

"No Delinquencer has ever made a mistake or distorted information. Every Delinquencer is, by any practical definition of the words, foolproof and incabale of error."

Delinquencer User Manual

Version 1.0.0

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Overview

Introduction

The *Delinquencer* is my second ever script for the Norns and I wanted to create a sequencer that allowed a music producer to have fun exploring, mangling and generally being inspired by finding sweet spots in a 64 grid of notes. Essentially, the *Delinquencer* starts out as a simple 64 grid sequencer but then allows you to experiment quickly.

So it's the Delinquencer feature complete?

Well probably not, I'm sure its missing a feature you think will be vital, but I've had to draw the line under the *Delinquencer* project otherwise it would never see the light of day outside of my Norns Shield.

So what makes the Delinquencer something you should try? After all it's not like the world needs yet another sequencer?

Entering notes into a 64 grid and playing them back is usually the end state for most sequencers but for the *Delinquencer* that's the starting point. It's the ability to mangle and alter over time the playback of these notes that makes the *Delinquencer* different to many other sequencers.

So is Delinquencer a MIDI sequencer?

Well yes, but I also dabbled in SuperCollider and ended up producing a new sound engine. I only added it so I could just have a simple sound during development of the *Delinquencer*. Trouble is, that took on a life of its own. It's still simplistic but then this was meant to be a sequencer project not a synth-engine project, but it's fun to play with.

Installation

The *Delinquencer* script can be installed easily through the Norns' Maiden screen.

At the Maiden command prompt just enter:

```
;install https://github.com/kevinlindley/delinquencer
```

Then, power the Norns off and back on to allow for the install of the *Delinquencer* synth engine (PolySaw). Once that's done, you should be good to go,

Theory of Operation

Fundamentally the *Delinquencer* script turns your Norns into a 1 to 64 **notes / cells / steps**¹ sequencer that allows you to set the note pitch, length, velocity and probability. You can change the BPM, time divisions The *Delinquencer* play both sound through its own limited PolySaw engine and/or send MIDI instructions to a connected synth (its intended purpose).

Delinquencer also allows you to change the direction of sequence note play, forward, back, up, down etc., as well as some more interesting ways (*spiral, snake, frog, blocks* etc.). It also has some note presets to get the 64 grid filled in quickly (to get you exploring rather than laboriously entering notes manually). *Delinquencer* allows you to transpose the whole grid of 64 notes and quantise the notes to a specific music scale.

¹ I use these different terms depending on the context, but essentially they are all the same thing, it's just done to confuse you

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If you do want to enter notes manually you can still set the individual pitch, length, probability for each of the 64 **steps/cells**.

So far nothing new I hear you say but

Delinquencer allows you to set each **cell/step** to one of the following four states: *On*, *Rest*, *Skip* and *Control*. The *On*, *Rest* and *Skip* states are all standard, but where things get interesting is setting a notes state to “**Control**”. Now you have just handed over *control* of that **cell/step** to the *Delinquencer*. The *Delinquencer* now decides what happens based on the other settings you make.

The *PatterMaker* screen makes it easy for you to assign the state to the 64 steps and which **cells/steps** you are going to give the *Delinquencer* control over.

So once the *Delinquencer* has some notes to play with, the fun starts. On the *Delinquencer* menu page you will see that the 64 grid of notes are displayed and 8 modulation indicators run along the bottom and on the right. The modulation indicators have one of two settings, either *On* (lit) or *Off* (un-lit). If the intersecting **cell/step** at an “On” modifier in a column and row modifiers are both *On*.

Navigation and finding your way around

The *Delinquencer* application consists of four screens: Sequencer, Note Entry, PatterMaker and Delinquencer. You can access these by pressing the [K2] button on your Norns. The four screens loop around as you continue to press the [K2] button, see Figure 1 below:

