1BITDRAGON USER GUIDE

1BITDRAGON Version 4.3

The content of this guide is furnished for informational use only and is subject to change without notice.

Fifth Edition, April 2023.

1BITDRAGON™

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Table of Contents

1. Install and run 1BITDRAGON

After purchasing the software from itch.io, you can download the version for your operating system.

If you have already installed 1BITDRAGON, you must manually **uninstall the previous version** before installing the new version, otherwise .1bd files may still open with the old version when you double-click on them:

› For Windows and Linux users: **delete the folder**.

› For macOS users: **delete the application** from the Applications folder.

Then **unzip the downloaded file**, which will create a new directory. Then:

› For Windows and Linux users: **launch the software from this directory**.

› For macOS users: **double-click the DMG** file to open it, and you will see a Finder window. **Drag the application's icon** to your Applications folder and you are done: the software is now installed.
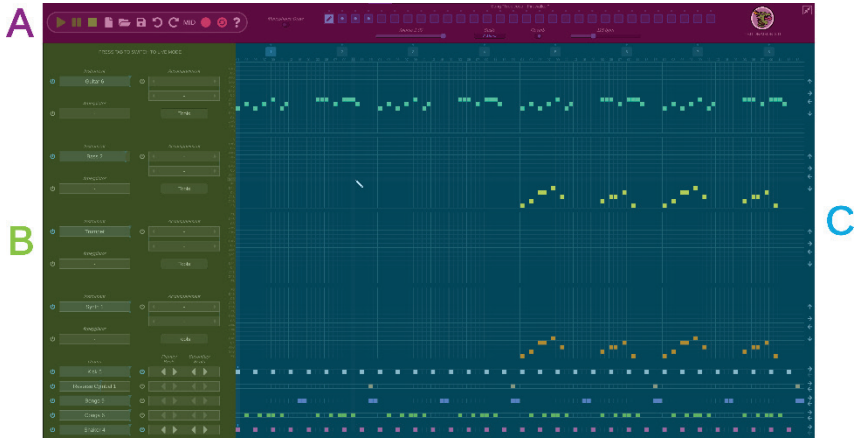

ⓘ Notes

› *For macOS users*: when you double-click on the application, you'll notice that it doesn't open. This is because macOS has blocked the app from running. Since this app came from the internet, macOS assumes it is not safe and automatically cancels opening the app. **To bypass this, ctrl-click (or right-click) the app icon in the Finder, choose Open, and confirm.**

› *For Linux users*: if you receive an error when double-clicking the X86_64 file, you may need to mark it as "executable". To enable execution of the X86_64 file, follow these steps: right-click the X86_64 file, select Properties, go to the permissions tab, then tick the box **"Allow executing file as program"**.

› *For macOS users*: if you try to open a new copy of 1BITDRAGON, it will switch to the running copy. If you want to open a new copy, this is what you need to do from your terminal: **open -n /Applications/1BITDRAGON.app**

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2. Main screen

1BITDRAGON's main screen is divided into **three sections**:

A   Song controls

B   Choice of instruments and drums

C   Notes editing grid

3. Main toolbar

The main toolbar contains button shortcuts for global commands:

PLAY

PAUSE

STOP

NEW SONG: erase all

OPEN SONG: open a .1bd file

SAVE SONG

UNDO

REDO

EXPORT MIDI FILE

RECORD A WAV, MP3 OR FLAC FILE

RECORD A LOOP (WAV, MP3 OR FLAC): export the looped region as a seamless loop file

HELP

ⓘ Note

You can also press the **space bar** to play or pause the song.

If you **double tap** on the space bar, the song will stop and return to the beginning (this is the equivalent of the Stop button).

> ### ⓘ Note
>
> You can also use the keyboard shortcuts **Ctrl-Z** (undo), **Ctrl-Y** or **Ctrl+Shift+Z** (redo).

On the right side of the screen there is a button to **switch to full screen mode**. The appearance of the button changes according to the action it proposes:

Enter Full Screen Mode
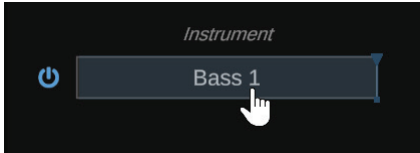
Exit Full Screen Mode

> ### ⓘ Note
>
> You can also use the keyboard shortcuts **Alt+Enter** (Windows) or **Command(⌘)+Enter** (Mac).
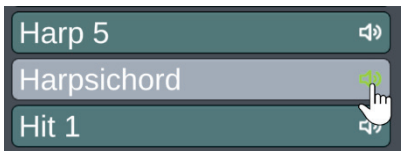
4. Choose an instrument

To choose an instrument or change it, **click on the instrument** name:

You can then choose from the list of proposed instruments.

