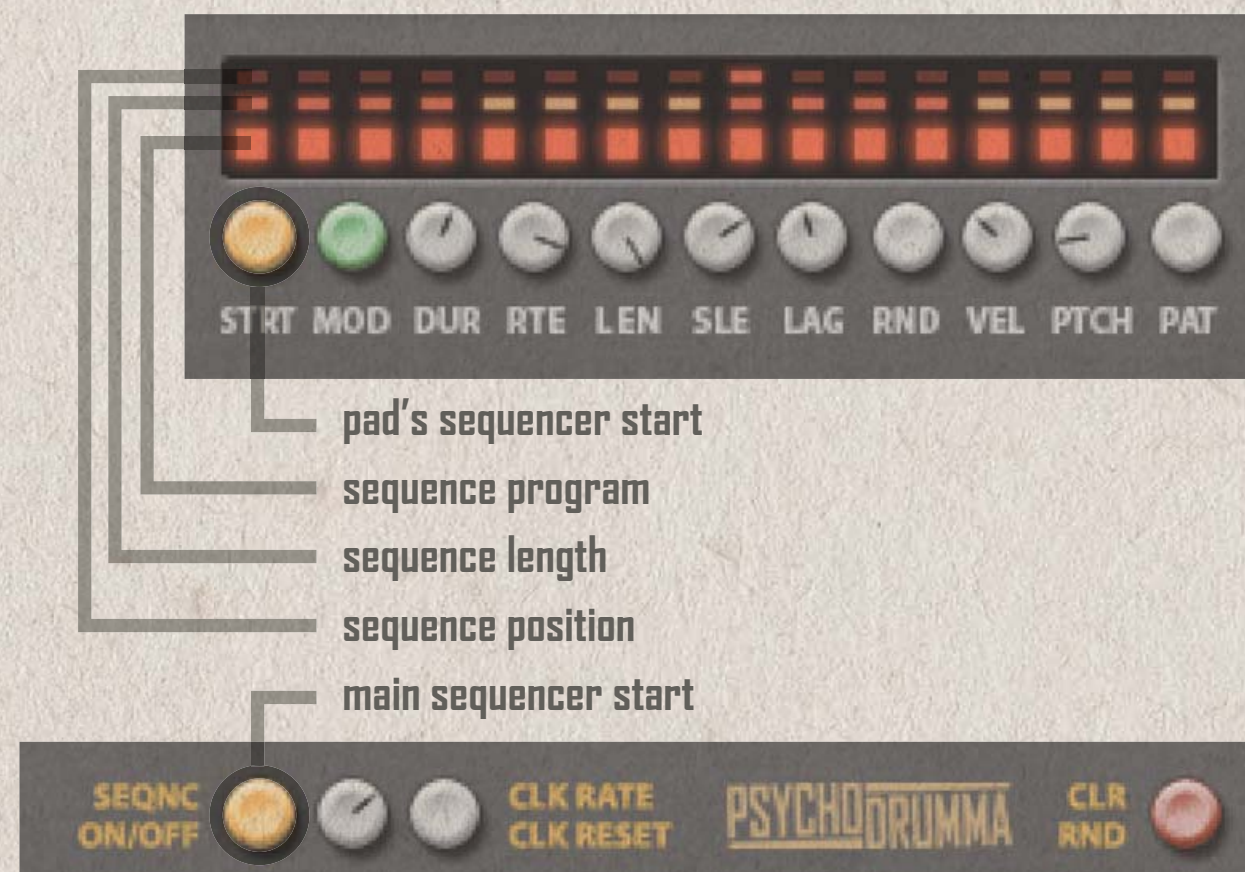
The sequencer

Each pad has it's own simple 16 step sequencer. On it's display you can see (from bottom to top) programmed sequence, sequence length and current sequence position. You can program sequence by clicking on the display or browse through predefined sequences pushing PAT (pattern) button.

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 switch through 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 zero, the entire sample will be played, this setting can create a lot of noise when longer samples are being played at low sequencer rate (so it will never be set by randomizers).



RTE (rate) knob controls the speed of pad sequencer. It sets, how often sequencer will move to the next position. At rate of 4 for example, sequencer will move every 4 engine ticks (every eighth note at default engine clock rate). So at higher rates, the 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 shorter 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 of the current sequence will be delayed by the same value. When ON, each note will have randomly selected delay from the range set by LAG knob. Use it for humanizing effect.

