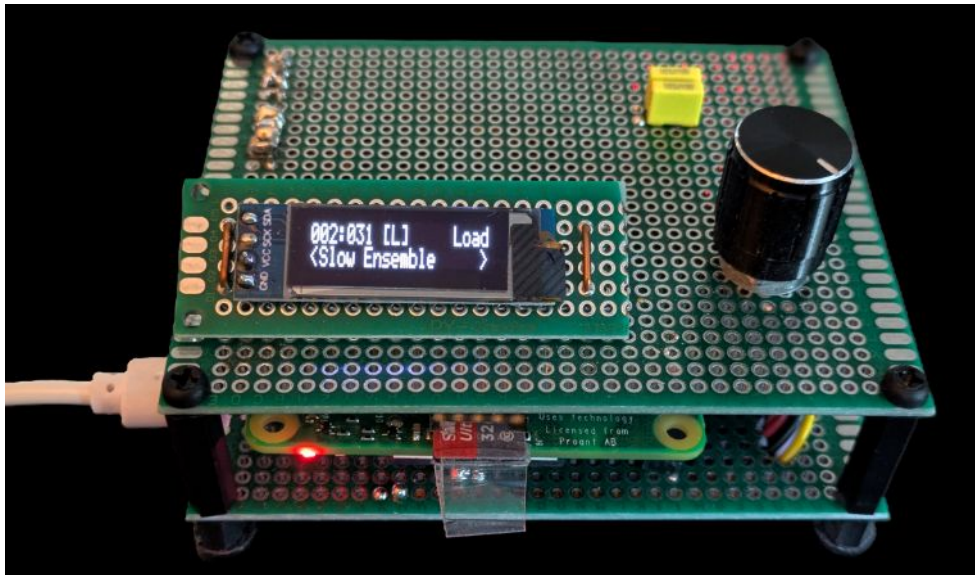# mini
Dexed

Quick Start Guide

A brief introduction to using the miniDexed

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For Raspberry Pi 2 and later, with encoder and display – like the Dtronics DT-DX

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What is a miniDexed?

The **miniDexed** is a DIY 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 the 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
```

Geting Started

Power up your miniDexed 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 livel 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 miniDexed 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

The 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 sequncer. Each TG is assigned its own MIDI channel:

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

Each Tone Generator can be edited independently.

Usefull 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

Performance Tabels

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.

	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	54	53	53	53	53	53	53	53
Pan	64	64	63	64	63	64	64	64
Detune	0	-3	3	-3	3	1	-4	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 128:002 – MultiTimbral.ini
The tone generators TG1-8 receive on MIDI channels 1-8

	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	64	63	64	63	64	63	64	63
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 128:003 - pure DX7
Only TG1 receives on MIDI channel 1; the MiniDexed in „DX7 mode"

	TG1	TG2	TG3	TG4	TG5	TG6	TG7	TG8
Voice	TR-Kick	TR-Snr.Gat	TR-cHiHat	TR-cHiHat	TR-cHiHat	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	64	56	64	72	72	64	63
Detune	0	11	7	-1	26	0	0	0
Cutoff	99	98	88	91	92	92	99	90
Resonance	0	0	33	42	50	40	0	4
NoteLimitLow	0	37	42	44	46	48	50	56
NoteLimitHigh	36	41	43	45	47	49	55	127
ReverbSend	14	48	32	32	39	43	31	42

Laboratory 128:010 – DrumMap.ini
The miniDexed as a drum machine, TG1 - TG8 receive on MIDI channel 1, different sounds split on the keyboard