KANDINSKY

12 Tone Matrix Generator & Player

Max for Live Device

USER'S GUIDE

flaviogaete.info

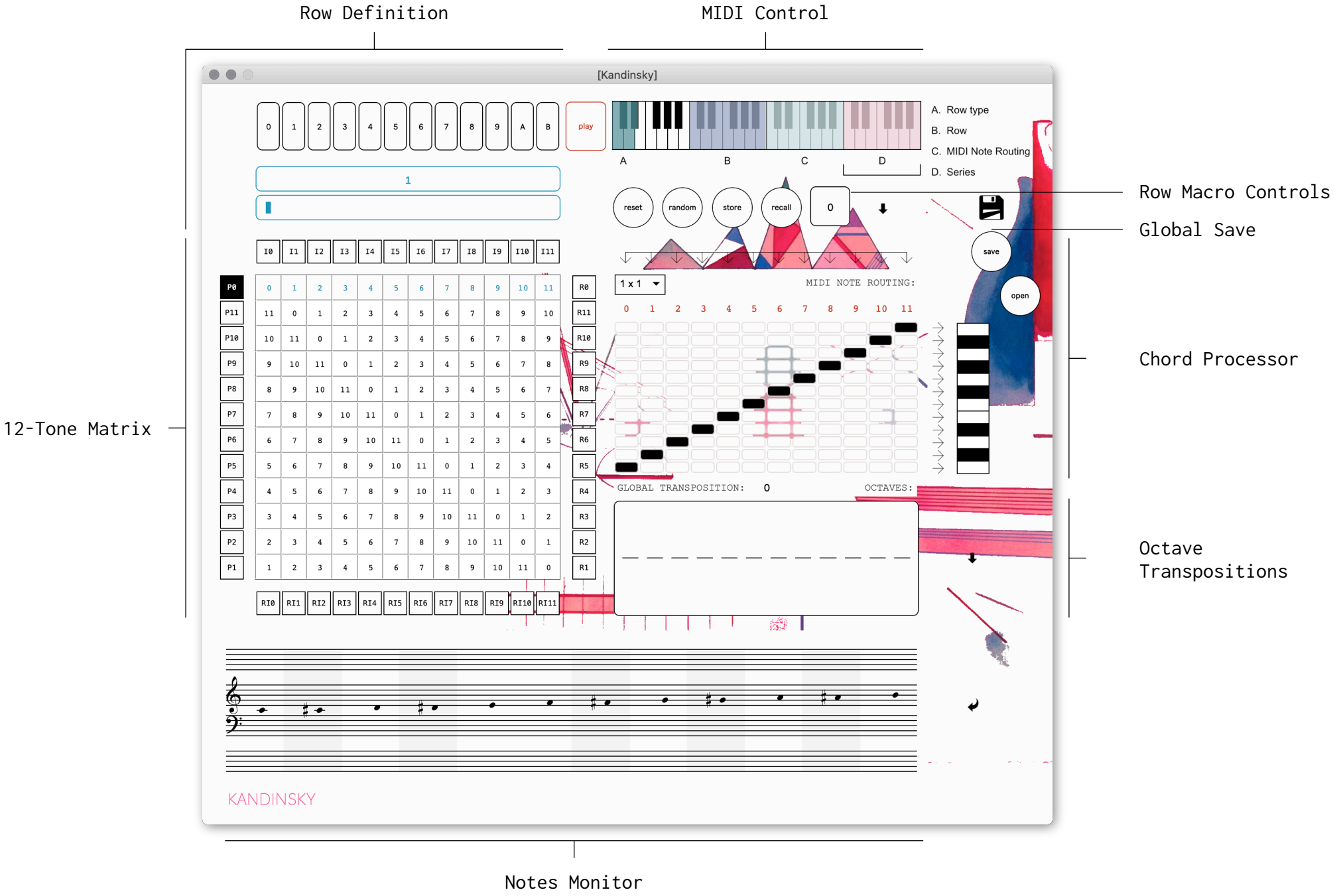
KANDINSKY

Kandinsky is a 12-tone matrix generator & player for Max for Live. Read on to get more acquainted with the device...