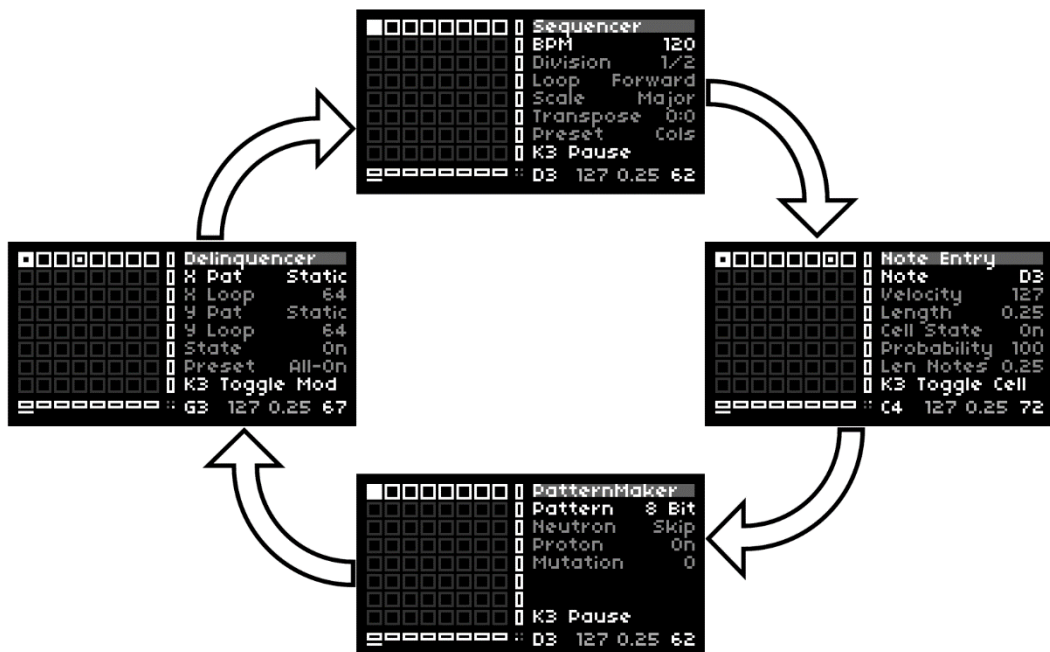


Figure 1: Menu Navigation

In the next section of the manual we will review each screen so that you have gain a thorough understanding of what each does.

Sequencer Screen

Figure 2 below shows the main *Sequencer* screen:

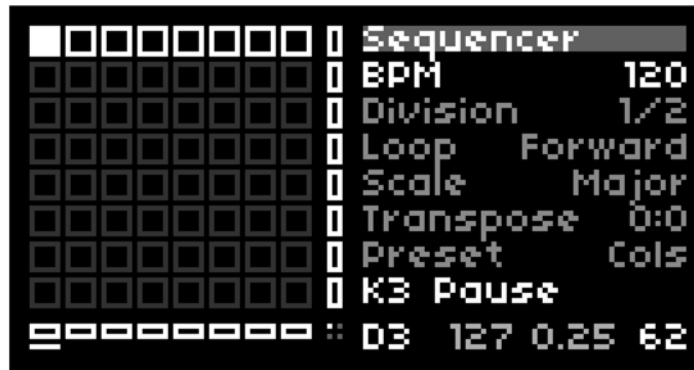


Figure 2: Sequencer screen

Navigation and Controls

The *Sequencer* screen has the following navigation options:

- **[Encoder 1]**: Used to change the **Beats Per Minute** setting.
- **[Encoder 2]**: Used to select the right hand parameter for editing.
- **[Encoder 3]**: Changes selected right hand parameter value.
- **[K1]**: Returns to the current NORNS screen (press **[K1]** again to come back)
- **[K2]**: Exits the *Note Entry* screen and enters to the *Note Entry* screen.
- **[K3]**: Toggles the sequencer on and off.

Parameters

The *Sequencer* screen allows you to change the main parameters settings for the sequencer:

- **BPM**: The number of **Beats Per Minute** – Ranges from 1 to 300, default is 120.
- **Division**: Allows you to have sub-divisions of the main BPM – Ranges from 1/1 to 1/16, default is 1/1 which is no sub-divisions. This setting allows for more interesting timings.
- **Loop**: This is the direction in which the sequencer will move. There are 22 different settings as follows:
 - **Forward**: Top left to bottom right.
 - **Back**: Bottom right to top left.
 - **Rain**: Left to right, top to bottom.
 - **Dust**: Left to right, bottom to top.
 - **DownUp**: Left to right going down then up.
 - **DownUp**: Right to left going up then down.
 - **Zipper**: Zig-Zag top to bottom.
 - **ZipperR**: *Zipper* in reverse.
 - **Snake**: Diagonally from top left to bottom right.
 - **SnakeR**: *Snake* in reverse.
 - **Frog**: Crazy “hopping” pattern.
 - **FrogR**: *Frog* in reverse.
 - **Spiral**: Spiral in pattern.
 - **SpiralR**: *Spiral* in reverse.

