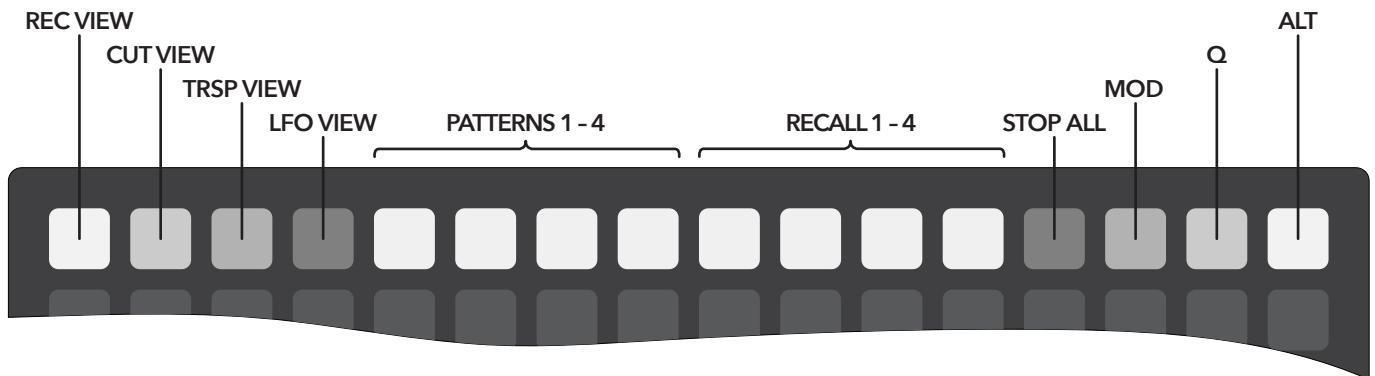


GRID NAVIGATION:

GRID NAVIGATION is referred to as the top row of the grid and is accessible from all pages.

- Press **REC VIEW** - **LFO VIEW** to change the grid page accordingly. To enter **CLIP VIEW** hold **ALT** and press **Q**.
- Press **STOP ALL** to stop all tracks.
- Press **Q** to toggle *grid press quantization* on/off. The *quantization value* is set either in the global parameter section or in **CLIP VIEW**.
- **MOD** is a modifier key and used for different button **COMBOS**.

COMBOS:

- Hold **ALT** and press **REC VIEW** to clear the softcut buffer of **all** tracks.
- Hold **ALT** and press **MOD** to set the playback position of all playing tracks to the first step (loops are cleared).
- Hold **ALT** and press **STOP ALL** to trigger **ALT RUN** (see **REC VIEW**).
- Hold **MOD** and press **ALT** then release **MOD** to lock into **HOLD MODE** (see **CUT VIEW**). Press **MOD** to unlock.

PATTERNS 1 - 4:

Each **PATTERN** slot can store and loop a sequence of key presses. Key presses for **TRANSPOSE** and **LFO** are currently not recorded.

- Press an empty **PATTERN** slot to **arm** recording (indicated by a fully lit pad).
- Enter a sequence of key presses. Press the **PATTERN** slot again to **loop** sequence (looping slots are slightly less bright than armed slots).
- Press **PATTERN** slot again to stop loop (inactive **PATTERN** slots are slightly brighter than empty slots).
- Hold **ALT** and press the corresponding pad to clear the slot.

RECALL 1 - 4:

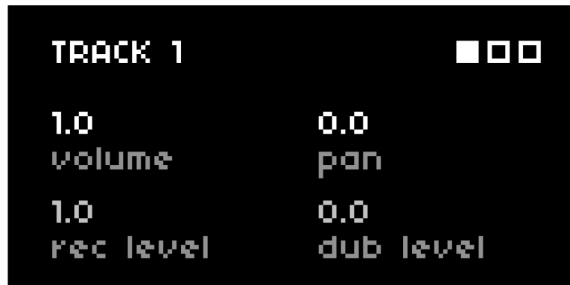
Each **RECALL** slot can **store** specified key presses. Key presses for **TRANSPOSE** and **LFO** are currently not stored.

- Press an empty **RECALL** slot to **arm** (indicated by a fully lit pad).
- Press keys that you wish to store the position of. Press the **RECALL** slot again to **store** the key states (slots with data are slightly less bright than armed slots).
- Press **RECALL** slot to recall stored key states.
- Hold **ALT** and press the corresponding pad to clear the slot.