*"Lend your ears to music, open your eyes to painting, and … stop thinking! Just ask yourself whether the work has enabled you to 'walk about into a hitherto **unknown world**. If the answer is yes, what more do you want?"*

— Wassily Kandinsky

DIAGRAM


Row Definition
MIDI Control
[Kandinsky]
A. Row type
B. Row
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play
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MIDI NOTE ROUTING:
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Notes Monitor

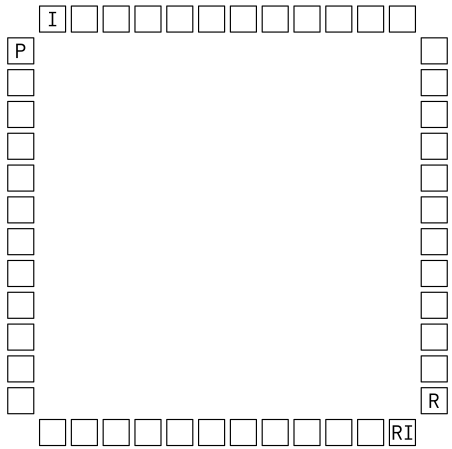
Learn Mode:

MIDI input is used to define your 12-tone matrix...

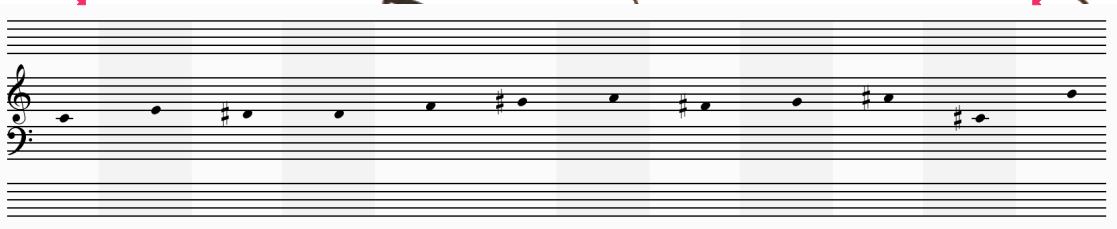
Play Mode:

MIDI input is used to choose your type of inversion & to play the selected row

0	4	3	2	5	8	9	6	7	10	1	11
8	0	11	10	1	4	5	2	3	6	9	7
9	1	0	11	2	5	6	3	4	7	10	8
10	2	1	0	3	6	7	4	5	8	11	9
7	11	10	9	0	3	4	1	2	5	8	6
4	8	7	6	9	0	1	10	11	2	5	3
3	7	6	5	8	11	0	9	10	1	4	2
6	10	9	8	11	2	3	0	1	4	7	5
5	9	8	7	10	1	2	11	0	3	6	4
2	6	5	4	7	10	11	8	9	0	3	1
11	3	2	1	4	7	8	5	6	9	0	10
1	5	4	3	6	9	10	7	8	11	2	0



The Notes Monitor will display the currently selected row...



...and display as well any chord processing or octave transposition.

ROW DEFINITION

On the top-left corner of Kandinsky's main window you'll find the following four elements:

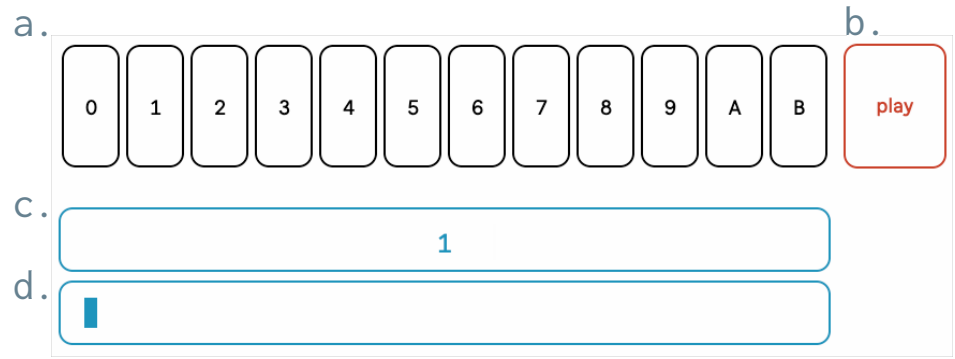
a. On the first row there's a tab for **Step Input**, with buttons labeled 0 – 9, plus A & B; the latter two represent steps 10 and 11, but are labeled thus to reflect their direct mapping to the computer's keyboard.

