# MSQ-CC-LRE V2

MotionSeQuencer for ControlChanges
for 2xLRE8x2 Boards
for 1x LRE5-LCD2 Boards
Synth-Patch-Editor & Motion-Sequencer 4 ControlChange (= CC-Automation)

## Introduction

Controls and automate a Nord Drum2 (Drum-Synth )NORD DRUM 2

**It acts as:**
- **Midi Merger** NTE,CLK,PC merge with CC... - **Patch Manager** it replaces the Synths internal Patch Storage, each PC Number from your Sequencer is added by the BANK CC (CC 32), where each Nr is ADD 128 PC Numbers more...
- **Motion Sequencer** Record your Controller Movements in a Sequence in 32th Resultion @ maximal 256 Steps length

### Features

- **Remote your Synths** by: 8x Midichannels with up to 32x Control Change (CC)
- **Save the Patches** and dump it to Synth
- **Load hundrets of Patches** via received Program Change + the Bank-CC (CC32)
- **Save Patches** vie CC24 + CC value 0-127... when sending before a BankCC32 you can expand that to 128×128 patches
- **Record CC-Motion-Sequences** - **PLAY Motions-Sequences** up to 256 steps @ 32th rate - **VELOCITY MORPH** Add Velocity-Ammount to CCs
- **MERGE** incoming Midi-Notes/Clock/Pitchbend with Automated CCs
- **Set Sequencer Beatstructure** - how to interprete Clock-ticks (4/4, 5/4, 6/4, 7/4...) - CC23
- **Global Page**: for example you use 8 simular Drum-Voices, with the Global you have 8 channel strips with dedicated Controlls, for example:
8xVolume, 8xTone/Noise-Mix, 8xDistortion, 8xClick
if you have one Synth over 2xMSQ_CC_LRE Tracks(booth set to MidiChannel 0, to get 64CCs instead of 32), then the Global Page: have the abillity to show/edit a parameter from Track1Voice on Track1Global, and from Track2Voice on Track2Global... it depends how you set the Midichannel in the Systemsettings (which are hardcodet but via Mapping Array changeable)
- for one multipart-synth, MSQ_CC_LRE do all the Preset Store, and Automations, so it is one Unit > to use the Unit in a other way would make all the Patches (128×128 patches) useless, so once done, its bound to it, load all with Programchange! minimal is better here, there will be other **MSQs** outthere see MSQ-CC-BCR

# Hardware Requirements

**External Requirement:**(for example)

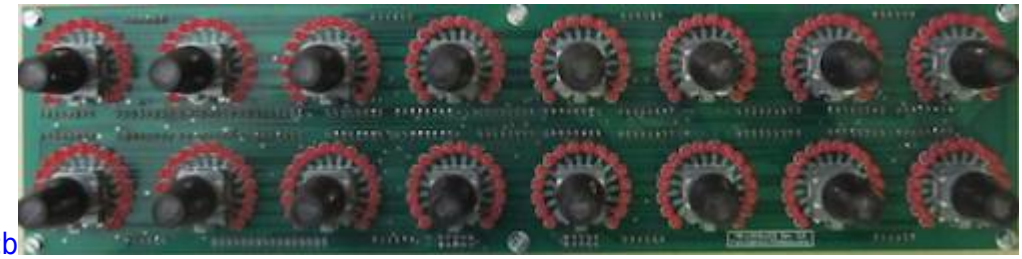
- Melody/Clock Source with ProgramChange-Output: midibox_seq_v4l oops that dont do PC...
- Melody/Clock Destination: NordDrum 2