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

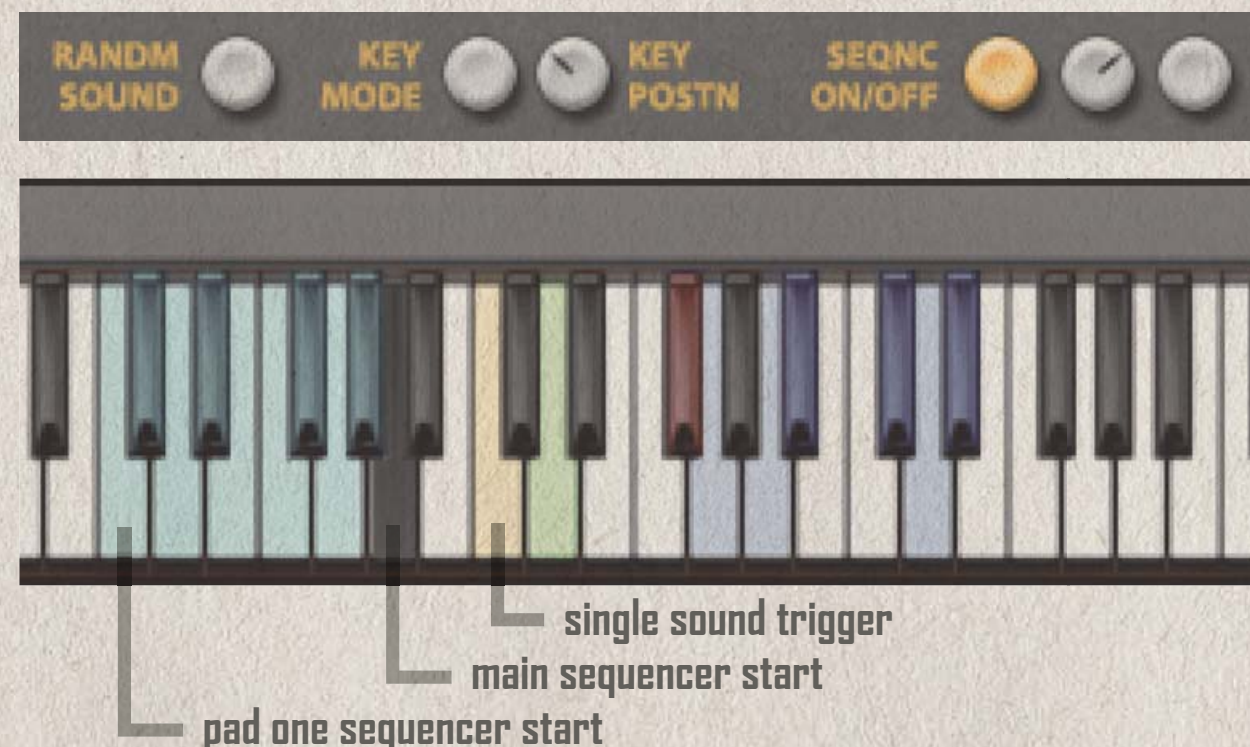
PTCH (pitch) button will activate pitch randomizer. The value is in semitones and sets the amplitude of pitch modification. E.g. at setting of 1, sample pitch will be changed by -1, 0 or +1 semitone.

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.



Random and algorithmic modes

Most of the settings in Psychodrumma can be randomized in some way. However the disadvantage of random events is that you can't replay them, once they happened they are gone, unless you have been recording audio output. 'Algorithmic mode' is a solution to this problem.

In algorithmic mode the machine will calculate a string of pseudo-random numbers (the array), which then will be synchronized with engine clock and used to calculate all 'random' events. This way all random event sequences can be repeated or looped. Controls for algorithmic mode are located on the back panel.



On/Off button switches between random and algorithmic modes. When it's white, random numbers will be generated with standard Kontakt's random() function, when it's blue (On) they will be read from the array.

Rewrite button will generate new array, the old one will be lost, so use it with care. The machine will switch through three algorithm settings using Kontakt's engine timer state as seed.

Cycle knob will set the array loop point (in measures) according to current tempo and time signature. E.g. when cycle is set to 8, the machine will start to read the array from the beginning after 8 measures. It will be easy to notice on melodies, as it will repeat the same pitch sequence. The array will also loop, if the sequence length exceeds the array size. The size of the array is big enough to play 32 measures at engine clock rate of 1 in 12/8 time signature, without looping. In signatures with longer measures, like say 6/2, the array may not be big enough for 32 measure loop and the machine will start reading values from the beginning.

All algorithmic mode settings, including the array, will be saved by Memory Module.