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- **LR:** Left to Right then right to left.
- **LRB:** *LR* in reverse.
- **Blocks:** Left to right, top to bottom in blocks of 16.
- **BlocksR:** *Blocks* in reverse.
- **Goat:** Crazy “mountain climbing” pattern.
- **GoatR:** *Goat* in reverse.
- **Knight:** Visits each of the 64 **cell/steps** using the knight’s chess move.
- **KnightR:** *Knight* in reverse.
- **Scale:** Sets the scale that the notes in the sequence will be quantised to. To leave the notes “un quantised” to a scale select the “Chromatic” setting. There are 41 different scales to choose from.
- **Transpose:** Allows you to transpose the notes in the sequence by up to 5 octaves up or down. Display shows the transposition in octaves: semitones.
- **Preset:** Allows you to select from 50+ different note patterns.

Note Readout

In the bottom right of all of the screens you will see a readout for the currently playing note:



Figure 3: Note Read-out on screen

In the example in Figure 3 above, the sequencer is current playing a D3 pitched note with a velocity of 127, a note length of 0.25 (16th Note) that has a MIDI number of 62.

Note Entry Screen

Figure 4 below shows the *Note Entry* screen:

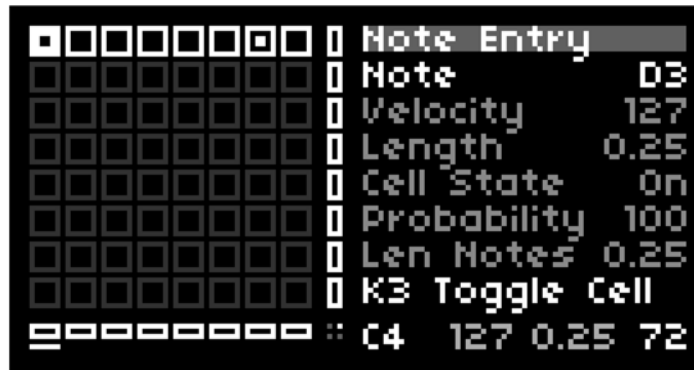


Figure 4: Note Entry screen

Navigation and Controls

The *Note Entry* screen has the following navigation options:

- **[Encoder 1]**: Used to select the sequencer **cell/step** for editing.
- **[Encoder 2]**: Used to select the right hand parameter for editing.
- **[Encoder 3]**: Changes selected right hand parameter value.
- **[K1]**: Returns to the current NORNS screen (press **[K1]** again to come back)
- **[K2]**: Exits the *Note Entry* screen and enters to the *Modulator* screen.
- **[K3]**: Toggles the state of the currently selected sequencer **cell/step**.

Parameters

The *Note Entry* screen allows you to change the individual sequencer step note parameters:

- **Note**: Allows you to enter a note from MIDI note value 0 to 127. Where 0 is -C2 and 127 is G8, Middle C has a value of 60.
- **Velocity**: Velocity of the MIDI note from 0 to 127. The lower the setting the quieter the note will play. Default is 127.
- **Length**: Length of time that the note will play for. Range is from 25% (a 32th note) through to 400% (full note). Default is 100%.
- **Cell/Step State**: Sets the state of the currently selected **cell/step**. A sequencer **cell/step** can have one of the four states:
 - **On**: When the sequencer gets to this **cell/step** it will play the relevant note.
 - **Rest**: When the sequencer gets to this **cell/step** it will not play a note but will rest instead.
 - **Skip**: When the sequencer gets to this **cell/step** it will immediately skip to the next **cell/step** it with neither play a note nor rest.
 - **Ctl**: When set to **Control** what happens will be up to the *Delinquer* settings to determine if the note should be played or skipped.
- **Probability**: Sets the probability that a note will play. Ranges from 0 - Note will not play through to 100 - Note will play. A setting of 50 is a coin toss with 50% probability the note will play. Default is 100. I.e. the note will always play. If a note does not play then the step will be treated as a rest.
- **Len Notes**: Sets the note length for ALL of the **cell/steps** in the sequencer. Default is 100% (quarter note).