You can also switch from classic instruments to **chiptune (8-bit) instruments**.

There is a **preview button** next to each instrument:

Validate your choice by clicking on "OK" or by double-clicking on the name of the chosen instrument.

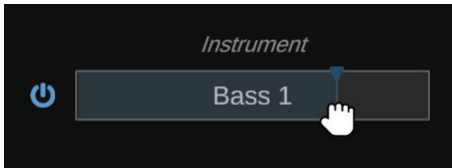> ### (i) Note
>
> You can change instruments **during play** to see what works best.

To enable or disable an instrument, click the **power button** next to the instrument name.

Click the **power button** while holding down the **Alt key** to **solo** an instrument track by muting all other tracks.

To change the volume of an instrument, **move the slider** on the field:

5. Add, move and copy notes

To add notes, just **draw them on the grid** by clicking the left mouse button.

Press:

› **click**…   to create note

› **click+alt**…   to create attenuated note

› **click+shift**…   to paint notes

› **click+ctrl and drag**…   to copy note

› **right click**…   to delete note

› **click and drag**…   to move note

› **click and drag at the ends**… to change the length of a note

You can also **move notes** left, right, up or down using the arrows:
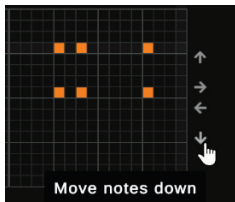
1BITDRAGON uses a **pentatonic scale** by default (five notes per octave) to avoid false notes. You can change the root note and the scale by clicking on the **Scale button** at the top of the screen.

> ### ⓘ **Note**
>
> There is an option to draw **monophonically**, i.e. not allow multiple notes in the same column while you draw:
>
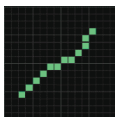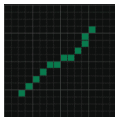> Press the **P key** to turn "pixel-perfect" mode on/off

> ### ⓘ Note
>
> In the grid, each square represents a **sixteenth note**.
>
> **BPM** (Beats Per Minute) is how many beats of the song (**quarter notes**) occur in a minute.

Click on a note while holding down the **Alt key** to reduce the volume:

     Notes with **100% volume**

     Attenuated notes (**50% of the volume**)

When you want to **draw several notes in one go**, just press the **Shift key** and keep your finger pressed on the left mouse button. Likewise, when you want to **delete several notes in one go**, simply hold down the right mouse button. If you want to **attenuate several notes in one go**, hold down the left mouse button while holding down the **Shift and Alt keys**.

You can **zoom in on part of the screen** using the **mouse wheel**, or the **trackpad pinch zoom**. You can **move around the window** when zoomed-in by pressing the **middle mouse button or the M key** while moving the mouse.
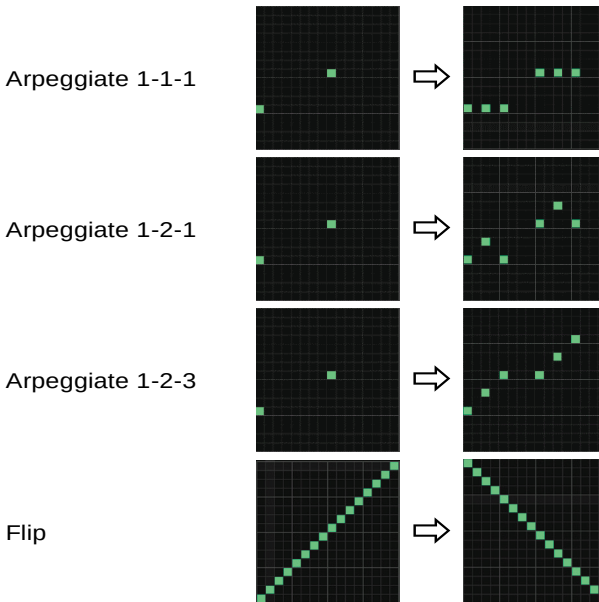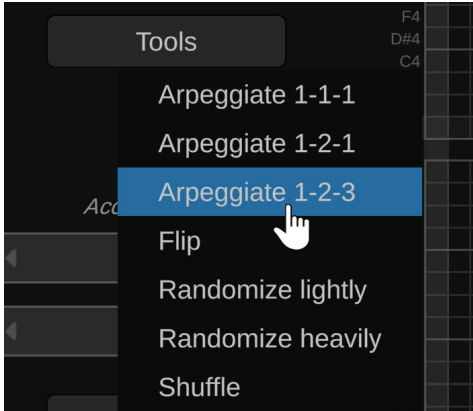
> ### ⓘ Note
>
> › *For macOS and Linux users*: pinch with two fingers on the trackpad to zoom in and out is not supported on all machines. Instead, **take two fingers and swipe upwards on the trackpad** area to zoom in, then use your two fingers to swipe downwards to zoom out (or vice versa, depending on your configuration).
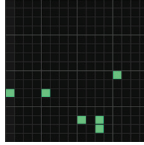
6. Use tools to modify notes