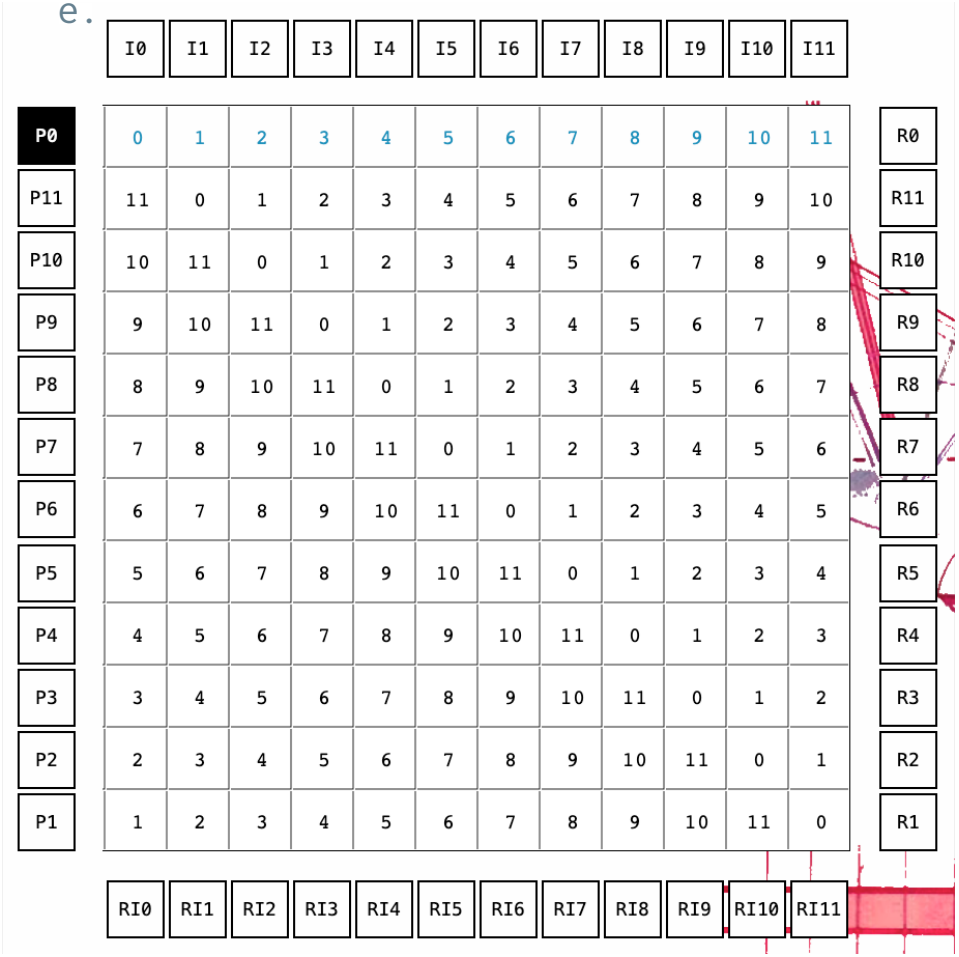
b. To the right of the Step Input tab is the **Play** / **Learn** toggle, which switches between the two MIDI input modes. In "Learn Mode," MIDI input behaves just like the step input tab: press any key on the keyboard and it will play its corresponding step:
C – 0 | C# – 1 | D - 2 | D# – 3 | E – 4 | F – 5 | F# – 6 | G – 7 | G# – 8 | A – 9 | A# – 10 | B – 11.

c. On the next row there are two elements in blue, the first one is the S**tep Indicator**: it will show you what step is being sent to the Matrix.

d. Below the step indicator is the **Row Slider**: it will show you what step in the series is being changed. It will automatically increment by steps as you enter the notes that will define your row, but you can also slide it yourself to define any particular step.

e. Below these controls is the **Matrix** itself. The top row is the 'hot row' where you get to define your series. The rest of the matrix will be automatically filled based on the steps that you define at the top.





