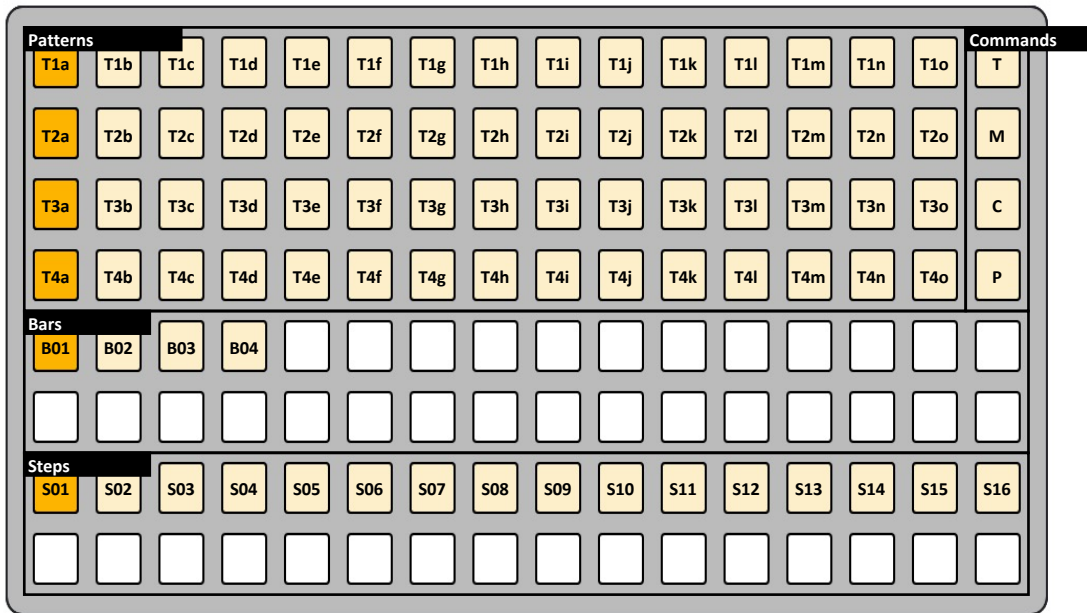


Concept

for a Norns-/Grid-based harmonic step sequencer

Main view



Patterns

- Overview of 60 available **Patterns** across 4 tracks
- Each track can play one **Pattern** at a time; **Patterns** within the same column share the same **Pattern Settings** (i.e. **Pattern Quantization** and **Step Layout**)
- Press a **Pattern** to edit its **Bars** and **Steps**

Commands

- Commands work in combination with other buttons on the grid
- Hold **Trigger** and press a **Pattern** to cue it (starts after previous pattern ends)
- Hold **Mute** and press a **Pattern** to mute the track
- Hold **Trigger** and **Mute** together and press a **Pattern** to open its **Pattern Settings**
- Hold **Copy** and press another button on the grid to copy into memory
- Hold **Paste** and press another button on the grid to paste from memory
- Hold **Copy** and **Paste** together and press another button on the grid to cut
- **Copy/Paste/Cut** actions work with **Patterns**, **Bars**, **Steps** and **Pattern Settings**

Bars

- Overview of **Bars** within the selected **Pattern**
- Press a **Bar** to edit its **Steps**
- Hold a **Bar** and press another **Bar** to set the loop length of the pattern

Steps

- Overview of **Steps** within the selected **Bar** and **Pattern**
- Press a **Step** to add a trigger event in the sequencer, press again to delete the event
- Hold a **Step** to open the step edit view (see next page)
- Layout of steps within a pattern column can be adjusted in **Pattern Settings**

Step edit view

| | | | | | | | | | | | | | | | |
|--------------------|-----|-----|-----|-----|-----|-----|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------|
| Mode | | | | | | | | Range | | | | | | | Commands |
| M1 | M2 | M3 | M4 | M5 | M6 | M7 | | -3 | -2 | -1 | 0 | +1 | +2 | +3 | T |
| Scale | | | | | | | | Notes | | | | | | | |
| S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | N1 ⁺¹ | N2 ⁺¹ | N3 ⁺¹ | N4 ⁺¹ | N5 ⁺¹ | N6 ⁺¹ | N7 ⁺¹ | K |
| Root | | | | | | | | | | | | | | | |
| | C# | D# | | F# | G# | A# | | N1 | N2 | N3 | N4 | N5 | N6 | N7 | C |
| C | D | E | F | G | A | B | | N1 ⁻¹ | N2 ⁻¹ | N3 ⁻¹ | N4 ⁻¹ | N5 ⁻¹ | N6 ⁻¹ | N7 ⁻¹ | P |
| Probability | | | | | | | | | | | | | | | |
| 6% | 13% | 19% | 25% | 31% | 38% | 44% | 50% | 56% | 63% | 69% | 75% | 81% | 88% | 94% | 100% |
| Velocity | | | | | | | | | | | | | | | |
| 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 | 104 | 112 | 120 | 127 |
| Steps | | | | | | | | | | | | | | | |
| S01 | S02 | S03 | S04 | S05 | S06 | S07 | S08 | S09 | S10 | S11 | S12 | S13 | S14 | S15 | S16 |
| | | | | | | | | | | | | | | | |