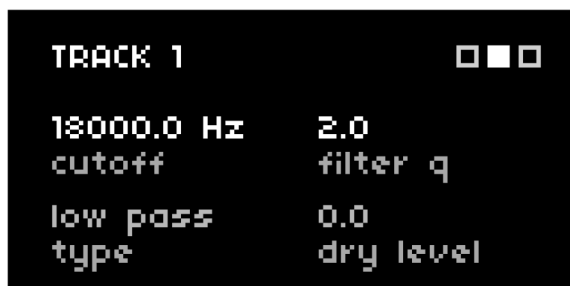
MAIN SCREEN:

The main screen consists of 3 pages and is displayed on **REC VIEW**, **CUT VIEW** and **TRSP VIEW**.

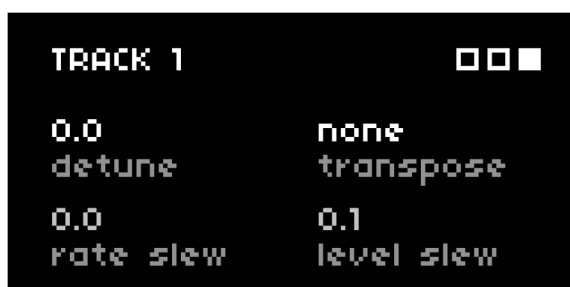
Use **ENC1** to scroll or alternatively **K3** to cycle through the pages. Use **K2** to toggle between the top and bottom row (active row is highlighted) and use **ENC2** and **ENC3** to change the corresponding parameter values.



- ▶ **volume: (0 - 1)**
- ▶ **pan: (-1 - 1)**
- ▶ **rec level: (0 - 1)**
- ▶ **dub level: (0 - 1)** 1 = 100% of the previous recording material is preserved.



- ▶ **cutoff: (20 - 18000)**
- ▶ **filter q: (0.01 - 4)** higher "resonance" at lower values
- ▶ **type: (low pass, high pass, band pass, band reject, off)**
- ▶ **dry level: (0 - 1)** dry signal level (disabled when filter type is set to "off".



- ▶ **detune: (-1 - 1)** track speed (+/- 1 octave)
- ▶ **transpose: (15 steps)** center value (8) = no transposition
- ▶ **rate slew: (0 - 1)** slew of track speed changes
- ▶ **level slew: (0 - 1)** slew of volume changes