Time for a Practical Break

OK, so you should now know how to cycle through the 4 screens and have a basic understand of the *Sequence* and *Note Entry* screens. It's now time to roll up your sleeves and gets your hands dirty in order to consolidate what you have read before we get any deeper into the *Delinquencer*.

I therefore suggest that you put this manual to one side (keep it handy for reference) and pick up the *Delinquencer Walkthrough # 1* document and work your way through. After completing it, you should be in a good position to continue on with the *PatterMaker* screen and *Delinquencer* screens covered in the next section.

So, follow the white rabbit....

Piece of advice, don't worry, everybody falls the first time.

PatternMaker Screen

Figure 5 below shows the *PatternMaker* screen:

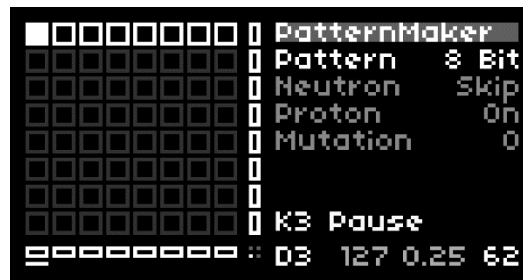


Figure 5: Modulator screen

The *PatternMaker* screen is used for quickly setting up sequence patterns without having to laboriously change each sequence's **cells/steps** by hand. Instead, you can select one of the predefined patterns as a starting point.

A pattern sets each cell/step to be either a *proton* or a *neutron* (I had to come up with some name for the two types, so I chose *proton* / *neutron*, it could have been *ying/yang*, it's just a label).

The *protons* and *neutrons* can have one of 4 states (I'll explain later), they can even have the same state (useful sometimes).

You can then tweak the *protons* and *neutrons* parameter settings to get something close to what you need. Then, cycle round to the *Note Entry* screen to tweak and fine tune individual sequencer **cell/steps**.

You can also mutate some of the protons into neutrons!

If this is confusing, don't worry Walkthrough #2 coming up soon will make it all as clear as mud.

Navigation and Controls

The *PatternMaker* screen has the following navigation options:

- **[Encoder 1]**: Doesn't do anything!
- **[Encoder 2]**: Used to select the right hand parameter for editing.
- **[Encoder 3]**: Changes selected right hand parameter value.
- **[K1]**: Returns to the current NORNS screen (press **[K1]** again to come back)
- **[K2]**: Exits the *PatternMaker* screen and enters to the *Delinquer* screen.
- **[K3]**: Toggles the sequencer on and off.

Parameters

The *PatternMaker* screen allows you to change the individual modulators for both the horizontal (x) and vertical (y):

- **Pattern**: Sets the state of the sequencer **cell/steps** to one of the following 22 different states:
 - **8 Bit**: Sets the first 8 **cells / steps** to **Protons** and the rest to **Neutrons**.
 - **16 Bit**: Sets the first 16 **cells / steps** to **Protons** and the rest to **Neutrons**.
 - **24 Bit**: Sets the first 24 **cells / steps** to **Protons** and the rest to **Neutrons**.
 - **32 Bit**: Sets the first 32 **cells / steps** to **Protons** and the rest to **Neutrons**.
 - **40 Bit**: Sets the first 40 **cells / steps** to **Protons** and the rest to **Neutrons**.
 - **56 Bit**: Sets the first 56 **cells / steps** to **Protons** and the rest to **Neutrons**.

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- **64 Bit:** Sets the all 64 **cells / steps** to **Protons**.
- **1 Col:** Sets the first **cells / step** of each row to a *Proton* and the rest to *Neutrons*.
- **2 Col:** Sets the first 2 **cells / steps** of each row to **Protons** and the rest to *Neutrons*.
- **3 Col:** Sets the first 3 **cells / steps** of each row to **Protons** and the rest to *Neutrons*.
- **4 Col:** Sets the first 4 **cells / steps** of each row to *Protons* and the rest to *Neutrons*.
- **5 Col:** Sets the first 5 **cells / steps** of each row to *Protons* and the rest to **Neutrons**.
- **6 Col:** Sets the first 6 **cells / steps** of each row to *Protons* and the rest to *Neutrons*.
- **7 Col:** Sets the first 7 **cells / step** of each row to *Protons* and the rest to *Neutrons*.
- **Stripe:** Sets the 1st, 3rd, 4th and 7th **cells / steps** of each row to *Protons* and the rest to *Neutrons*.
- **Lines:** Sets the 1st, 3rd, 4th and 7th rows of **cells / steps** to *Protons* and the rest to *Neutrons*.
- **Cheq:** Sets the sequencer **cells / steps** to a chequerboard pattern of alternate *Protons* and *Neutrons*.
- **Cube:** Sets the sequencer **cells / steps** to a small cube pattern of alternate *Protons* and *Neutrons*.
- **Cube4:** Sets the sequencer **cells / steps** to a large cube pattern of alternate *Protons* and *Neutrons*.
- **Invader:** Sets the sequencer **cells / steps** to a “space invader” design.
- **Face:** Sets the sequencer **cells / steps** to a “smiley face” design.
- **Seq1 – 64:** Sets the number of sequencer **cells / steps** to *Protons* and the rest to *Neutrons*.