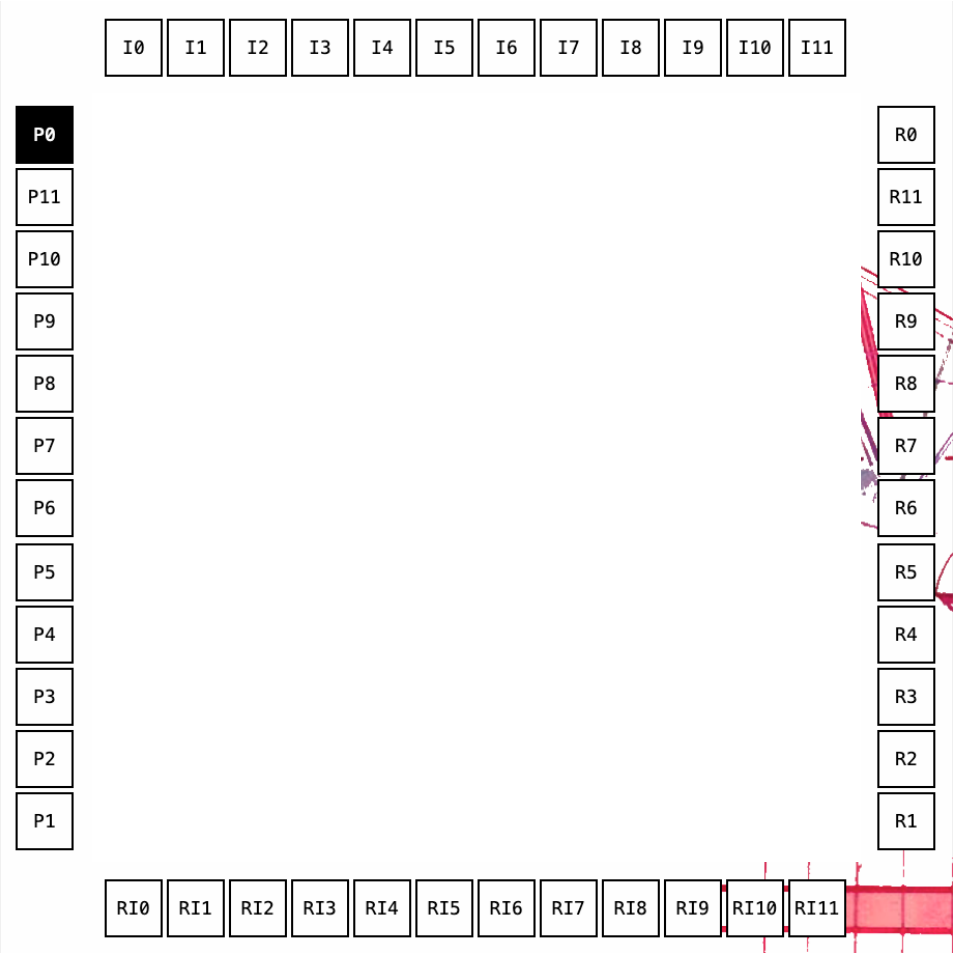
The Matrix serves only as a a kind monitor (just like the music staff below), you can only change the top row by:

- Clicking on the Step Input tab
- Entering the steps via the computer keyboard
- Entering the notes directly via MIDI (“Learn Mode” must be active)