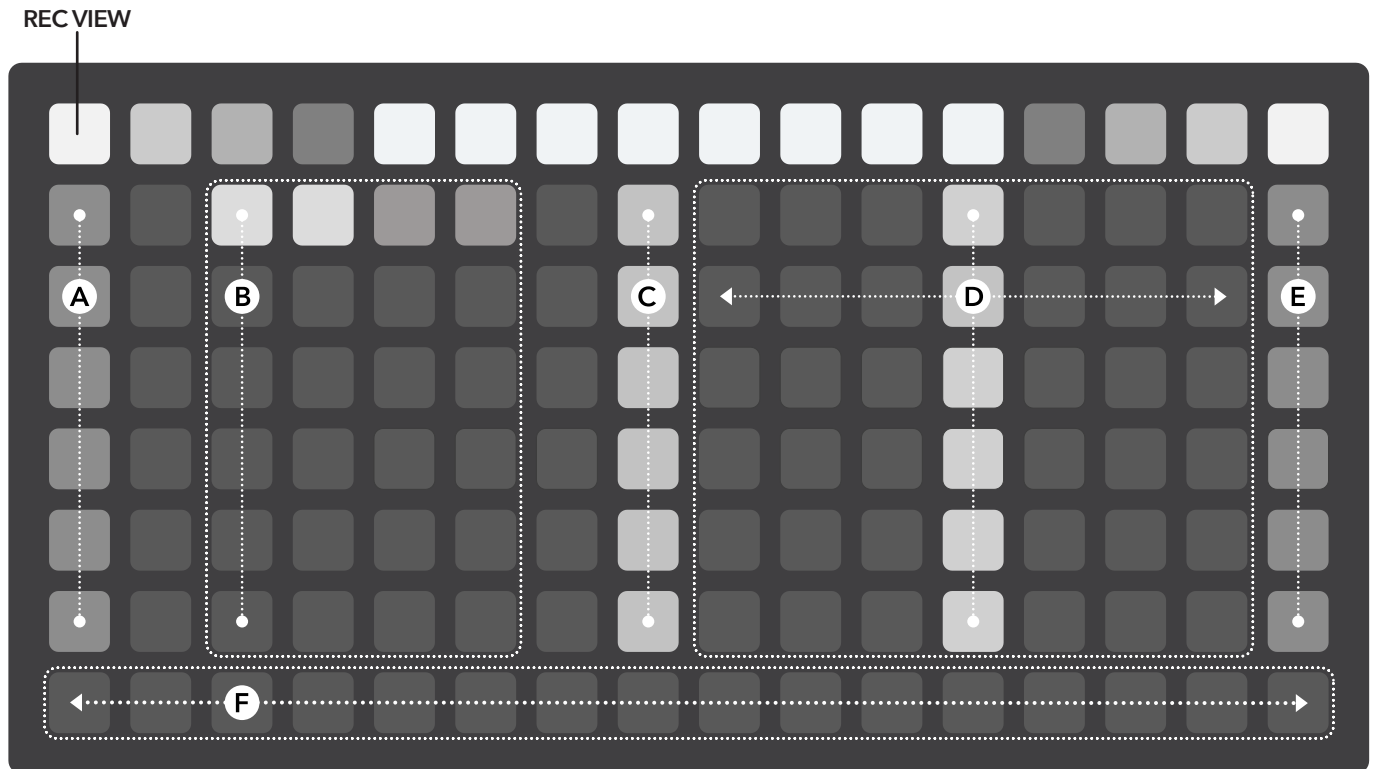
GLOBAL PARAMETERS:

In the parameter section for mlre there are three sections: **global**, **tracks** and **modulation**. The parameters for track and modulation are accessible over the grid/ main menu interface. Transposition scale and rec threshold are only available over the **global** menu. All parameters are midi-mappable.



- ▶ **scale: (scales)** transposition scales specified in *mlre.lua*
- ▶ **quant div: (16 steps)** value for **Q** (see **CLIP VIEW**)
- ▶ **rec threshold: (-40 - 6)** threshold for *one-shot-recording*
- ▶ **auto-randomize (off, on)** see **REC VIEW**

REC VIEW:



- A:** Toggle **RECORD** for tracks 1-6. Hold **ALT** and press the pad of the corresponding track to activate **one-shot recording**.
- B:** Select **FOCUS** for tracks 1-6. Hold **ALT** and press row to **tempo map** the corresponding track to system clock.
- C:** Toggle **REVERSE PLAYBACK** for tracks 1-6.
- D:** Select **SPEED** for tracks 1-6 (+/- 3 octaves). Press **ALT** + **center key** to randomize **track speed, playback direction, pan** and **loop points**.
- E:** Toggle **PLAYBACK** for tracks 1-6. Hold **ALT** and press pad to toggle **track select mode** for the corresponding track.
- F:** **CUT VIEW** of focused track.