Note: Each modulator **cell/step** can have one of two states, because these are not just limited to on and off, they have been called Neutron and Proton.

- **Neutron:** This specifies the state of the **cell/step** when the *Modulator Control* has a setting of 0. This can be set to any of the following states:
 - **On:** When the sequencer gets to this **cell/step** it will play the relevant note.
 - **Rest:** When the sequencer gets to this **cell/step** it will not play a note but will rest instead.
 - **Skip:** When the sequencer gets to this **cell/step** it will immediately skip to the next **cell/step** it with not play a note or rest.
 - **Ctl:** When set to **Control** what happens will be up to the *Delinquer* settings to determine if the note should be played or skipped.
- **Proton:** This specifies the state of the **cell/step** when the *Modulator Control* has a setting of 1. This can be set to any of the same states are the *Neutron*. **Note:** By swapping the values of the *Protons* and *Neutrons* around you can create many permutations of the patterns than just the basic 22.
- **Mutation:** This settings allows you to mutate the basic pattern, it ranges from 0 (no mutation) to 100 (randomly mutate every **cell/step**).

Note: Don't forget that using the *PatterMaker* screen is just the start, it's designed to take the drudgery out of entering 64 values, however you are encouraged to start with the *PatterMaker* screen, but, then go into the *Note Entry* screen and tweak individual **cell/steps** to your hearts content.



Delinquer Screen

Figure 6 below shows the *Delinquer* screen:



Figure 6: Delinquer screen

Navigation and Controls

The *Delinquer* screen has the following navigation options:

- **[Encoder 1]**: Used to select one of the 16 modulator **cell/steps** for editing. There are 8 along the bottom under the sequencer **cell/steps**, see Figure 7 below:



Figure 7: X-Modulator **cell/steps**

- and 8 down the right hand side of the sequencer **cell/steps**, see Figure 8 below:



Figure 8: Y-Modulator **cell/steps**

- **[Encoder 2]**: Used to select the right hand parameter for editing.
- **[Encoder 3]**: Changes selected right hand parameter value.
- **[K1]**: Returns to the current NORNS screen (press **[K1]** again to come back)
- **[K2]**: Exits the *Delinquer* screen and enters to the *Sequencer* screen.
- **[K3]**: Toggles the state of the currently selected modulator **cell/step**.

Parameters

The *Delinquer* screen allows you to *really mess* (a technical term) with the flow of the sequencer and has the following parameters:

- **X Pat**: This defines the X-Modulator's patterns and can have any of the following values:
 - **Static**: The X-Modulator remains static (default).
 - **Shift-L**: The X-Modulator does a Shift to the Left, so a pattern of 10101000 would become 01010001. (Note the wraparound).
 - **Shift-R**: The X-Modulator does a Shift to the Right, so a pattern of 11110001 would become 11111000. (Again, note the wraparound).
 - **Flip**: The X-Modulator does a Flip of the "bits" so a pattern of 11110000 would become 00001111.