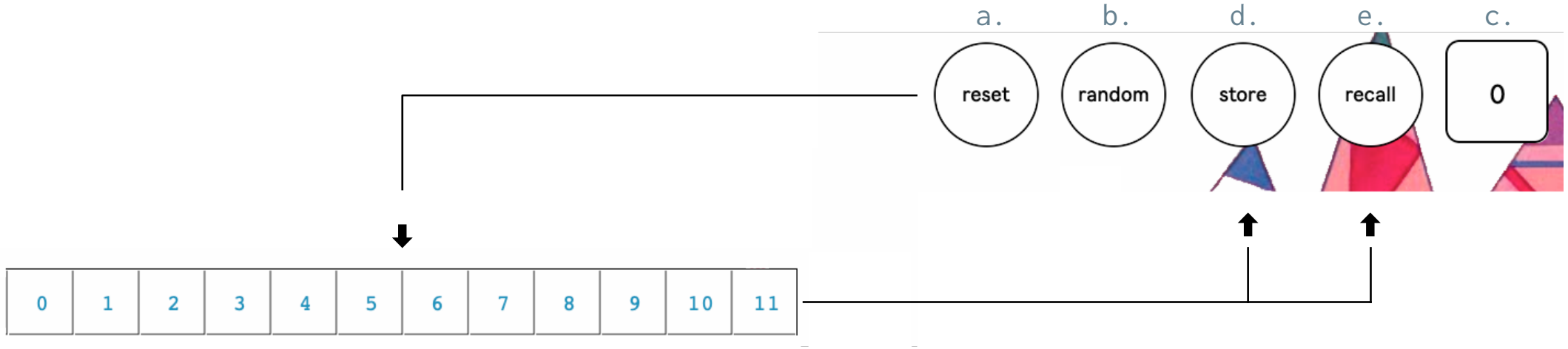
Around the Matrix there are four sets of **Row Selectors**, which let you select the current row to be played:

- **Primes**, located on the left.
- **Inversions**, at the top.
- **Retrogrades**, on the right.
- **Retrograde Inversions**, at the bottom.

You can click on any one ‘row inversion’ type, or you can select them via MIDI (more details will follow).



ROW MACRO CONTROLS



On the right side of the Kandinsky panel, there are five additional elements called the **Row Macro Controls**:

a. The **Reset** button: whenever you're confused about the state of your row, or if you want to start working from a clean slate, click on this button. The row itself will be normalized to a straight numerical sequence, from 0 – 11.

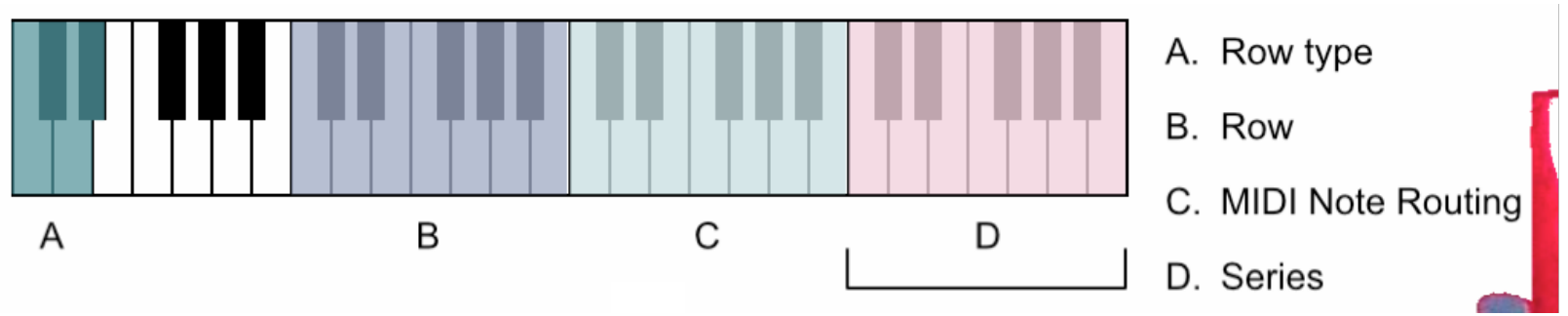
b. The **Random** button will, as the name implies, randomize your row.

c. Towards the right of the Row Macro Controls is the **Row Bank** program number: you can store and recall up to 99 rows. You need to select your program number first, before you choose to store or recall.

d. Once you've selected a program number, you can **Store** the current row on that number slot, or...

e. You can also **Recall** a program number once it's been saved.

MIDI MAPPING



On the top-right corner, you'll find the **MIDI Mapping** guide. It's divided into four sections, by octaves ("Play Mode" must be enabled)...

