

Home

[Edit](#) [New page](#)[Jump to bottom](#)

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MiniDexed - Quick Start Guide

A brief introduction to using MiniDexed

NOTE: This Quick Start Guide assumes a Raspberry Pi 2, Zero 2 or later, with Rotary Encoder and Display. Other hardware configurations are possible.

What is MiniDexed?

MiniDexed is a synthesizer that emulates eight DX7s, an 8-channel mixer, reverb, and a compressor as acting a limiter — all running on a Raspberry Pi (version 2 or higher).

The DX7 simulation is based on the excellent open-source software Dexed.

TG – Tone Generator

In MiniDexed, each Dexed instance is referred to as a Tone Generator (TG) — labeled TG1 to TG8. For each TG, you can adjust the sound (DX7 patch), volume, panning, reverb send, detune, cutoff, resonance, pitch bend, portamento, poly/mono mode, modulation, and the MIDI channel.

Voice

A Voice refers to a single DX7 patch. Voices are stored in SysEx banks, which can be copied to the SD card. Each bank contains 32 voices.

Example: The four DX7II Factory banks

```
D:\sysex\voice\000001_DX7IIVox32.syx
D:\sysex\voice\000002_DX7IIVox32b.syx
D:\sysex\voice\000003_DX7IIVox64.syx
D:\sysex\voice\000004_DX7IIVox64b.syx
```



Refer to the MiniDexed Wiki for required file name formats.

Performance

A Performance stores the complete configuration of all 8 Tone Generators, plus the reverb settings. Performances are organized into banks, each capable of holding up to 128 Performances. They are saved on the SD card.

Example: The performances banks included with MiniDexed

```
D:\performance\001_Seed
D:\performance\002_Greenhouse
D:\performance\003_Oasis
D:\performance\128_Laboratory
```



Performances from the Laboratory bank

```
D:\performance\128_Laboratory\000001_INIT-Multitim..ini
D:\performance\128_Laboratory\000002_MultiTimbral.ini
D:\performance\128_Laboratory\000003_pure DX7.ini
D:\performance\128_Laboratory\000004_Single.ini
D:\performance\128_Laboratory\000005_DoubleLayer.ini
D:\performance\128_Laboratory\000006_Quadro.ini
D:\performance\128_Laboratory\000007_OctaThin.ini
D:\performance\128_Laboratory\000008_OctaFat.ini
D:\performance\128_Laboratory\000009_1TG Perf..ini
D:\performance\128_Laboratory\000010_Drum Map.ini
```



Getting Started

Power up your device and set your MIDI keyboard to **MIDI Channel 1**.

Using the Encoder

With the encoder, you control everything:

- Rotate: Move through the Top-Level menu or adjust a parameter.

- Short press: Enter a submenu.
- Long press: Go up one level in the menu
- Press and Turn: Switch TGs in the submenus like Voice, Bank, Volume, Pan, ReverbSend, Detune, Cutoff, Resonance, Midi Channel.
- Double-click: Don't panic - that's the Home function! Return to the top-level menu at "TG1". Anyone who has equipped their device with buttons or operates it with the help of a MIDI controller will of course have to rethink this accordingly.

Menu table

TG1	TG2	TG3	TG4	TG5	TG6	TG7	TG8
Voice	Voice	Voice	Voice	Voice	Voice	Voice	Voice
Bank	Bank	Bank	Bank	Bank	Bank	Bank	Bank
Volume	Volume	Volume	Volume	Volume	Volume	Volume	Volume
Pan	Pan	Pan	Pan	Pan	Pan	Pan	Pan
ReverbSend	ReverbSend	ReverbSend	ReverbSend	ReverbSend	ReverbSend	ReverbSend	ReverbSend
Detune	Detune	Detune	Detune	Detune	Detune	Detune	Detune
Cutoff	Cutoff	Cutoff	Cutoff	Cutoff	Cutoff	Cutoff	Cutoff
Resonance	Resonance	Resonance	Resonance	Resonance	Resonance	Resonance	Resonance
Pitch Bend	Pitch Bend	Pitch Bend	Pitch Bend	Pitch Bend	Pitch Bend	Pitch Bend	Pitch Bend
Portamento	Portamento	Portamento	Portamento	Portamento	Portamento	Portamento	Portamento
Poly/Mono	Poly/Mono	Poly/Mono	Poly/Mono	Poly/Mono	Poly/Mono	Poly/Mono	Poly/Mono
Modulation	Modulation	Modulation	Modulation	Modulation	Modulation	Modulation	Modulation
Midi Channel	Midi Channel	Midi Channel	Midi Channel	Midi Channel	Midi Channel	Midi Channel	Midi Channel
Edit Voice	Edit Voice	Edit Voice	Edit Voice	Edit Voice	Edit Voice	Edit Voice	Edit Voice

Effects	Master Vol.	Performance
Compress	Master Vol.	Load
On/Off		Save
Reverb		Overwrite
Enable		New
Size		Save as default
High damp		Delete
Low damp		Bank
Low pass		PCCH
Diffusion		
Level		

It takes some practice to master the operation with only one encoder.

Loading a Performance

- At the top-level menu, navigate to Performance.
- Press the encoder once to open the submenu, the display will show "Performance" and "Load".
- Press the encoder again to access the Performance selection.
- Rotate to select a Performance and press to load it.