Steps

- Hold a **Step** to edit it and open the Step Edit view
- Hold a **Step** and press another **Step** to set the step length

Velocity

- Set the **Step**'s velocity when triggered

Probability

- Set the **Step**'s probability of being triggered

Root

- Set the root note of the scale

Scale

- Set the scale (see next page for pre-selected 7-note scales)

Mode

- Set the scale mode (e.g. press **M1** within the 'Major' scale for the 'Ionian' mode)

Range

- Select the octave range for the 3-octave **Notes** window below

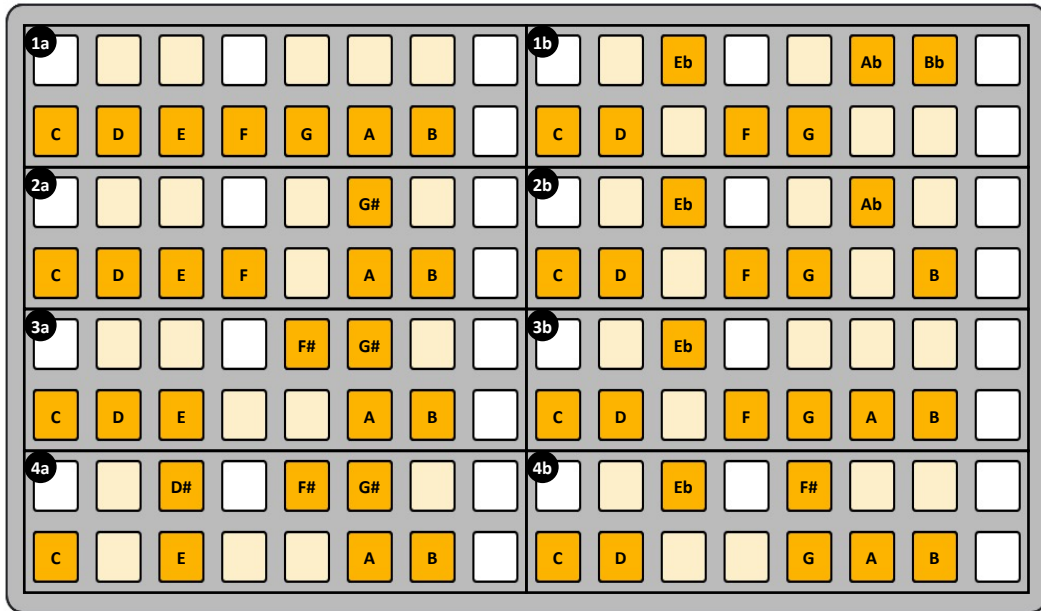
Notes

- A 3-octave diatonic keyboard to voice the **Step**'s melody/chord
- This makes it easy to create chords (e.g. select **N1**, **N3**, **N5**, **N7** for 'Major 7' chord)

Commands:

- Press **Trigger** to momentarily trigger the **Step**'s melody/chord
- Press **Keyboard** to open a 6-octave keyboard visualizing the **Step**'s melody/chord
- See previous page for **Copy/Paste/Cut** actions