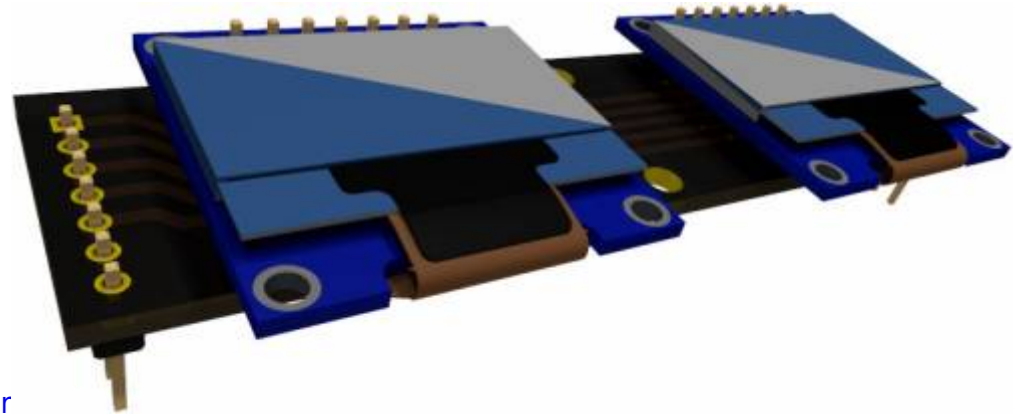
**Midibox:**

- 1x core32
- 1x LRE5-LCD2

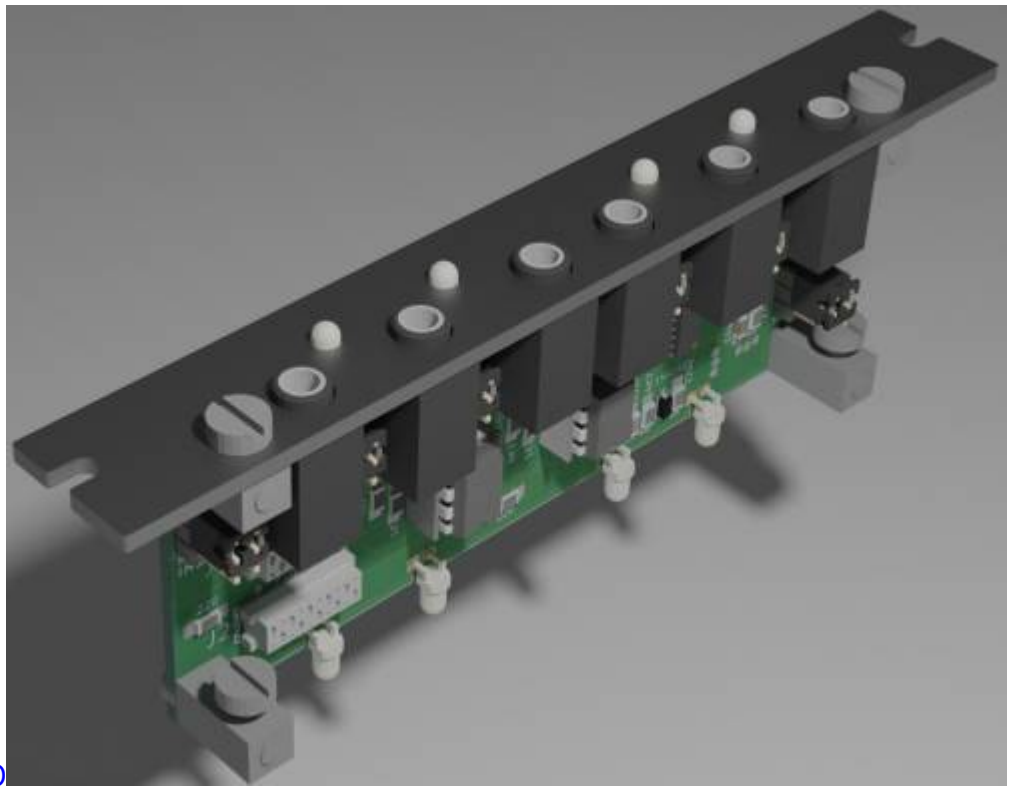



- 2x mb-lre8x2cs_pcb





- 8x LRE-OLED-Bar
- 17x SSD1306 OLED Screens (smalles variant, 7 Pin)
- 1x DINX4



- 1x Euro-Midi-IO
- SD-Card, formated with FAT32
- Soldering Iron, Wires, PCB....
- USB Power Supply

