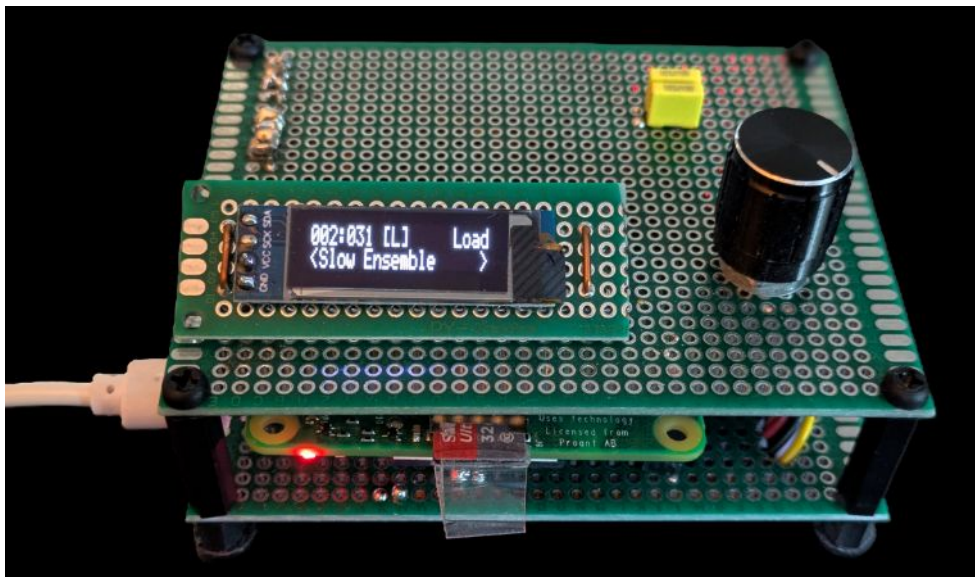# mini
Dexed

Quick Start Guide

A short introduction to the operation of the MiniDexed

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, a 8-channel mixer, a reverb, and a compressor acting as 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
```

The required file name format is explained in the **miniDexed Wiki**.

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
```

The practice

Power up your miniDexed and set your MIDI keyboard to MIDI Channel 1.

The Mighty Encoder

With the encoder, you control everything:

- **Turn the encoder:** Move sideways through the Top-Level menu or tweak a parameter.
- **Short press:** Dive one level deeper into the menu.
- **Long press:** Jump one level up
- **Press and Turn:** Change the TG Sideway in the menus 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 but it gets better with time, believe me 😅

Loading a Performance

- At the top-level menu, rotate the encoder to select **Performance.**

- Press the encoder once: 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.

🎸 **Keep on rockin'!**

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.

Master Volume

By turning the encoder left or right, you scroll through the top-level menu items.

- Rotate the encoder to scroll through the top-level menu until you reach **Master Volume**.

- Press the encoder once to select it.

- The first line of the display will show "Master Volume"; the second line will display a volume bar.

- Rotate the encoder to adjust the output volume.

- Long-press the encoder to return to the previous menu level.

Multitimbral Operation

The Performance **"MultiTimbral"** in Bank **128_Laboratory** is a perfect place to start if you want to fire different DX7 sounds from a sequencer.
The channel mapping is as follows:

- TG1 → MIDI Channel 1

- TG2 → MIDI Channel 2

- ...

- TG8 → MIDI Channel 8

Settings for each Tone Generator (TG1–TG8) can be adjusted individually in their respective menus.

Usefull links

MiniDexed Homepage - https://github.com/probonopd/MiniDexed
MiniDexed Wiki - https://github.com/probonopd/MiniDexed/wiki
MiniDexed Discussions - https://github.com/probonopd/MiniDexed/discussions
Dexed Homepage - https://asb2m10.github.io/dexed/
Sounds for miniDexed - https://github.com/Banana71/Soundplantage

👉 For any further questions, please visit the MiniDexed discussion forum

Tabels

Some parameters of a performance in table format.
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