Dynamic randomizers

Psychodrumma has a set of randomizers which can be used to create random or randomly evolving patterns. Randomizers can dynamically reprogram sequencers or/and sound settings.

CHAOS and DISORDER are gradual randomizers. They will constantly monitor all settings and randomize them, according to amount of acceleration. When the controller is turned fully counterclockwise, the randomizer is OFF, the more you turn it clockwise, the more acceleration will be applied to the randomizer. 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 (sequencer state, program, mode, rate, length and slide). CHAOS will affect all sound related settings, with exception of sound bank selection.

CONFUSION is periodical randomizer. It will randomize all settings at specified interval. Timer unit for CONFUSION is measure. E.g. when you set it to 4, it will randomize settings every 4 measures according to current tempo and time signature. CONFUSION has three modes of operation, which can be activated by MODE button. In 'white' mode, the machine will pick one pad and randomize its settings, in 'blue' mode it will randomize all pads and in 'green' mode it will only randomize pad's START button state.

Next to randomizers controllers, there is CHAOS MODULATOR controller, labeled MOD. In algorithmic mode, most of the array is not used at default clock rate and 4/4 time signature, especially when you loop to shorter interval than 32 measures. Chaos modulator is shifting the array read position, this way you can create different event progressions within the same array. To see how it works set both array and confusion cycles to 2 measures and set confusion mode to blue. You will notice that the machine will play whatever is the result in two measure long loop. Now, changing the modulator value will make the machine play different loop and when you set modulator back to zero, you get back to the first loop. Chaos modulator is only active in algorithmic mode and it only affects disorder, chaos and confusion randomizers. In the bottom row, next to 'MODE' button, there are CHAOS MODULATOR fine tune buttons, they will change its value by one point.



On the right side of randomizers section there is a set of nine buttons labeled 'include pads'. They let you exclude pads of choice from randomizing process. In default setting (all blue), all pad will be randomized. This mechanism makes it possible to have some pads playing steady rhythm, while other pads are being filled with random content. Its setting will be effective when using gradual/periodical randomizers (disorder, chaos, confusion), one shot randomizers (randomize all, randomize patterns, randomize sounds), bank switch and two randomizers on front panel (random sound and reset/randomize sequencers. Global 'device reset button' will reset all settings including randomization bypass buttons.

Left to the randomizers section on back panel, there is randomizer's power switch. When the switch is off randomizers are not functional. It only applies to dynamically triggered randomizers and its state is not being saved by memory module. Its purpose is to be able to create presets, that start from fixed point and then evolve dynamically.

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

Static randomizers

Above dynamic randomizers section there is set of static randomizer buttons. These randomizers will apply changes in one pass on user input.

RANDOMIZE ALL PATTERNS will randomize sequencer's settings. It will affect all sequencer settings on all pads, with exception of **NOTE DURATION** and **PITCH**. Sequence program will be random or randomly selected from factory pattern bank. The algorithm is tuned to prefer some outcomes. For example, randomizing **SLIDE** setting is not as probable as randomizing other settings and it's more likely that **SLIDE** and **RATE** values will be set to power of 2. This randomizer is static equivalent of 'disorder' and it's 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. It is static equivalent to 'chaos'.

RANDOMIZE ALL does both of the above at once.



On the front panel, next to Psychodrumma logo, there is another static randomizer button, labeled **CLR/RND** (clear/randomize). It has two functions. When the button is red, it will reset all pad settings on current page, not affecting pads excluded from randomization by back panel buttons. When reset is applied the button will turn green. Now it will affect only sequence programs on current page filling them with random data. Again, excluded pads are not affected. After executing randomization it will switch back to reset functionality and so on.

Back panel general purpose buttons

On the top row on back panel there are three general purpose buttons.

DEVICE RESET - will reset the machine to default settings, it will reset all settings on front and back panels, excluding algorithmic mode section. It will reset pads excluded from randomization and reset 'include pads' section. The engine clock rate and trigger keys values will be reset to default. Device reset will not affect extension modules and effect rack.

BANK SWITCH - will switch bank settings on all pads (except for those excluded from randomization), bank A will be switched to bank B, bank B to bank C and bank C to bank A. As randomization procedures does not apply to bank settings, this switch can be used to quickly test randomization outcome on various banks.

HUMANIZE - this button will quickly set humanization related controls on all pads, lag, lag mode and velocity.



The Compressor

Each pad is equipped with it's own compressor. On back panel there are compressor controllers which will apply to all pads. There are standard controls, on/off switch, threshold, ratio, attack and release. You can use the compressor to tame the dynamic range of randomized sequences.