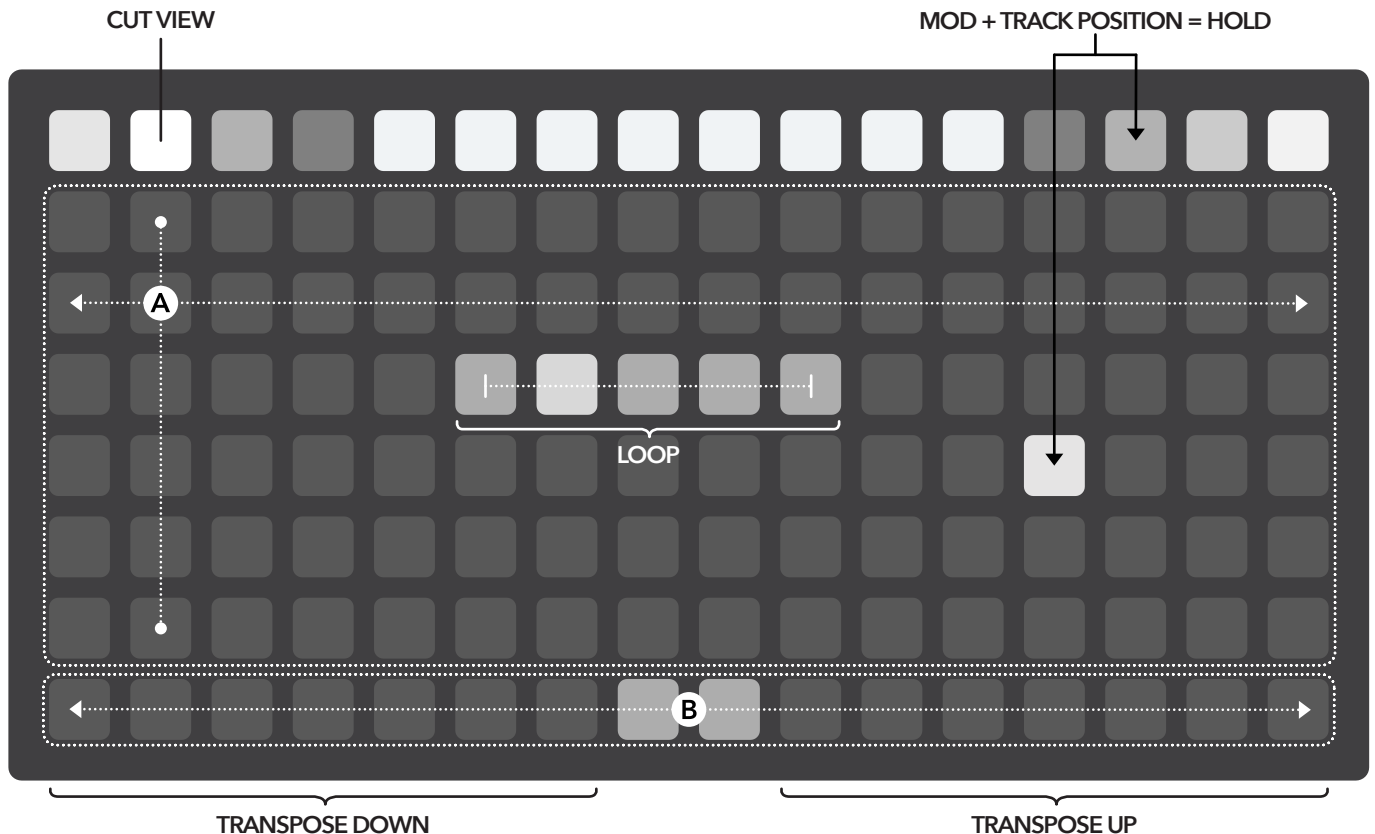
One-shot recording:

- When **one-shot recording** is activated for a track, **RECORD** is turned **on** and **PLAYBACK** starts at the first step, when the threshold specified in the global parameters "**rec threshold**" is reached. **RECORD** is deactivated for the corresponding track after one cycle.

Track select mode:

- When a track is in **track select mode** the corresponding LED is slightly brighter than the others. These tracks respond to two additional functions:
- MIDI start message (tracks start playing at first step)
- Alt Run Combo (**ALT** + **STOP ALL**): playing tracks will stop and stopped tracks will play.
- If "**auto-randomize**" is turned on in the global settings, **track speed, playback direction, pan** and **loop points** are randomized after a one-shot cycle (of any track) ends.

CUT VIEW:



A: Set playhead position for tracks 1-6.