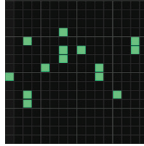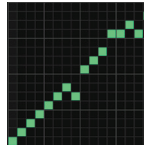The **Tools** menu contains useful tools for working with notes:

Arpeggiate 1-1-1

Arpeggiate 1-2-1
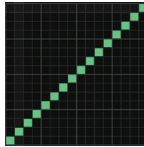

Arpeggiate 1-2-3

Flip

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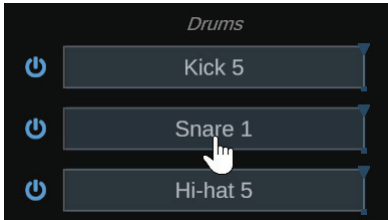Randomize lightly

Randomize heavily

Shuffle

ⓘ **Note**

› You can press the shuffle several times to get a little more randomness.

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7. Choose a drum

To choose a drum or change it, **click on the drum** name:

You can then choose from the list of proposed drums.

You can also switch from classic drums to **chiptune (8-bit)** drums.

Validate your choice by clicking on "OK" or by double-clicking on the name of the chosen drum.
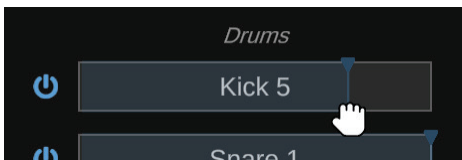
> ### (i) Note
>
> You can change drums **during play** to see what works best.

To enable or disable a drum, click the **power button** next to the drum name.

Click the **power button** while holding down the **Alt key** to **solo** a drum track by muting all other tracks.

To change the volume of a drum, **move the slider** on the field:

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8. Create a song using blocks

A song is made up of blocks. A song can use up to **30 different blocks**.

The blocks are shown at the top of the screen:

To switch from one block to another, just click on a block.

A block can have different states:

The block **is empty**. It contains no notes.
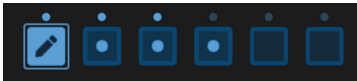
The block **contains notes**.

The block **is being edited**.

Above the blocks, there is a **loop button**:

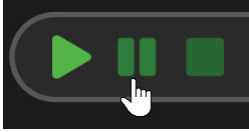You can **loop regions** so that they play repeatedly:

Looped region

9. Play the song, pause it

Use the following buttons to **play**, **pause**, or **stop** the song:

> ### ⓘ Note
>
> You can also press the **space bar** to play or pause the song.
>
> If you **double tap** on the space bar, the song will stop and return to the beginning (this is the equivalent of the Stop button).

When the song is stopped, you can position the play bar on a particular column **by clicking on the column number**.

Similarly, you can **click on a block** to select it.

> ### ⓘ Note
>
> While the song is playing, if you want to go **immediately** to a specific column, **double-click** on it.
>
> While the song is playing, you can also click on a specific block to go to that block. The sequence will start when the play bar reaches the end of the column that is currently playing. If you want to **immediately** select this block, **double-click** on it.
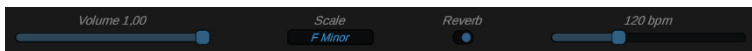
> ### ⓘ Note
>
> If you experience a lag, **close other applications, including background applications**.

10. Edit song properties (volume, BPM, etc.)

At the top of the screen, you can edit the song's properties:

The **Scale** button allows you to change the root note and the scale.