Circuit breaker

This control section lets you to bypass pads internal effects. Saturation and lo-fi effects, filters and sound reverse can be turned off globally. These settings will be still set by randomizers or they can be set by user input, yet they will have no effect when bypassed in circuit breaker. This can be useful in fine-tuning randomized effects.



Music box

The machine can apply pitch changes to samples and so it can generate melodies. Combined with algorithmic mode, it can quickly generate melodic loops. At this point it would be handy to constrain generated melody to a scale, which is what music box extension does.



When you turn music box module on, pitch changes will be modulated to match programmed scale pattern. You can program scale manually, clicking on the display, the same way you would program sequence pattern, or switch through predefined scale patterns using PATTN button. You can then slide pattern left or right using '<<' and '>>' buttons.

When testing this module functionality, note that pad needs to have sequence pitch controller set to value greater than zero to start to generate different pitches. Also try using sounds from bank C, which all have harmonic content and are made specifically to use with music box module. To quickly set all pads to bank C, use SET BANK button on music box panel.

Next to power switch there is 'melody modulator', it has the same principle as 'chaos modulator' it shifts the array read position and it will let you generate different melodies using the same array and the same pad settings. It only has effect in algorithmic mode. Its value range is 0 to 127.

Music box settings are being saved by memory module. If you don't want its settings being overwritten when loading a preset, use LOCK switch. When it's on, music box data portion will be ignored when reading saved data by memory module.

If you'd like replace sound bank samples, note that music box module assumes every sample base tuning is C and applies tune changes accordingly. If you want harmonizing module to function properly, make sure that new samples are tuned to C.

Turning Music Box power button on, will affect randomizers probabilities for sequencer's pitch range, it will be now more likely to get values greater than zero.

Memory module

Mark II version of Psychodrumma comes with memory extension. It can save and recall machine settings. There are two tape mechanisms for data storage. Each tape can accommodate nine save states. Each save state has dedicated load, save and clear buttons.

Save button will save machine settings to tape, it is green when the save state slot is empty and it turns yellow when it has been written. If you want to replace save state with new content you need to clear it first, using 'clear' red button. This mechanism is there to prevent accidental overwriting of saved data.

Load button will recall saved settings. It has no effect when the save slot is empty.

Swap button unloads current tape and load the other one, so memory module can store 18 save states, 9 on each tape. The purpose of having two tapes, is mainly to make it easier to organize tape contents.

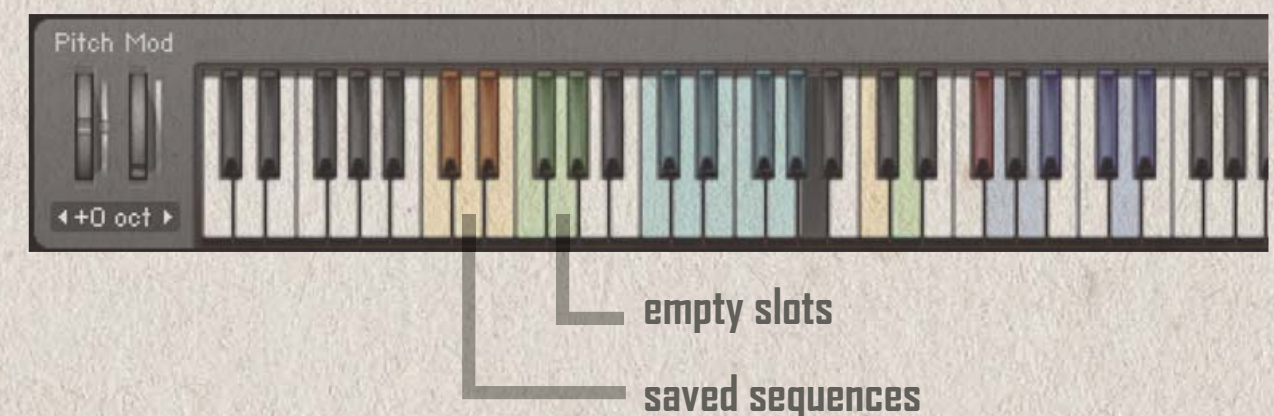
In top row there are tape load and save buttons, they let you save the entire tape to a file in data folder. This way you can store programmed sequences without having to save sampler patch, or share it with others. Note that only currently loaded tape will be saved to file, if you want to save the other tape too, you need to swap tapes and save it to another file.