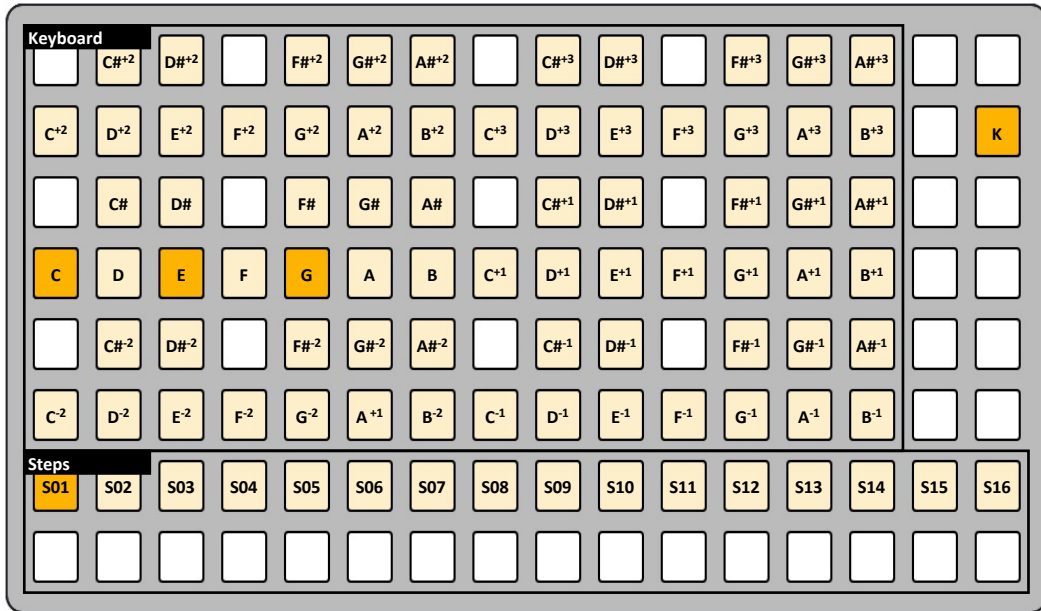
Available scales



Scale

- 4 pre-selected 7-notes scales covering a wide range of harmonic sounds
 - Each scale is available in two variations – a ‘major’ (**a**) and a ‘minor’ (**b**) variation
 - The variations represent the same scale and merely a different starting point for quick and easy switching between a ‘major’ and ‘minor’ timbre
 - Along with each scale’s modes, this results in 28 unique modes to choose from
- ➊ ‘Melodic Major’ scale (also called ‘Diatonic Major’ scale)
 - ➋ ‘Harmonic Minor’ scale
 - ➌ ‘Melodic Minor’ scale
 - ➍ ‘Harmonic Major’ scale

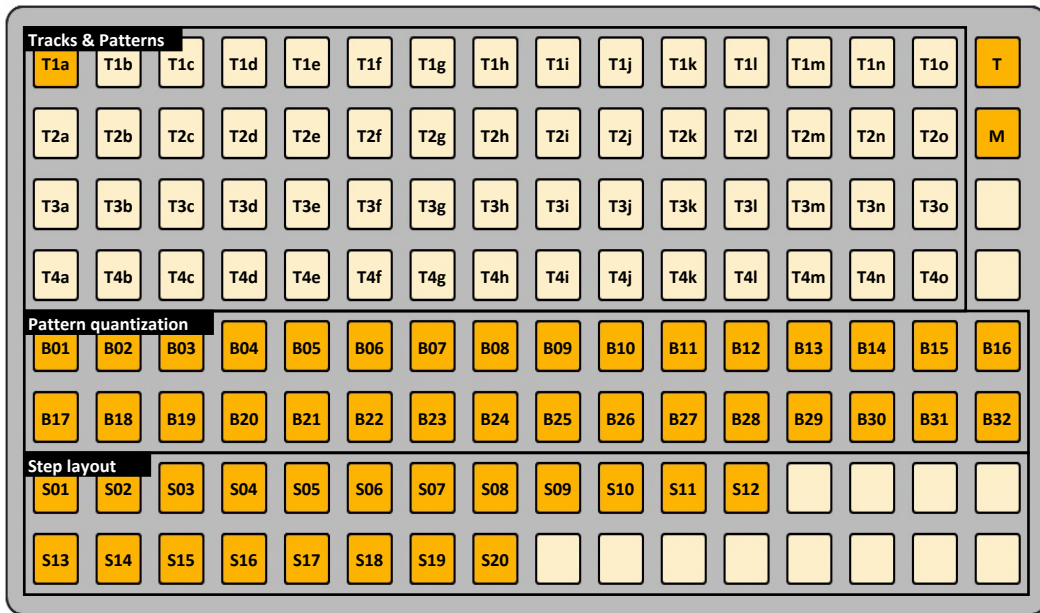
Keyboard view



Keyboard

- Press **Keyboard** to open a 6-octave keyboard visualizing the **Step's** melody/chord

Pattern Settings view



Tracks & Patterns

- Hold **Trigger** and **Mute** together and press a **Pattern** to open its **Pattern Settings**
- **Patterns** within the same column (e.g. column 'a') share the same **Pattern Settings**

Pattern quantization

- Set the bar length after which the **Pattern** restarts or switches to the next **Pattern**

Step layout

- Set the layout of **Steps** for each **Bar** within the **Pattern** column
- This makes it easy to sequence uneven time signatures (e.g. select first 12 steps in the first row and first 8 steps in the second row for a typical 5/4 time signature)

Norns interface

K2

- Press to start the sequencer

K3

- Press to pause the sequencer; press again to stop the sequencer

E2

- Set bpm (e.g. 120 bpm)

E3

- Set time division of bpm in 16th (e.g. a setting of 4/16 means that four 16th-notes in the sequencer correspond to one beat of the clock)