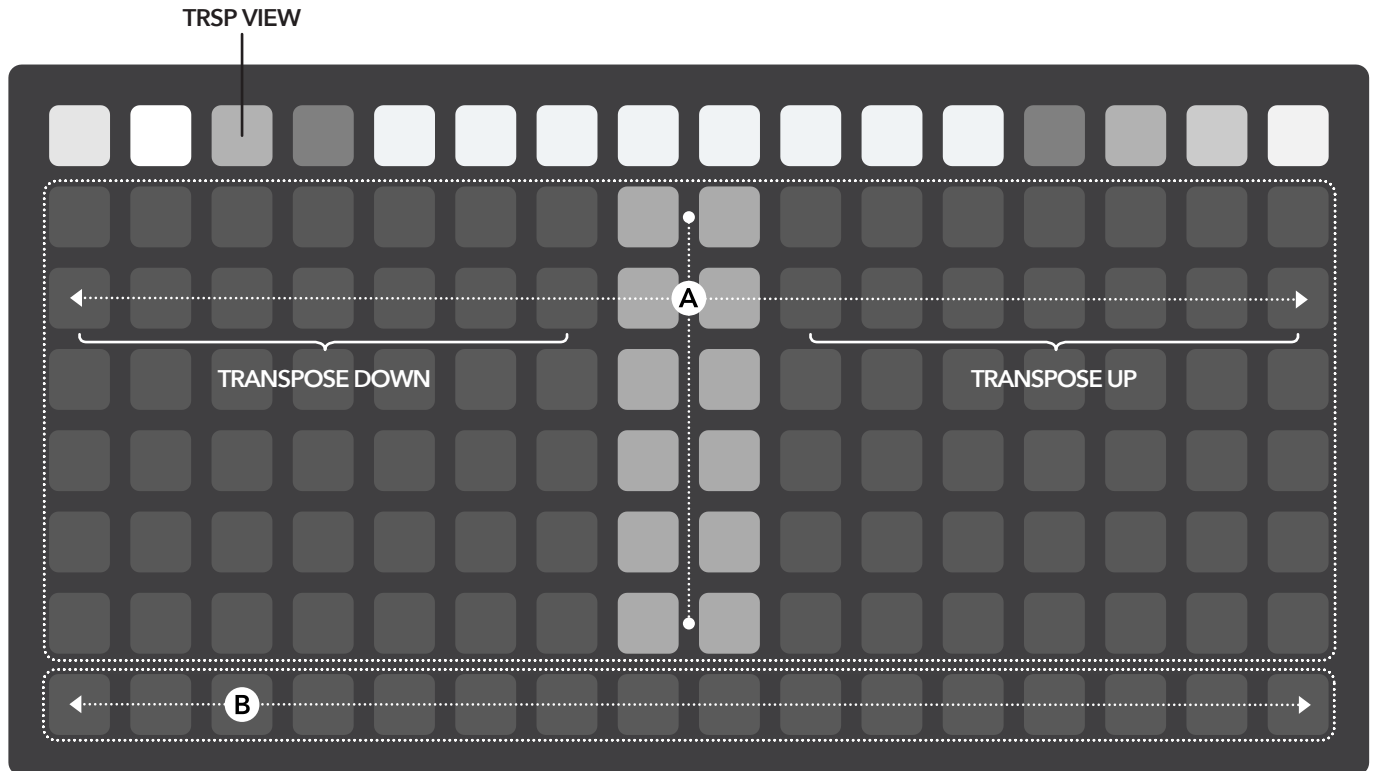
- **CUT:** Press any pad (1-16) of a track row to jump to that position.
- **LOOP:** Press and hold any pad (1-16) of a track row to set start position. Press any other pad within the track row to set the loop.
- **HOLD:** Hold **MOD** and press any pad (1-16) to set a one-pad-loop (aka **HOLD**). To lock into **HOLD MODE** hold **MOD** and press **ALT**, then release **MOD** before releasing **ALT**. Press **MOD** to unlock.

B: **TRANPOSE FOCUSED TRACK** (see **TRSP VIEW**).

START/STOP: Hold **ALT** and press any pad (1-16) of a track row to start/stop the corresponding track.

FOCUS: Press any pad (1-16) of a track row to **FOCUS** the corresponding track.

TRANPOSE VIEW:



A: TRANPOSE TRACK 1-6

- Pads 7-1 **TRANPOSE** the track speed **down** and pads 10-16 **TRANPOSE** the track speed **up**, specified by the scale settings of the global parameter menu. Scales can be easily modified.
- **START/STOP:** Hold **ALT** and press a center pad of a track row to start/stop the playhead.
- **FOCUS:** Press any pad (1-16) of a track row to **FOCUS** the corresponding track.