## Setting

#### Cabeling MIDI

MidiIO PortB Out »> Synth Midi IN
MidiIO PortB In »> Clock+Notes

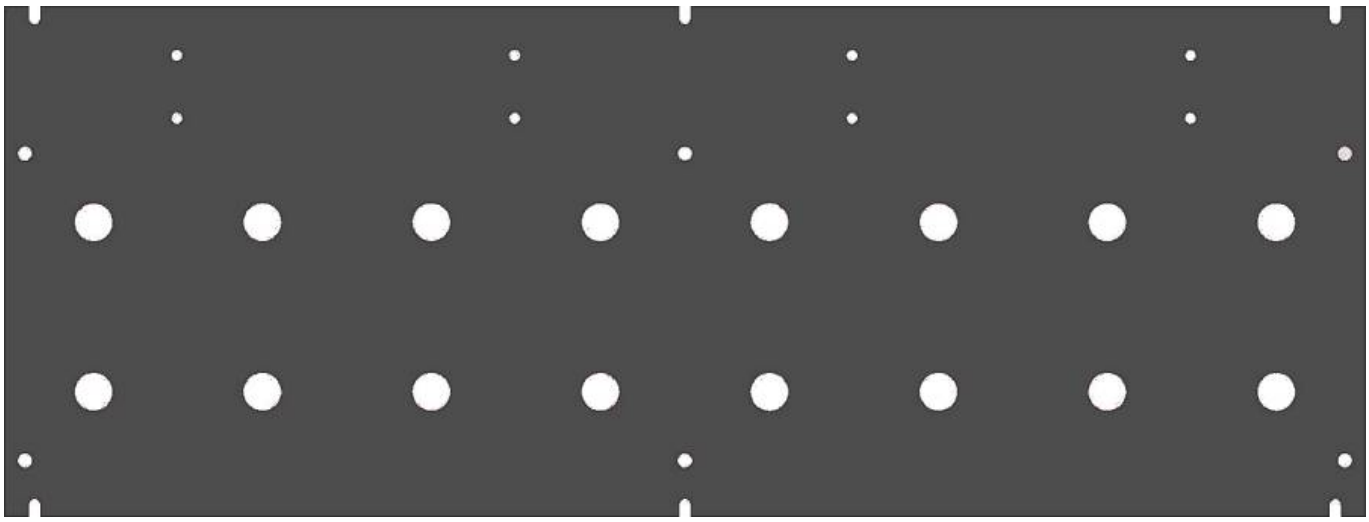
#### Cabeling Modules




### Frontpanels

### MBHP

see LRE-OLED-Bar

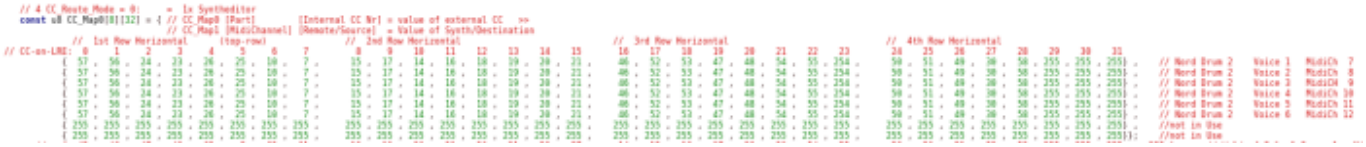


# Software

# Firmware

V2. from x.02.2022msq_cc_lre_v2.norddrum2.zip - published when finished

Initialized for a NordDrum2 - but change-able in Mapping via a Array in Sourceode or via System-Menue:
this is the maping which says wich of the 32 internal CCs are one of the outhernal CCs (0-127):



This Mapping says which one of the 32 internal CCs are positioniered in the Mixer/Overview/Channelstrip-Mode



there are 8 deep edit pages, and 8 overview pages.

# CC Routing to Synths

MSQ_CC_LRE internal i have 8×32 CCs, they are always identical.
but with a simple input output matrix i can decide which CC it gets in real world.
each of the 8 Part can have midichannle 0-15...
So we talking about Mapping... in the moment it is made in the source code with a simple array.

# To Do

Since we have 18 Screens, write the code for it - special the labeling > Sys
Make a System Menue to set CC NRs on the fly...

maybe scale min max values for CC: for example different synths have only 0-3value instead of 0-127, by different functions like WAVEFORM...) - this will be interesting when using other synths then nord drum...

# Resources

# Community users working on it

- **Phatline** = Programming, Documentation...

Just let a Private message on the forum to user already involved

From:
https://midibox.org/dokuwiki/ - **MIDIbox**

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**https://midibox.org/dokuwiki/doku.php?id=msq-cc-lre-v2&rev=1643992197**

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