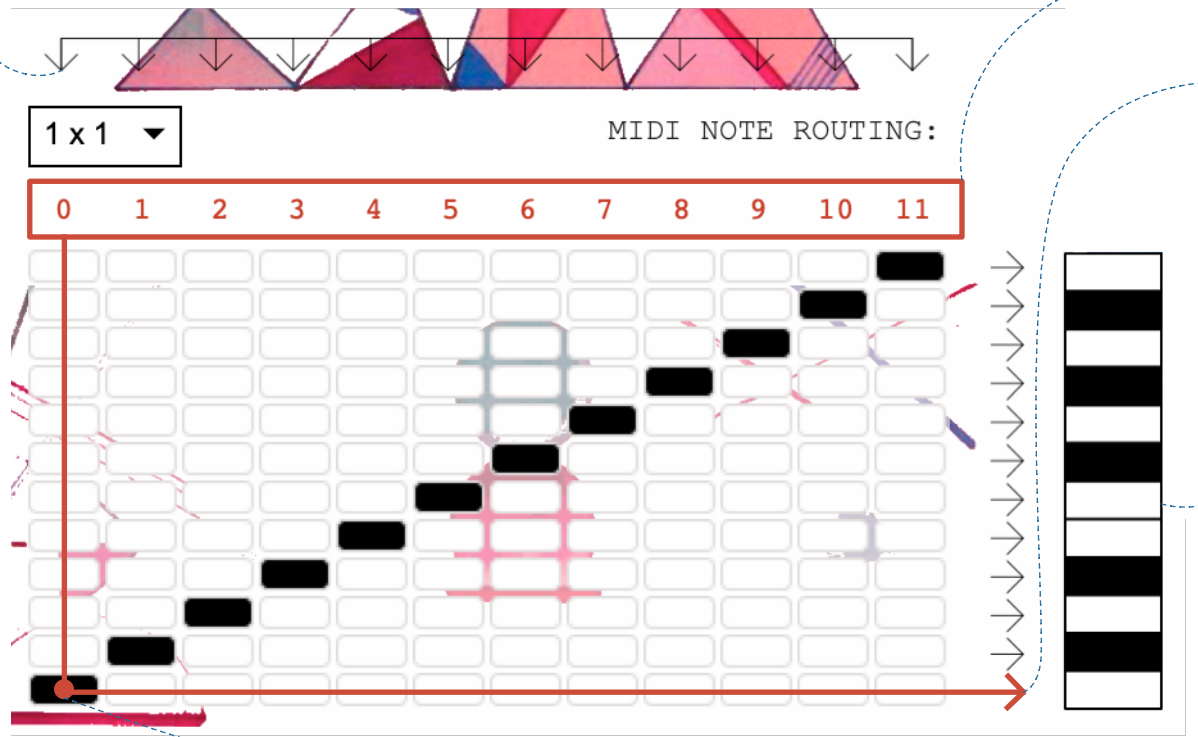
A. The first octave – **starting on C1** – features for keys, which are further split into the white keys and black keys, as follows:
   – C1 will select the Prime rows.
   – D1 will select the Retrogrades.
   – C#1 will select the Inversions.
   – D#1 will select the Retrograde Inversions.

B. The next octave up – **from C2 to B2** – will choose the row in question. So, for example, if you first select the retrograde inversions (by hitting D#1 on the first octave [A], hitting F4 on the second octave [B] will select the 6th retrograde inversion as your active row.

C. On the following octave – **from C3 to B3** – you can choose the type of chord processing. You can choose to play your series straight (as originally intended), or you can play around with a number of alternative chord combinations (or re-mangling of the series altogether – refer to the chord processing matrix on the following page):
   – C3 will select "1x1": this will play the original series, note by note.
   – C#3 will select "2x2": this will make an interval of the first two notes in your series and play them together, as a chord and continue to group the rest of the row, two notes at a time.
   – D3 will select "3x3": this will group the series into triads.
   – D#3 will select "4x4": this will group the series into tetra chords.
   – E3 - B3 will select "User" settings 1 through 8, which will let you reorder the series into any chord combination or note sequence as you conceive them.

D. The last octave – **from C4 to B4** – will play your series as you have finally configured it (including transpositions, which we'll visit soon).

The **Chord Processor** is an additional matrix that allows you to "re-route" your MIDI input so that you can regroup your series in any combination of chords or note sequence. It's a "British" kind of matrix (for it's backwards!): It takes the series* itself as its input and re-routes each step in your series so that it can be played by any one note on the *playable* octave – **C4 through B4** [D]. This input comes in vertically into the matrix. You then select a row for each step, as a possible output on the right side of the matrix, which corresponds to said octave.