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- **Inc:** The X-Modulator increments the binary value of the X-Modulator, so a pattern of 00001111 (15 in decimal) would become 00010000 (16 decimal).
- **Dec:** The X-Modulator decrements the binary value of the X-Modulator, so a pattern of 00001111 (15 in decimal) would become 00001110 (14 decimal).
- **RndBit:** The X-Modulator randomly flips a single binary value, so a pattern of 11111111 could become 11101111.
- **RndAll:** The X-Modulator randomly flips all the binary values, so a pattern of 11111111 could become 01101001.
- **X Loop:** Sets how many sequencer steps must pass before the X-Modulator pattern changes. Range: 2 – 1024. Default value 64.
- **Y Pat:** This defines the Y-Modulator's patterns and can have any of the following values:
 - **Static:** The Y-Modulator remains static (default).
 - **Shift-L:** The Y-Modulator does a Shift to the left, so a pattern of 10101010 would become 01010101. (Note the wraparound).
 - **Shift-R:** The Y-Modulator does a Shift to the right, so a pattern of 11110000 would become 01111000. (Note the wraparound).
 - **Flip:** The Y-Modulator does a Flip of the "bits" so a pattern of 11110000 would become 00001111.
 - **Flip:** The Y-Modulator does a Flip of the "bits" so a pattern of 11110000 would become 00001111.
 - **Inc:** The Y-Modulator increments the binary value of the Y-Modulator, so a pattern of 00001111 (15 in decimal) would become 00010000 (16 decimal).
 - **Dec:** The Y-Modulator decrements the binary value of the Y-Modulator, so a pattern of 00001111 (15 in decimal) would become 00001110 (14 decimal).
 - **RndBit:** The Y-Modulator randomly flips a single binary value, so a pattern of 11111111 could become 11101111.
 - **RndAll:** The Y-Modulator randomly flips all the binary values, so a pattern of 11111111 could become 01101001.
- **Y Loop:** Sets how many sequencer steps must pass before the X-Modulator pattern changes. Range: 2 – 1024. Default value 64.
- **State:** State has 2 settings which are important to understand as they have a major impact on how the sequencer operates, the available settings are:
 - **On:** Meaning that the
 - **Off:** Meaning
- **Preset:** Allows you to change the *Delinquer* settings to one of the following:
 - **All-On:** 11111111-11111111 - The *Delinquer* will play a note that is under its control.
 - **All-Off:** 00000000-00000000 - The *Delinquer* will not play a note that is under its control.
 - **Checks:** 10101010-10101010 - The *Delinquer* will play a note where the intersection of the vertical and horizontal modifier are both 1.
 - **Half:** Half the notes are set to play and the X and Y patterns shift left every 16 steps.
 - **Flip:** The X and Y patterns flip every 64 and 16 steps.
 - **Count:** X counts in binary from 0 to 255 and the cycles around, Y counts in binary from 255 to 0 every 16 steps.
 - **Rand:** Random Bits are flipped on the X and Y patterns aver 64 and 32 steps.
 - **Chaos:** The X an Y Patterns are randomised every 8 steps Chaotic Evil!

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- **Long:** Show and example of setting longer pattern times to get an evolving patterns, useful for more ambient experiments.
- **WTF!:** Complex setting originally used to stress test the *Delinquer* code.
- **Prime:** Using Random Bit changes and 2 prime numbers to ensure that pattern does not repeat for a significant amount of time.



Time for a Practical Break Again

OK, so you should be getting a good feel for how the Delinquencer works, but it's time again to quit with the dry manual and get your hands dirty again.

I therefore suggest that you put this manual to one side (keep it handy for reference) and pick up the *Delinquencer Walkthrough # 2* document and work your way through.

After completing it, you should know almost everything there is to know about the Delinquencer and can finally skim through the Appendix A that covers all the Parameters for a few other golden nuggets of information.

But we digress, load up the *Delinquencer Walkthrough # 2* construct and give it ago.

Piece of advice, we are going to need Guns ... lots of Guns.

Appendix A: Parameters

Notes

All Note Settings

These parameters change all of the notes of a sequence.

Lengths: Changes the note length values to one of the following options:

0.25	0.50	0.75	1.00
1.25	1.50	1.75	2.00
2.25	2.50	2.75	3.00
3.25	3.50	3.75	4.00

Default: **0.5**

Note: Sometimes these are refer to as %'s, with 0.25 being 25%.

Probabilities: Changes the note probability to one of the following settings:

<i>All 100%</i>	<i>All 75%</i>	<i>All 50%</i>	<i>All 25%</i>
<i>Each Row 100%-05%</i>	<i>Each Row 5%-100%</i>	<i>Each Column 100%-5%</i>	<i>Each Column 5%-100%</i>
<i>25% inc by 0.5%</i>	<i>25% inc by 1.2%</i>	<i>01% inc by 1.5%</i>	
<i>100% dec by 0.5%</i>	<i>100% dec by 1%</i>	<i>100% dec by 1.25%</i>	
<i>Random (25%-75%)</i>	<i>Random (0%-100%)</i>	<i>Random (75%-100%)</i>	<i>Random (95%-100%)</i>
<i>Random (0%-25%)</i>	<i>RandomWalk 1</i>	<i>RandomWalk 2</i>	<i>RandomWalk 3</i>
<i>RandomWalk 4</i>	<i>Subtle</i>		

Default: **All 100%**

Note: Originally added for testing the *Delinquer* but retained.