What is being saved when saving state: all individual pad settings for all pads, including bank setting; dynamic randomizers settings, excluding power switch state; circuit breaker state; algorithmic mode state and settings, including the entire array; music box settings; effect rack settings (send levels effects settings) excluding rack randomizer state.

What is not being saved when saving state: engine clock rate and position; trigger keys settings; special extension settings; compressor settings; dynamic randomizers power switch state; effect rack randomizer settings (drift, boost and modes).

Metasequencer state is not being saved, as it would be illogical, however it is being saved when you save the whole tape to file.

You can trigger loading presets from midi keyboard or by programming midi notes in host. Keys for loading presets are marked with colours on Kontakt's virtual keyboard. Yellow keys are saved sequences, green keys indicate empty save slots.



Metasequencer

Metasequencer is extension module which can trigger loading save states according to program. It can be used to organize previously created sequences into a track, without need to automate anything in host.

The string of digits on metasequencer display is the program. You can change the program manipulating digits, as you manipulate knobs, the same way it is possible to change pad's trigger note on front panel. When program step is set to value from 1 to 9, metasequencer will load a preset from currently installed tape, if the preset is empty it will have no effect, but metasequencer will not check save state, it will just trigger the number in memory module. When program step is set to zero, metasequencer will do nothing. If previous program step has the same value as current one, metasequencer will still trigger state recall, loading the same values can be useful for example when you set evolving effect rack settings and you want to periodically reset them to saved state. When metasequencer is active it will indicate current position with brighter digit display.

RATE knob sets metasequencer speed, that is, how often it will proceed to next step. As with confusion rate and algorithmic cycle, the unit is measure. So e.g. at rate of 4, metasequencer will move to the next step every 4 measures, according to current tempo and time signature.

LENGTH knob sets the program length, the value range is from 2 to 16 steps. Unused program steps will dim when you change this setting.

START button starts metasequencer. If the main sequencer is off, metasequencer will not trigger loading save states, it will update its position to indicate that it's running, but it will not work until you start the main sequencer.

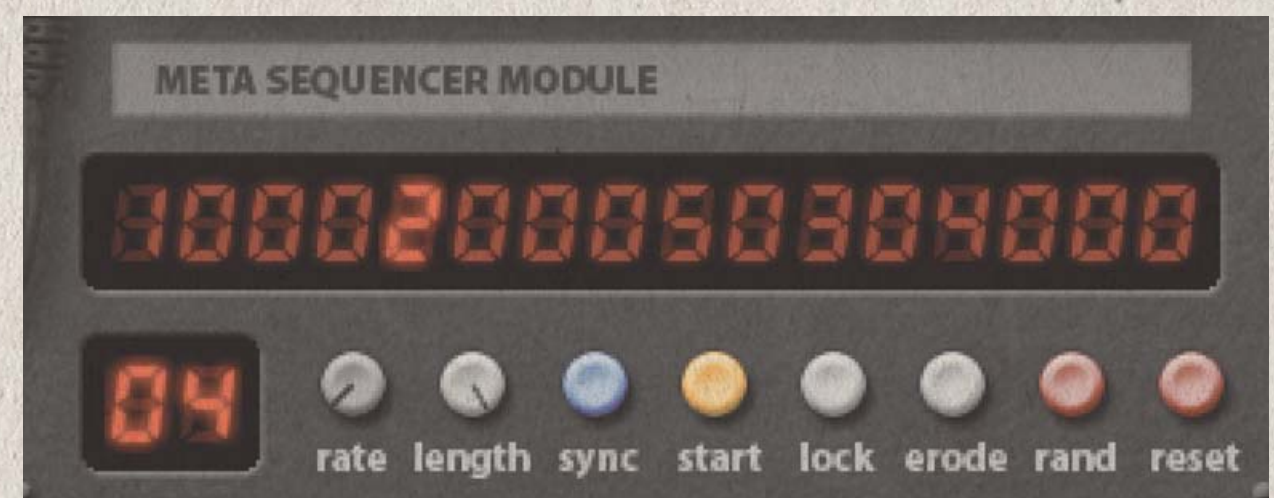
SYNC button has two functions. First is to synchronize metasequencer and main sequencer start buttons, so when SYNC is on, starting metasequencer will start the main sequencer. Second function is to synchronize main sequencer start with transport. Regardless of metasequencer state, when sync is on, main sequencer will start when you press play in host and stop when transport stop message is received.

When you save current tape to file, metasequencer state is being saved. Then when you load a tape, the machine will load metasequencer settings that come with it, saved data includes program, sequence length, rate and erosion status. This way a tape can be used as a pre-programmed track. If you don't want metasequencer settings being overwritten when loading a tape, use LOCK button, when it's on this portion of data will be ignored.