B: CUT VIEW of **FOCUSED TRACK** (see **CUT VIEW**)

CUSTOM SCALES:

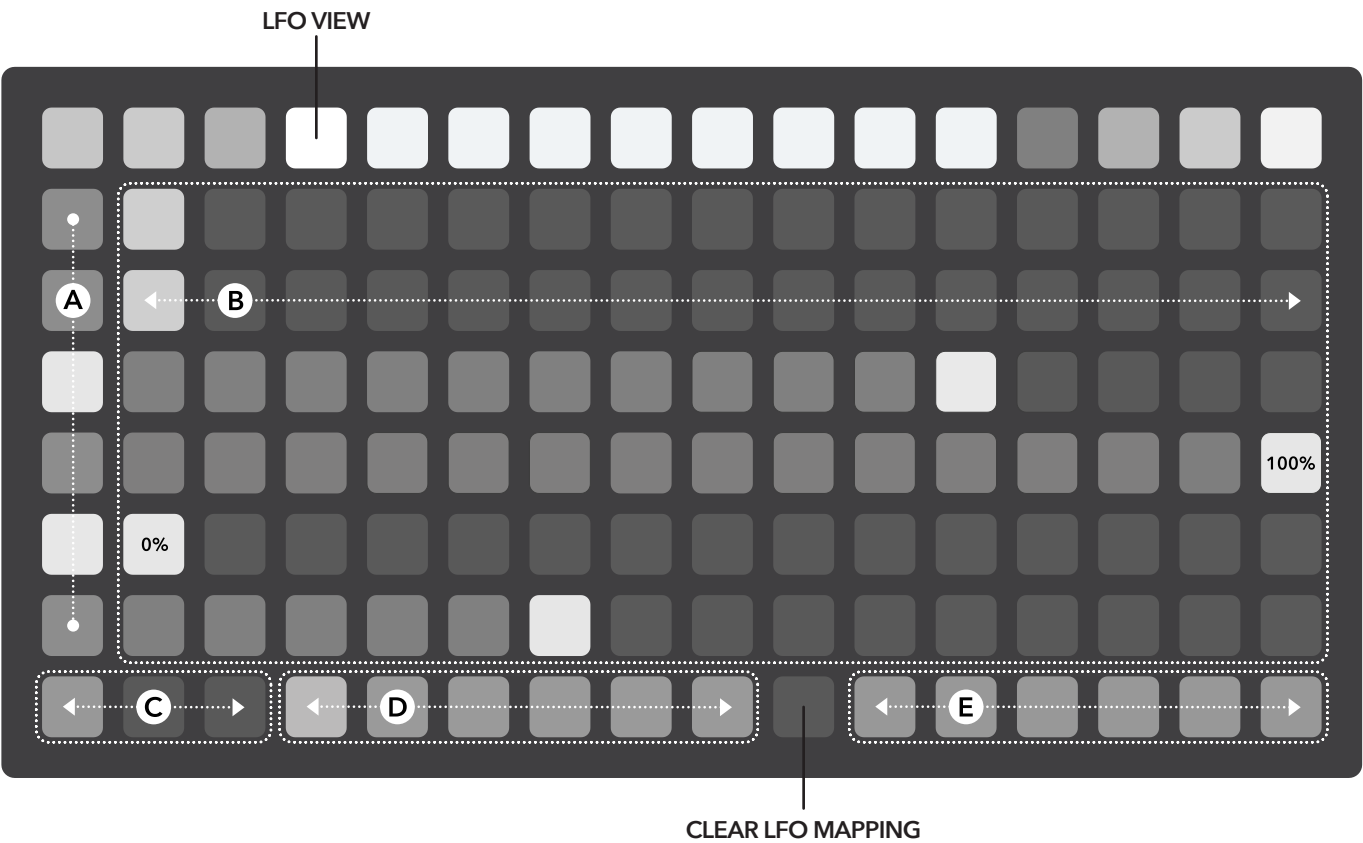
Scales can be easily modified in the *mlre.lua* script. Transposition steps are defined as cents. The values displayed on the screen don't affect the transposition function and can be set to anything. The number of scales specified is "unlimited", however, the format must be kept. The index of the scale name specified in **scale_options** points to index of the **trsp_id** and **trsp_scale**. All scales consist of 15 steps (center reference = index 8).

```
--scale names
local scale_options = {"semitones", "minor", "major", "custom"}

--transposition step id
local trsp_id = {
{"-P5", "-d5", "-P4", "-M3", "-m3", "-M2", "-m2", "P1", "m2", "M2", "m3", "M3", "P4", "d5", "P5"},
{"-P8", "-m7", "-m6", "-P5", "-P4", "-m3", "-M2", "P1", "M2", "m3", "P4", "P5", "m6", "m7", "P8"},
{"-P8", "-M7", "-M6", "-P5", "-P4", "-M3", "-M2", "P1", "M2", "M3", "P4", "P5", "M6", "M7", "P8"},
{"-here", "-notation", "-own", "-your", "-type", "-can", "you", "none", "you", "can", "type", "your", "own", "notation", "here"},
}

--steps in cents
local trsp_scale = {
{-700, -600, -500, -400, -300, -200, -100, 0, 100, 200, 300, 400, 500, 600, 700},
{-1200, -1000, -800, -700, -500, -300, -200, 0, 200, 300, 500, 700, 800, 1000, 1200},
{-1200, -1100, -900, -700, -500, -400, -200, 0, 200, 400, 500, 700, 900, 1100, 1200},
{-3100, -2400, -1900, -1700, -1200, -700, -500, 0, 500, 700, 1200, 1700, 1900, 2400, 3100},
}
```