Input of the Chord Processing matrix

Selected row

Output of the Chord Processing matrix

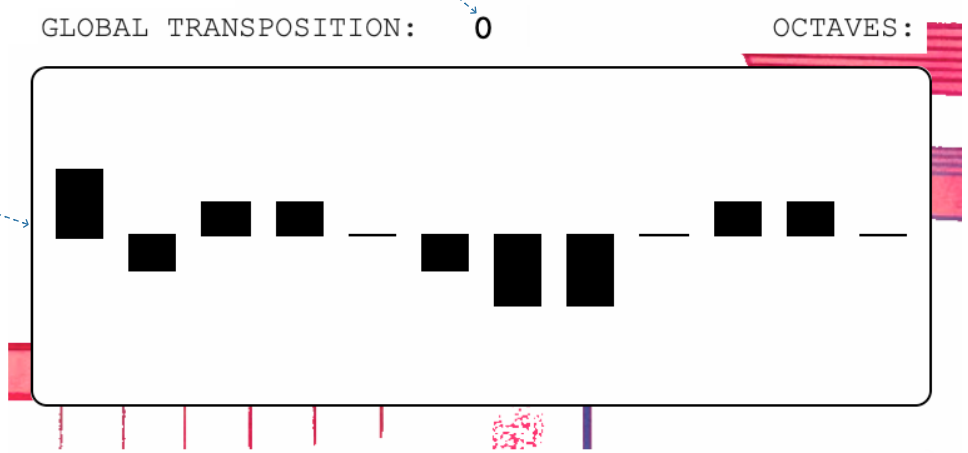
Playable octave - C4 through B4

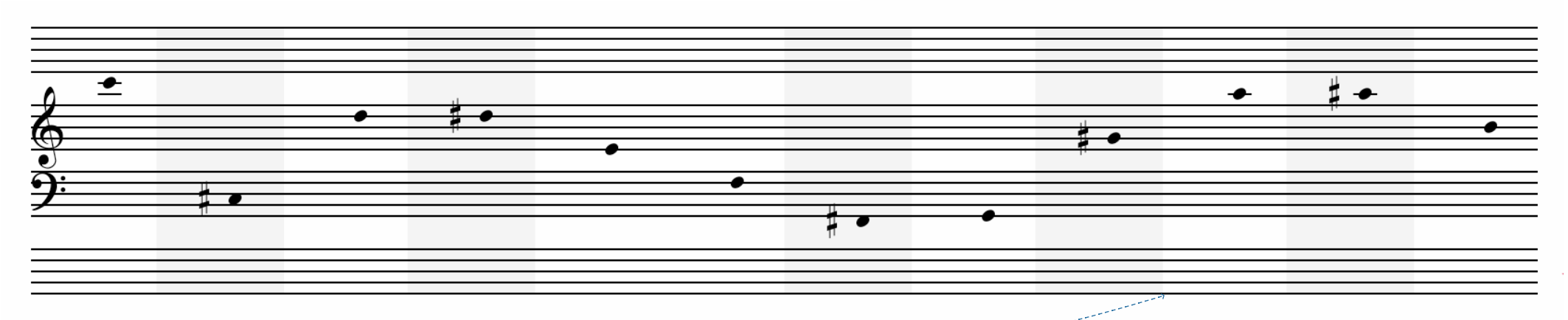
Patch point

TRANSPOSITIONS & NOTES MONITOR

The **Global Transposition** allows you to shift the base reference of your series (numbers 0 – 11 corresponding to musical notes C through B), so that zero can become any other note base. For example, a transposition value of 5 renders 0 as F, 1 as F#, 2 as G, and so on (wrapping around the octave, of course).

The **Octaves Transposition** allows you to transpose each note in the series up to four octaves above or below the center pitch.