ERODE is metasequencer randomizer mode, when it's active, on each step the machine will randomize the next step value. Like other randomizers erosion takes advantage of algorithmic mode, if it's enabled.

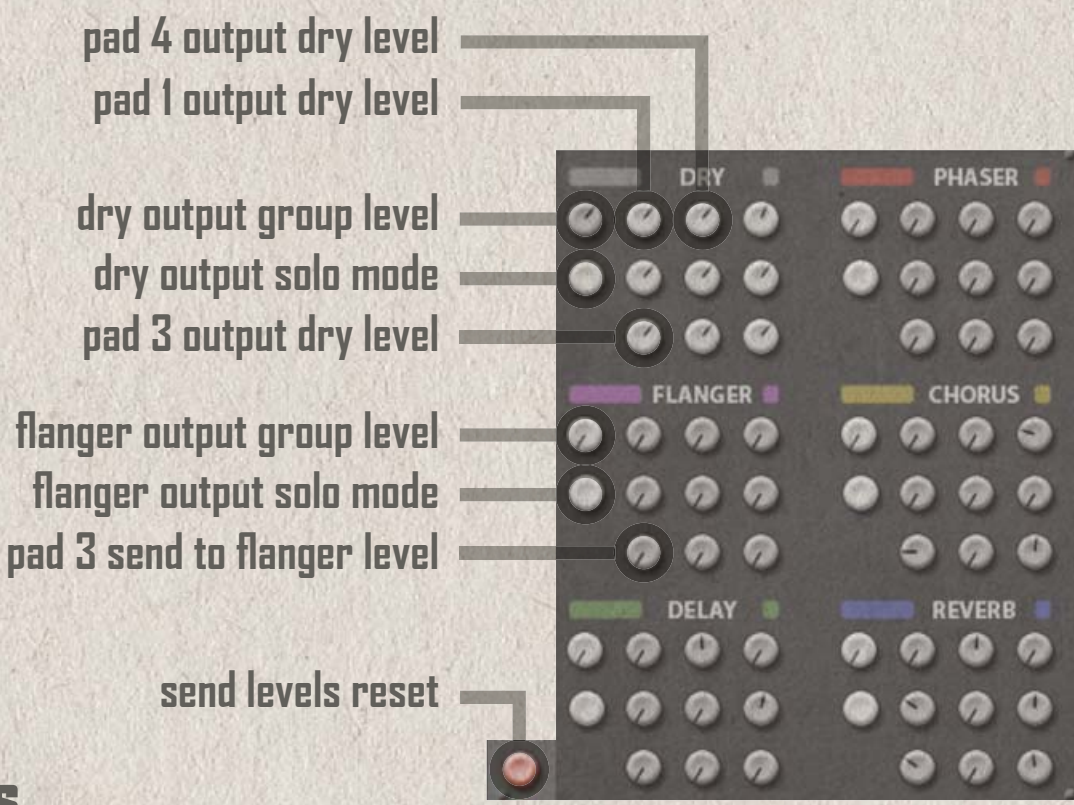
RAND button calls static randomizer, it will randomize program and sequence length.

RESET button will reset all metasequencer settings to default.



Send levels

Mark II version of Psychodrumma is equipped with rack of basic effects: phaser, flanger, chorus, delay and reverb connected to pad's outputs through levels mixer. There are independent level controllers between each pad and each effect and additional set for pad's dry outputs. Each set of controllers has a group controller, which will set all section levels together and section solo mode switch. In the bottom-left corner of effects rack panel there is send levels reset switch, it will set all dry levels to default and all effect send levels to zero.



Effects

Next to mixer matrix there are effects controllers. Each one has power switch, so it can be disabled without manipulating send levels. Above effects control section there is effects RESET switch, which will reset all effects to default settings.



Drift

DRIFT is effects rack randomizer, when engaged it will manipulate send levels and/or effects settings according to current randomization mode. In algorithmic mode, cycle loop will be ignored, as it would result in too short interval for this application. When DRIFT knob is fully counterclockwise, drift is off. When drift is on, the machine will pick a target level/controller state, a speed and then it will gradually change the controller state according to speed rate, until target state is reached. DRIFT controller level affects how often new targets are being set and speed range for their movement.