LFO VIEW:



Norns screen displays which LFO is currently in **FOCUS**. Use **ENC1** to scroll or **K3** to step through the LFOs 1-6. Alternatively press any pad within the LFO rows to **select** an LFO. Use **K2** to toggle between the top and bottom row (active row is highlighted) and use **ENC2** and **ENC3** to change the corresponding parameter values. The parameters "**TARGET**" and "**SHAPE**" can be accessed via grid for quick **LFO mapping**.

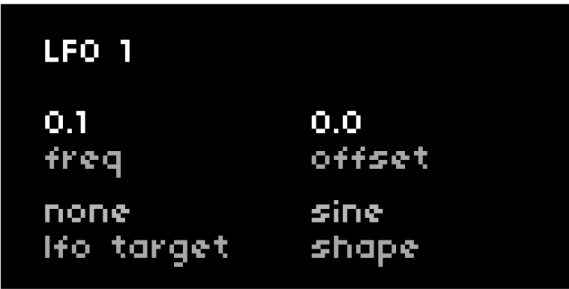
- A:** Toggle **LFO STATE** (on/off) for LFOs 1-6.
- B:** Set **LFO DEPTH** for LFOs 1-6.
- C:** Set **LFO SHAPE** for **selected LFO**.
- D:** Select **TRACK** of destination (1-6)
- E:** Select **TARGET** of the **selected LFO**.

LFO MAPPING:

1. Select **LFO [focus or ENC1 or K3]**
2. Select the **TRACK [D]**
3. Select the **TARGET [E]**
4. Adjust **LFO DEPTH [B]** and turn on **[A]**