> ### ⓘ Note
>
> 1BITDRAGON uses a **pentatonic scale** by default.
>
> A "pentatonic scale" is a set of 5 notes which belong to a conventional scale (for example, C major scale), in contrast to the heptatonic scale, which has seven notes per octave (such as the major scale and minor scale).
>
> Example:
>
> *C Major is C D E F G A B*
>
> *C Major Pentatonic is C D E G A*

The **Reverb** toggle button disables the effects that are applied by default (reverb and echo).

The **BPM** indicates the number of beats (quarter notes) per minute.

These properties are **saved** when the song is saved.
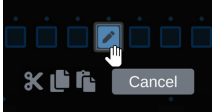
> ### ⓘ Note
>
> You can change the song properties while the song is playing, allowing you to apply live effects **while recording a WAV, MP3 or FLAC file**.
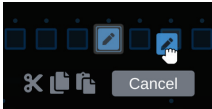
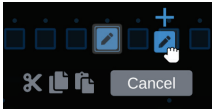# 11. Copy and paste blocks, columns, rows and grids

<u>**Copy and paste blocks**</u>

Right-click on a block, or press the **Ctrl key** for one second while moving the mouse over a block to bring up the cut, copy and paste buttons:

You can then **click and drag** the block with the mouse to **move** it:

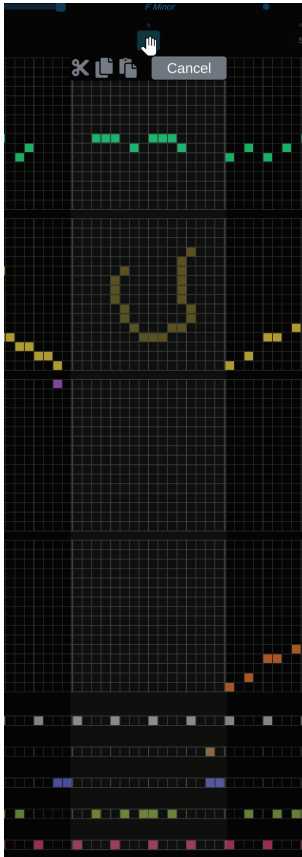**Click and drag** while holding down the **Alt key** to **copy** the block:

> ## ⓘ **Note**
>
> **When copy buttons are visible**, you can also use the keyboard shortcuts **Ctrl-X**, **Ctrl-C** and **Ctrl-V** to cut, copy or paste.
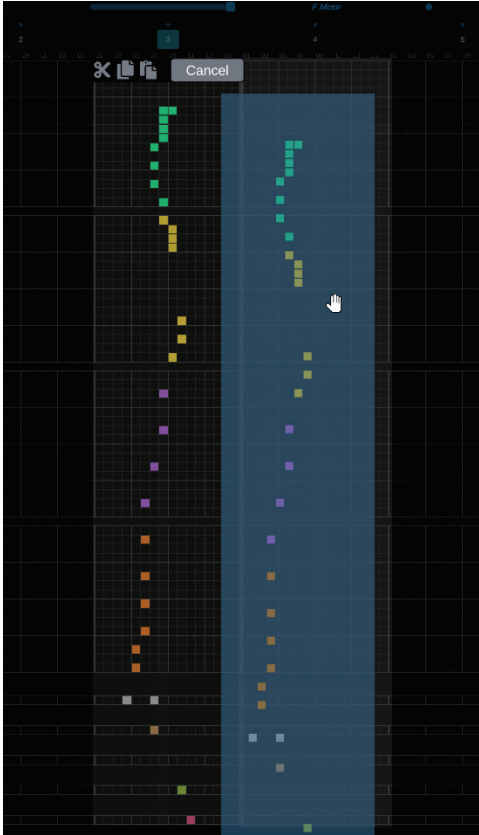
Copy and paste columns