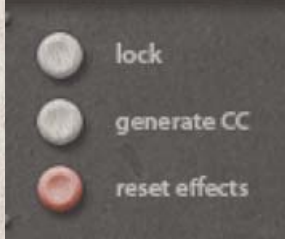
BOOST controller will multiply drifting controllers speed, from x1 to x10.

There are three drift modes, which can be switched with MODE button. In white mode, drift is applied to send levels, in blue mode drift is applied to effects controllers (except for power switches) and in green mode it applies to both of the above.

There is additional WARP mode for drift, when it's on, controllers will warp-jump to new target levels instantly.

Manipulating delay's time settings and reverb's pre-delay while these effects are processing incoming signal, may result in glitch effects. To avoid this, they can be locked from being affected by drift. The LOCK switch is in delay controllers section.

Drift settings are not being saved by memory module.



Effects rack additional switches

Send levels and effects settings are being saved by memory module and are being recalled when loading a save state. If you don't want effect rack setting being overwritten when reading save states, use LOCK switch, in the top-right corner of effects rack panel.



Kontakt can send midi messages to other instruments or effects. It is possible to apply drift to an external device. When GENERATE CC switch is on, Kontakt will send a CC message whenever an effect controller is being changed by user or by drift. Only effect controllers will generate CC messages. CC range is 20-31 and 105-113. If there is a need to change controllers numbers, they can be edited in fx rack script. The array with CC numbers is declared in the very beginning of the script.

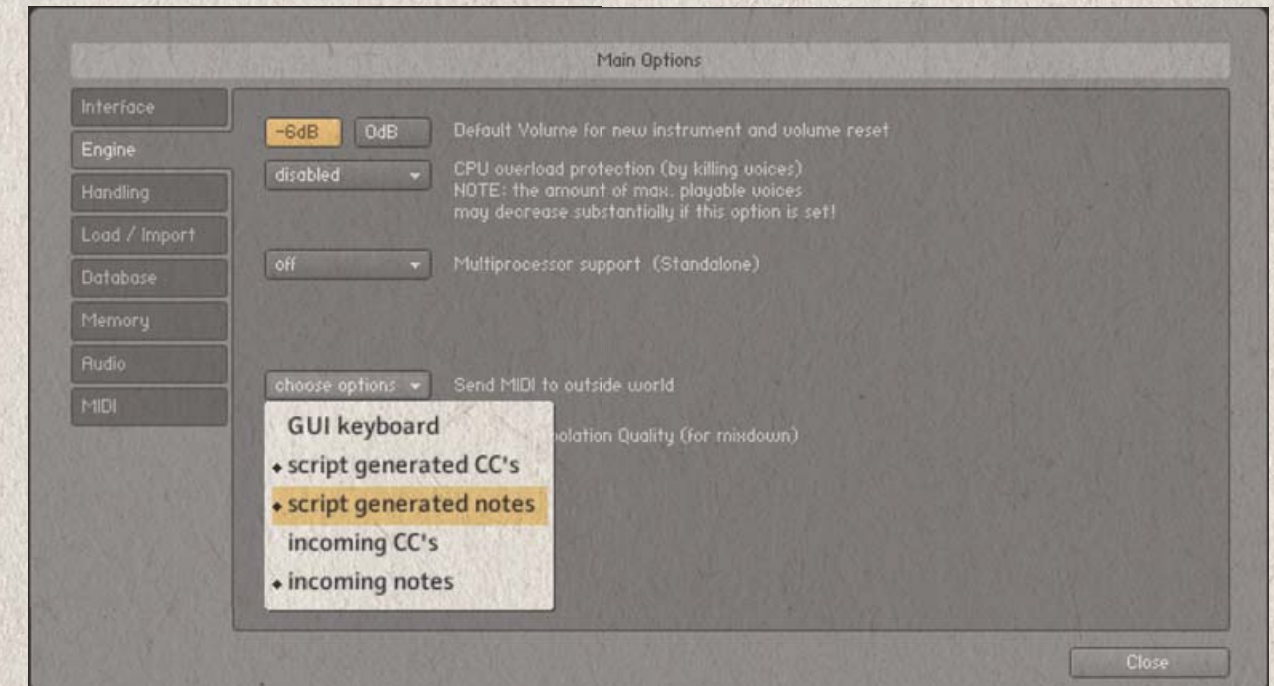
Activity monitor

There is graphical pad activity monitor on effects rack panel. 3x3 matrix display is following pad's output, when pad is triggered, its section will flash light. The purpose of this device is to make it easier to find which pad is generating sounds and set send levels accordingly. When you switch activity monitor button, the device will stop monitoring pads, now you can use it to put pads in solo mode, once you click on one of matrix cells, the pad will be playing solo, then you can turn other pads on and off. These solo modes work independently of front panel solo functionality. Switch activity monitor button again and all pads will switch back on and the device will resume monitoring.