Change the Performance Bank

- At the top-level menu, navigate to Performance.
- Press the encoder once to open the submenu
- Navigate to Bank
- Press the encoder again to access the Bank selection.
- Rotate to select a Performance Bank and press to load it.
- The quickest way to access the „Performance Load menu“ from here is this: Long press – rotate left to "Load" then short press and you'll be back in the Performance Load menu.

Master Volume

- Start from the top level menu and navitgate to Master Volume.
- Press once: "Master Volume" appears with a volume bar.
- Rotate to set the level.
- Long-press to return to the previous menu.

Multitimbral Operation

MiniDexed can be used in a variety of ways. The included Performances are mostly single-player sounds, meaning the tone generators are layered and all play the same notes as those played by the MIDI keyboard. However, it is also possible to control multitimbral sounds from a DAW. The Performance "MultiTimbral" in Bank 128_Laboratory is a good starting point for using a DAW or sequencer. Each TG is assigned its own MIDI channel:

- TG1 → MIDI Channel 1
- TG2 → MIDI Channel 2
- ...
- TG8 → MIDI Channel 8

Laboratory 128:002 – MultiTimbral.ini

The tone generators TG1-8 receive on MIDI channels 1-8 and can be edited individually:

	TG1	TG2	TG3	TG4	TG5	TG6	TG7	TG8
Voice	FENDERHODE	BR TRUMPET	FLUTE 1	LESLIE	CLAV ENS	B.J. STRG	FRETLESS 1	VIBE 2
MIDIChannel	1	2	3	4	5	6	7	8
Volume	64	48	53	53	64	64	64	64
Pan	3	3	3	3	3	3	3	3
Detune	0	0	0	0	0	0	0	0
Cutoff	99	99	99	99	99	99	99	99

	TG1	TG2	TG3	TG4	TG5	TG6	TG7	TG8
Resonance	0	0	0	0	0	0	0	0
NoteLimitLow	0	0	0	0	0	0	0	0
NoteLimitHigh	127	127	127	127	127	127	127	127
ReverbSend	99	99	99	99	99	99	99	99

Laboratory 128:003 – pure DX7

Only TG1 receives on MIDI channel 1; MiniDexed in "DX7 mode:"

	TG1	TG2	TG3	TG4	TG5	TG6	TG7	TG8
Voice	INIT miniD	INIT miniD	INIT miniD	INIT miniD	INIT miniD	INIT miniD	INIT miniD	INIT miniD
MIDIChannel	1	0	0	0	0	0	0	0
Volume	64	48	48	48	48	48	48	48
Pan	3	3	3	3	3	3	3	3
Detune	0	0	0	0	0	0	0	0
Cutoff	99	99	99	99	99	99	99	99
Resonance	0	0	0	0	0	0	0	0
NoteLimitLow	0	0	0	0	0	0	0	0
NoteLimitHigh	127	127	127	127	127	127	127	127
ReverbSend	99	99	99	99	99	99	99	99

Laboratory 128:010 – DrumMap.ini

MiniDexed as a drum machine, TG1 - TG8 receive on MIDI channel 1, different sounds split on the keyboard:

	TG1	TG2	TG3	TG4	TG5	TG6	TG7	TG8
Voice	TR-Kick	TR-Snr.Gat	TR-clHat	TR-clHat	TR-clHat	DM-Ride	TR-Ambos	TR-Toms
MIDIChannel	1	1	1	1	1	1	1	1
Volume	127	77	34	32	40	42	56	77
Pan	64	56	56	56	56	56	77	64
Detune	0	0	0	0	0	0	0	0
Cutoff	99	99	99	99	99	99	99	99
Resonance	0	0	0	0	0	0	0	0
NoteLimitLow	36	38	42	44	46	51	56	41
NoteLimitHigh	36	38	42	44	46	51	56	41
ReverbSend	32	32	32	32	39	43	31	42

These tables do not contain all the parameters of a performance, they are only intended for easy understanding. The NoteLimitLow and NoteLimitHigh lines are not yet accessible from the MiniDexed menu.

Useful Links

- MiniDexed Homepage - <https://github.com/probonopd/MiniDexed>
- MiniDexed Wiki - <https://github.com/probonopd/MiniDexed/wiki>
- Dexed Homepage - <https://asb2m10.github.io/dexed/>
- Sounds for MiniDexed - <https://github.com/Banana71/Soundplantage>
- 🙌 For further questions, visit the [MiniDexed Discussion Forum](#)

Acknowledgments

This MiniDexed - Quick Start Guide was written by [Banana71](#).

+ Add a custom footer

▼ Pages 15

Find a page...

▼ Home

- MiniDexed - Quick Start Guide
- What is MiniDexed?
- TG – Tone Generator
- Voice
- Performance
- Getting Started
 - Using the Encoder
- Menu table
- Loading a Performance
- Change the Performance Bank
- Master Volume
- Multitimbral Operation
 - Laboratory 128:002 – MultiTimbral.ini
 - Laboratory 128:003 – pure DX7
 - Laboratory 128:010 – DrumMap.ini
- Useful Links
- Acknowledgments

▸ Algorithms

▸ Development

▸ Exercises

▸ Fault Finding

▸ Files

▸ Hardware

▸ Kits, PCBs and Products

▸ Menu
▸ MIDI Implementation
▸ MIDI Thru
▸ Networking
▸ Performances
▸ Recommended Resources
▸ Voice Parameters (VCED)

+ Add a custom sidebar

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