Velocities: Changes the note velocity to one of the following settings:

<i>All 127</i>	<i>All 96</i>	<i>All 64</i>	<i>All 32</i>
<i>Rows 125-20</i>	<i>Rows 20-125</i>	<i>Cols 125-20</i>	<i>Cols 20-125</i>
<i>Inc 32 by 0.5</i>	<i>Inc 32 by 1.0</i>	<i>Inc 32 by 1.5</i>	
<i>Dec 127 by 0.5</i>	<i>Dec 127 by 1</i>	<i>Dec 127 by 1.5</i>	
<i>Rnd (32-96)</i>	<i>Rnd (64-96)</i>	<i>Rnd (32-127)</i>	<i>Rnd (1-127)</i>
<i>Rnd (80-127)</i>	<i>RndWalk(64:32:127:2)</i>	<i>RndWalk(64:32:127:4)</i>	<i>RndWalk(64:48:80:2)</i>
<i>RndWalk(64:48:80:8)</i>	<i>RndWalk(100:80:127:4)</i>		

Default: **All 96**

Note: Originally added for testing the *lan* but retained.

Note Presets

Length Pattern: Sets the note length based on one of the following settings:

25-100%	50-125%	75-150%	100-25%
125-50%	150-75%	25-100%	50-125%
75-150%	100-25%	125-50%	150-75%
25-50%	25-75%	Random 25-100%	Random 50-100%
Random 75-125%	Random 25-200%	Random 100-250%	

Default: **50-125%**

Note: Originally added for testing the *Delinquer* but retained.

Toggles

Probability Reset: Toggles a probability reset every cycle:

On	Off
----	-----

Default: **On**

Note: If this is set to **off** then the random probability values are kept, if set to **on** then every cycle a new set of random values are generated.

Sequencer

Selected Cell: The currently selected cell in the grid for editing, this ranges from between 1 (top left) and 64 (bottom right).

Default: 1

Divisions: Allows you to have sub-divisions of the main BPM – Ranges from 1/1 to 1/16, default is 1/1 which is no sub-divisions. This setting allows for more interesting timings.

Default: 1/1

Loop Direction: Refer to the parameters section on page 5.

Default: Forward

Scale Quantizer: Sets the scale that the notes in the sequence will be quantised to. To leave the notes “un quantised” to a scale select the “Chromatic” setting. There are 41 different scales to choose from, see below:

Major	Natural Minor	Harmonic Minor	Melodic Minor
Dorian	Phrygian	Lydian	Mixolydian
Locrian	Whole Tone	Major Pentatonic	Minor Pentatonic
Major Bebop	Altered Scale	Dorian Bebop	Mixolydian Bebop
Blues Scale	Diminished Whole Half	Diminished Half Whole	Neapolitan Major
Hungarian Major	Harmonic Major	Hungarian Minor	Lydian Minor
Neapolitan Minor	Major Locrian	Leading Whole Tone	Six Tone Symmetrical
Balinese	Persian	East Indian Purvi	Oriental
Double Harmonic	Enigmatic	Overtone	Eight Tone Spanish
Prometheus	Gagaku Rittsu Sen Pou	In Sen Pou	Okinawa
Chromatic			

Default: Chromatic

Transpose (semitones): Allows you transpose up or down 60 semitones (5 octaves)

Default: 0

Sequencer Presets

Preset: One of the following presets:

Rows	Cols	UE1 - Up from C1	UE1 - Up from D1
UF#1 - Up from F#1	UG#1 - Up from G#1	UA#1 - Up from A#1	DB6 - Down from B6
DA6 - Down from A6	DG6 - Down from G6	DF6 - Down from F6	DD#6 - Down from D#6
DC#6 - Down from C#6	Tau-1 ... Tau-9	Rho1 ... Rho9	Phi1 ... Phi9
Eta-1 ... Eta9	RnwW1-RndW4	OTR	Silica1
Silica2			

Default: Rows

Delinquencer

Selected Modulator: The currently selected modulator for editing, this ranges from between 1 (bottom left) and 16 (top right).