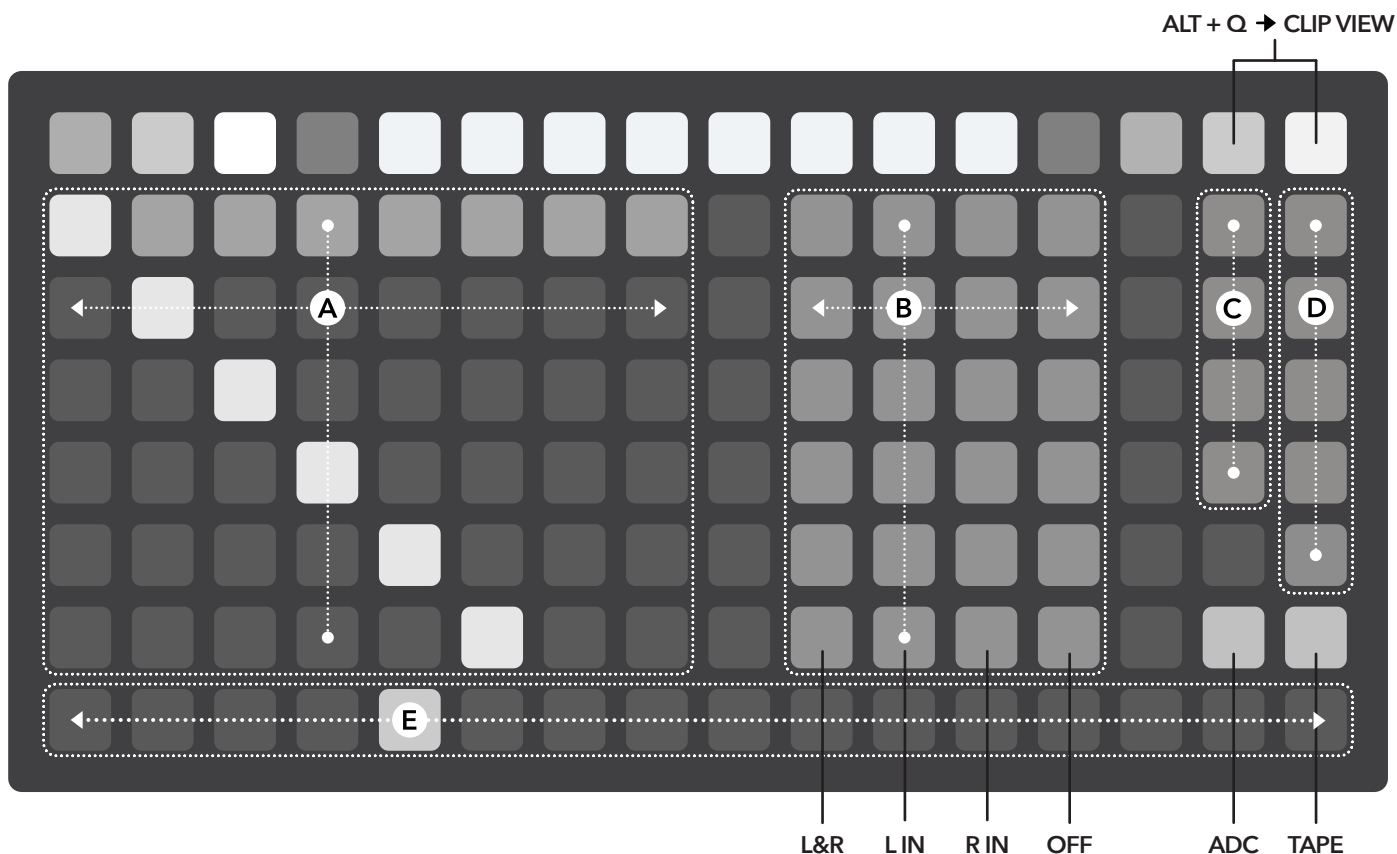
► **HINT:**

If you set LFO depth back to zero before switching the LFO off, the modulated parameter will return to its initial state.



- **freq: (0.1 - 10)** LFO frequency
- **offset: (-1 - 1)**
- **lfo target: (vol, pan, dub, transpose, rate_slew, cutoff)**
- **shape: (sine, square, s&h)** LFO shapes

CLIP VIEW:



A: Set **CLIP** (1-8) of the corresponding track 1-6.

B: Set **INPUT SOURCE** for tracks 1-6.

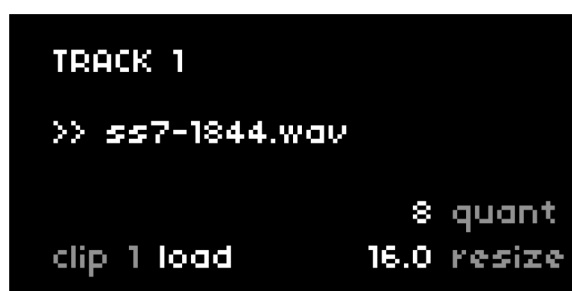
C: Toggle "**ROUTE to TRACK 5**" to internally route tracks 1-4 to track 5.

D: Toggle "**ROUTE to TRACK 6**" to internally route tracks 1-5 to track 6.

E: Set **QUANTIZATION DIVISION** (see global parameters).

ADC: Press to toggle ADC to softcut on/off (on by default)

TAPE: Press to toggle TAPE to softcut on/off (off by default)



- ▶ Use **ENC2** to scroll through the clip actions (*load*, *clear*, *save*) and press **K2** to trigger the clip action. **>>** displays the currently loaded clip file.
- ▶ Use **ENC3** to scroll through the resize options and press **K3** to resize the clip.
- ▶ The **QUANTIZATION DIVISION** set by **(E)** or global menu is displayed by "quant".