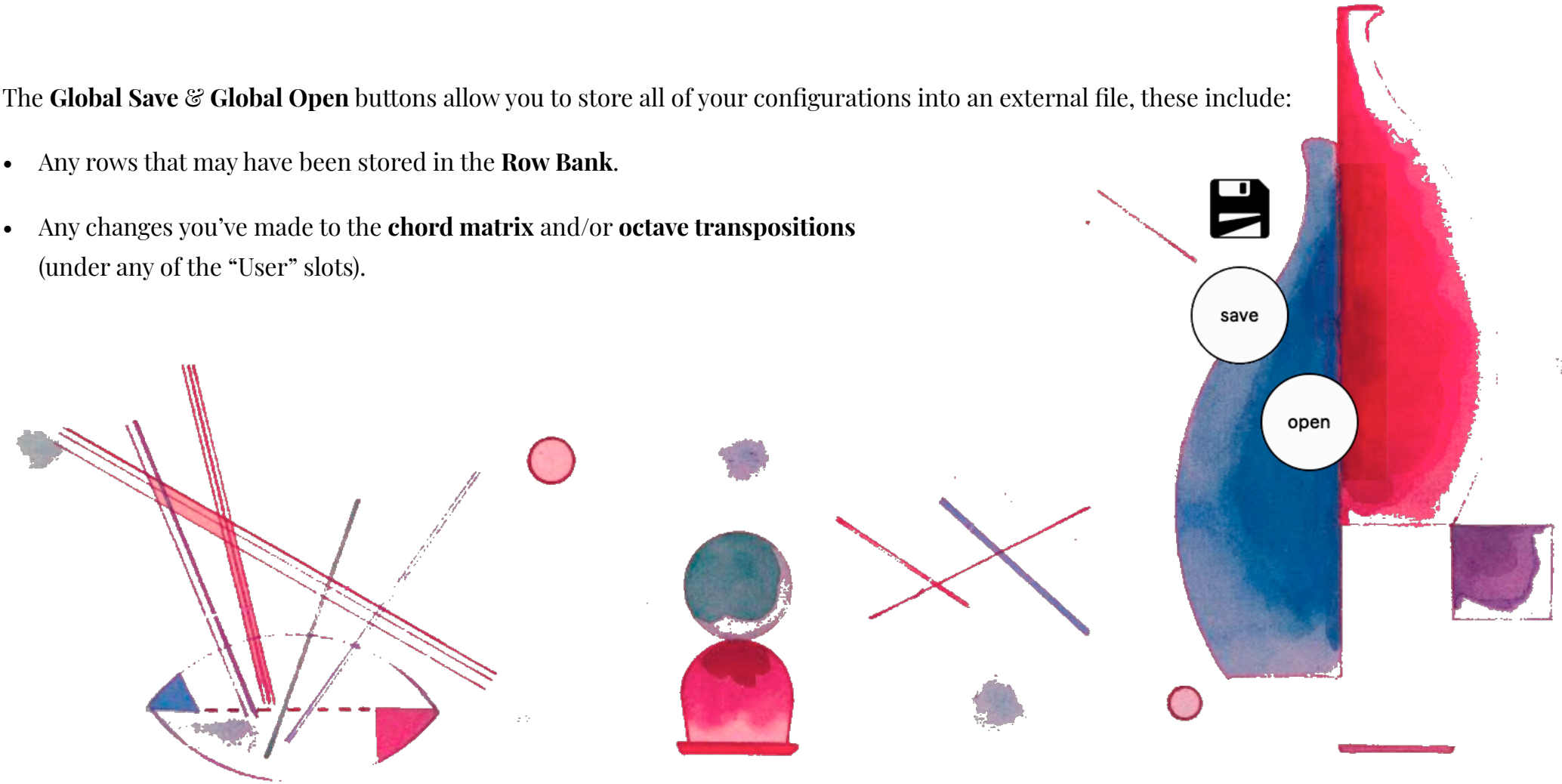


The **Notes Monitor** will reflect whatever processing you apply to your series, whether you make chord combinations or you add any octave transpositions to any of the notes in the series.

GLOBAL SAVE & OPEN

The **Global Save** & **Global Open** buttons allow you to store all of your configurations into an external file, these include:

- Any rows that may have been stored in the **Row Bank**.
- Any changes you've made to the **chord matrix** and/or **octave transpositions** (under any of the "User" slots).



That's it! I hope you'll enjoy Kandinsky. There are many more ideas around this device, so make sure to `subscribe to my newsletter` if you'd like to receive any related updates. Also, please send any comments, questions or feature requests to `hello@flaviogaete.info`.