Default: 1

X Modulation Pattern: For details please refer to the parameters section on page 11. Values can be one of the following:

Static	Shift-L	Shift-R	Flip
Inc	Dec	RndBit	RndAll

Default: Static

Y Modulation Pattern: For details please refer to the parameters section on page 11. Values can be one of the following:

Static	Shift-L	Shift-R	Flip
Inc	Dec	RndBit	RndAll

DELINQUENCER

Default: **Static**

X Modulation Frequency: Range of 2 .. 1024

Default: **64**

Y Modulation Frequency: Range of 2 .. 1024

Default: **64**

Delinquer Presets

Preset: One of the following presets:

<i>Checks</i>	<i>Half</i>	<i>Flip</i>	<i>Count</i>
<i>Rand</i>	<i>Chaos</i>	<i>Long</i>	<i>WTF!</i>
<i>Prime</i>			

Default: **Checks**

Patternmaker

Pattern: One of the following presets:

<i>8 Bit</i>	<i>16 Bit</i>	<i>24 Bit</i>	<i>32 Bit</i>
<i>40 Bit</i>	<i>56 Bit</i>	<i>64 Bit</i>	
<i>1 Col</i>	<i>2 Col</i>	<i>3 Col</i>	<i>4 Col</i>
<i>5 Col</i>	<i>6 Col</i>	<i>7 Col</i>	
<i>Stripe</i>	<i>Lines</i>	<i>Cheq</i>	<i>Cube</i>
<i>Cube4</i>	<i>Invader</i>	<i>Face</i>	
<i>Seq1 – 64</i>			

Default: **Checks**

Neutron Status: One of the following values

<i>On</i>	<i>Off</i>	<i>Skip</i>	<i>Ctl</i>
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Default: **Off**

Proton Status: One of the following values

<i>On</i>	<i>Off</i>	<i>Skip</i>	<i>Ctl</i>
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Default: **Off**

Mutation: Value between 0 and 100



Sound

Amplifier

Amplitude: Amplitude of the sound between 0.0 and 1.0.

Amplifier ASR Envelope

Amp Attack: Amplitude Envelop Attack time, value between 0.0 and 4.0.

Amp Sustain: Amplitude Envelop Sustain level, value between 0.0 and 1.0.

Amp Release: Amplitude Envelop Release time, value between 0.0 and 4.0.

Filter

Filter Cutoff: Filter Cut-off frequency in Hz, values between 20.0 and 20,000 Hz.

Filter Gain: Amount of Filter Gain, values between 0.0 and 4.0.

Filter ADSRP Envelope

Filter Attack: Filter Attack time, value between 0.0 and 4.0.

Filter Decay: Filter Decay time, value between 0.0 and 4.0.

Filter Sustain: Filter Sustain level, value between 0.0 and 1.0.

Filter Release: Filter Release time, value between 0.0 and 4.0.

Filter P Release: Filter P Release time, value between 0.0 and 4.0.

Stereo Panning

Pan L/R: Left and Right Panning – Value between -1.0 (full left), 0.0 (centre) and 1.0 (full right)

Synth Sound Presets

Preset: One of the following presets:

<i>Init</i>	<i>Ivy</i>	<i>Bravo</i>	<i>OTR</i>
<i>Bass</i>	<i>Droplet</i>	<i>Bass 2</i>	

Default: [Init](#)

Output

Output: Specifies if the output of the *Delinquencer* will output to just the Audio channels, the midi channels or both. One of the following values:

<i>Audio</i>	<i>Midi</i>	<i>Audio+Midi</i>
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Default: [Audio + Midi](#)

MIDI Settings

MIDI out device: Value in the range 1 to 4.

MIDI out channel: Value in the range 1 to 16.



MIDI Panic

All MIDI notes off: Switches all the MIDI notes off.

Patches

Output: Example patches to try out. Select from one of the following values:

<i>Init</i>	<i>Latch of the Day</i>	<i>Is Tawsinaay Ok</i>	<i>Descent</i>
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Default: [Init](#)

Projects

Saving

Project Name: Allows the entry of a project name to store the patch.

Loading

Load Name: Allows the previously saved patch to be loaded.