Controlling external instruments

Kontakt can send generated notes and messages to external instruments via midi. It is possible to control another instrument with Psychodrumma sequencer. First you need to check, if midi output is enabled in Kontakt's options.



Psychodrumma can be used to generate notes, generate CC (as mentioned earlier on this page) and to transform incoming notes.

Normally, Psychodrumma is functioning as a drum machine, each note number is assigned to different sound. Music box module is not changing notes, but it is tuning the samples according to defined constraints. You can use music box module to control external tonal instrument, and generate abstract evolving melodies by changing the way the module works, using special modifier described on next page.

Music box modifier

Music box modifier can transform Psychodrumma from drum machine to midi melody generator. It is designed to send melodic patterns generated by sequencers and music box module to outside instruments. Or you can send back to Kontakt with virtual or real cable midi loop.

A note about midi channels: midi output channel number depends on input settings in Kontakt, when Psychodrumma is set to receive data from channel 1, it will output data to channel 1 as well. If you want to send transmitted data back to the same instance of Kontakt, you need to re-route transmission to another channel, or else you will create an infinite loop.

When you turn modifier on, using SPEC button, music box module will start to change note numbers, it will still tune the samples, but now different notes will be triggered. Note that, to make it useful you need to set pitch randomizing range on pads sequencers to a value greater than zero, else the machine will generate sequences of the same notes.

MUTE button will disable all audio output of Psychodrumma, it will continue generating notes and CC, but it will not generate audio signal. Using this button, has advantage over muting the output in host, it saves CPU cycles, as this way no audio is being processed inside Kontakt.

When the machine starts to shuffle note numbers of sequenced programs, it is likely to get overlapping notes. New note on messages will be generated, while previous note is still playing, the effect may be interesting, but there is option to prevent overlapping notes. Use KILL button to switch to 'kill overlapping notes' mode. In this mode, if a note is generated by the sequencer, all new notes with same number will be ignored until the first note stops playing.



Next to KILL button, there is note duration modifier slider. Normally Psychodrumma sequencer is generating notes which has duration range from 1/64 note to whole note (whole notes being rarely triggered). It works for a drum machine, but if you'd like to try it on e.g. piano, those short notes are not so desirable. This modifier changes generated duration range, in x2 mode the range is 1/32 to quarter note and in x4 mode it's 1/16 to half note. This modifier is only effective in special mode.

Next modifier is OCTAVE SHIFT. It simply shifts sequencer generated notes by an octave up, or down. It is also effective only in special mode.

Finally there are two OVERRIDE knobs, for velocity and lag settings. If they are set to a value other than zero, all pads will ignore their velocity/lag settings and will use override knobs settings. In case of lag, it will always set randomized value. Override knobs work regardless of special mode state.

In special mode the machine will also process incoming notes, if you choose to send incoming notes to Kontakt's midi out. Note numbers will be ignored and new note numbers will be assigned according to pad's tune setting and sequencer pitch range. Notes assigned to pads will use pad's pitch range settings, while other notes will use pad one setting. However, if pitch range of pad one is set to zero, note numbers will only be modified to match pattern scale, rounded to nearest number. Notes assigned to trigger sequences will be muted.

Note that because of the way Kontakt works, notes can't be really muted, ignored notes are being redirected to note number 0 (lowest note), with minimal velocity and duration. If this is a problem you may need to filter out lowest note numbers on input of controlled instrument.

Under the hood

In case you'd like to customize sounds under the hood, here's the outline of machine schematic. Each pad has its own 6 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 two groups contain sound from bank C. Following 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 18-53 are organized the same way but with sounds for banks B and C. 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 5400 different samples into this device. Or much more, if you used velocity layers...

Instrument InsertFx slots are not operational, nothing is being sent there. Main dry output is routed through 'Gainer' in Send Fx. If you'd like to use additional effects, you can use remaining slot in Group Insert Fx.

You can replace algorithmic Reverb with Convolution, reverb controls will not be operational anymore, but send levels and power button will work, as long as Convolution is loaded to the same effect slot.



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This concludes operators handbook. Thank you for your support.

If you have problems, questions or just want to share a tape, write to marcin@fairlyconfusing.net

Visit Psychodrumma page at:
<http://www.fairlyconfusing.net/psychodrumma.html>

You can look there for videos, tapes or possible updates.

SzcZ

