

grandPA

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Grandpa is a granular mono sampler for Eurorack modular synthesizers. Grandpa reads samples from a microSD card, accessible from the front panel and runs the same sound core as the microGranny 2. For each sample you can adjust: sample rate, crush, grain size, shift speed, attack, release (full release is hold), start and end position. There are two different samples with all their settings that can be triggered but only one of them can play at once. There are 6 buttons, 2 knobs and several LEDs to set the parameters.

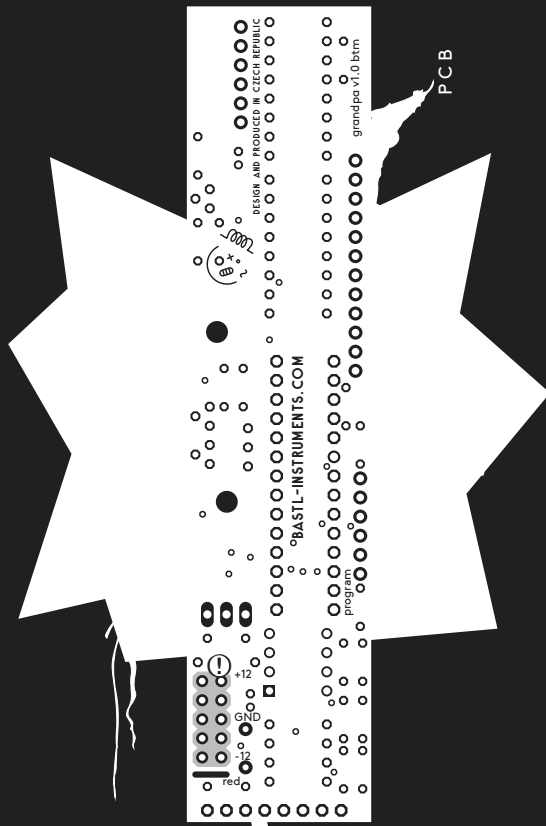
instruction

- 1 Display shows the name of the sample and graphically displays the value of a parameter when changed by the knobs. When the dot is lit in this representation it indicates important setting: for instance the original sample rate or static grain speed.
- 2 The function of the knobs depends on the color of RGB LED. For each channel A and B, all the parameters can be set independently. The last triggered channel will be affected by the changes. The PAGE button changes the color of the RGB LED to indicate the functions of the knobs:
 RED: sample rate / crush
 GREEN: grain size / shift speed
 BLUE: attack / release
 WHITE: start / end

- 3 Holding the function (FN) button while pressing another button does the following:
 FN > DOWN = SAVE (saves preset)
 FN > UP = SYNC (activates or deactivates grain shifting when sending trigger signals to the CV input)
 FN > PAGE = LOOP (activates or deactivates looping of the sample)
- 4 CV input which is assignable to any sound parameter. Holding the FN button and moving a knob (indicated by a white flash) on a specific page, will assign the CV input to control this sound parameter. the CV input can also be assigned to trigger grain shifts - this is done by activating the SYNC function.
- 5 the microSD card should be formatted by the standardSDformater software. The files on the SD card need to be in the root directory and have specific names e.g.: P0.wav -P9.wav, PA.wav -PZ.wav etc. The first letter of the name has to be a capital P and second letter 0-9 or A-Z (also capital). Samples have to be 22050hz, 16bit, mono wav files. (they can also be 44.1khz, but the sample rate will not allow pitch up then). You can remove the card from the device without powering it off. When you put the card back in hold the UP and DOWN buttons together for 2 seconds to reboot.
- 6 The SYNC and LOOP states are indicated by the two LEDs, while the FN button is pressed. (those LEDs normally indicate which sample is playing).

- 7 The UP and DOWN buttons are used to select a sample which is played back from the microSD card. (the name is shown on the display). Pressing those buttons while the PAGE button is pressed, changes the preset (the display shows the preset's name). Presets consist of the two loaded samples with all their settings.
- 8 The TRIGGER A and TRIGGER B buttons are manually triggering the sounds.
- 9 The output is DC coupled in range 0-5V where 2.5V is the silence in the sample. This enables you to use it as a CV source, with specially prepared slow running wave shapes stored as wav files.

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features

- granular sampler with microgranny 2.0 sound core
- plays .wav files from a microSD card (22050 Hz, 16 bit, mono)
- 12bit output
- adjustable sample rate (can go up to 44.1 kHz)
- trigger inputs for playing 2 different samples with different settings at the same time
- each trigger input has a button for manual triggering
- RGB led to indicate menu page (on each page the two knobs adjust different parameters)
- crush distortion
- adjustable grain size and grain shift (positive or negative)
- digital attack decay envelope
- adjustable start and end points
- no interpolation between grain jumps
- the CV input can be set to control any one of each sample's parameters
- grain sync - CV input can act as trigger input for triggering the grain shift
- 35 different samples can be loaded from the microSD card (they need to be named in a specific way)
- 35 presets (all settings of the 2 loaded samples are one preset)
- CV input range: 0-10V
- handmade in Brno, Czech republic
- breakout for FTDi USB adapter for hacking the opensource firmware (see github)

technical details

- 5HP width
- 35mm deep (skiff friendly)
- power consumption: +12 <10mA, -12 <10mA
- PTC fuse and diode protected 10 pin power connector
- requires +5V from the power supply bus board

Connecting module to your system

Before connecting the ribbon cable to this module disconnect your system from power !

⚠ Double check the polarity of the ribbon cable and that it is not shifted in any direction. the red cable should match the -12V rail both on the module and on the bus board !

please make sure of the following

- you have a standard pinout eurorack bus board
- you have +12V and -12V rails on that bus board
- the power rails are not overloaded by current

Although we put protection circuits in the device, we do not take any responsibility for damages caused by wrong power supply connection. After you connected everything, double-checked it and closed your system, so no power lines can be touched by hand, turn on your system and test the module.

Take it Carefully