Right-click on a column, or press the **Ctrl key** for one second while moving the mouse over a column to bring up the cut, copy and paste buttons:
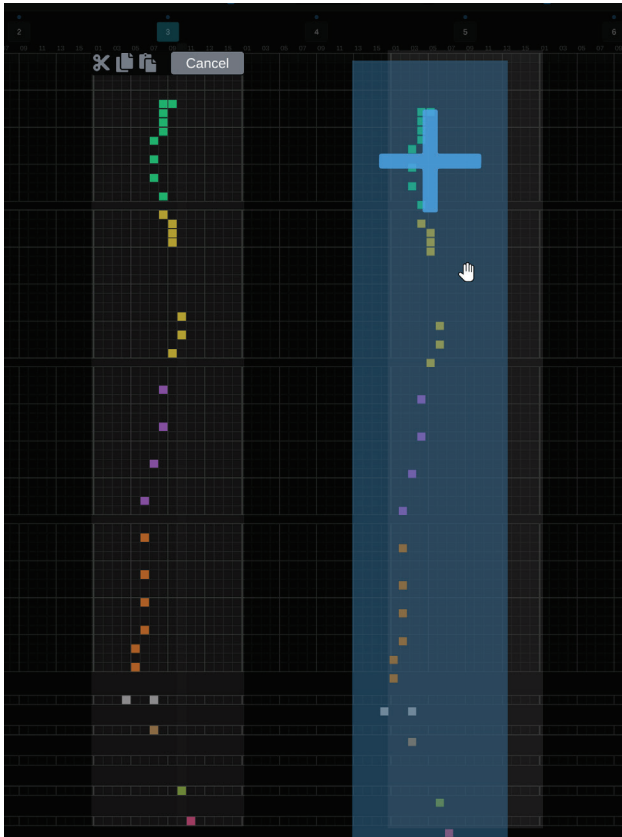
You can then **click and drag** the column with the mouse to **move** it:

Click and drag while holding down the **Alt key** to **copy** the column:

> ⓘ **Note**
>
> **When copy buttons are visible**, you can also use the keyboard shortcuts **Ctrl-X**, **Ctrl-C** and **Ctrl-V** to cut, copy or paste.

Copy and paste rows

Right-click on the power button next to the instrument name, or press the **Ctrl key** for one second while moving the mouse over the left part of a row to bring up the cut, copy and paste buttons:

You can then **click and drag** the row with the mouse to **move** it:

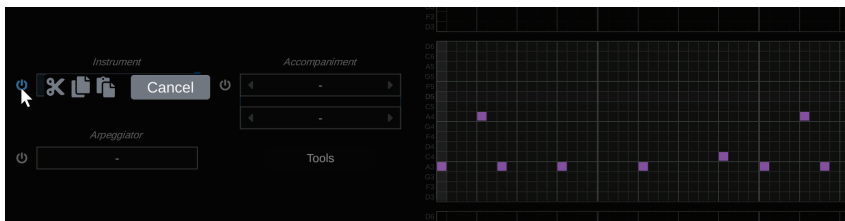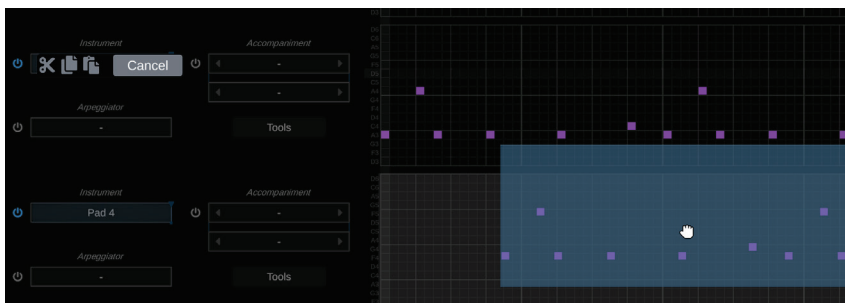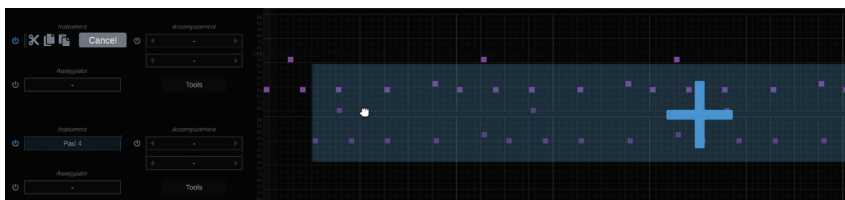**Click and drag** while holding down the **Alt key** to **copy** the row:

> ⓘ **Note**
>
> **When copy buttons are visible**, you can also use the keyboard shortcuts **Ctrl-X**, **Ctrl-C** and **Ctrl-V** to cut, copy or paste.

Copy and paste grids

Press the **Ctrl key** for one second while moving the mouse over a grid to bring up the cut, copy and paste buttons:

You can then **click and drag** the grid with the mouse to **move** it:

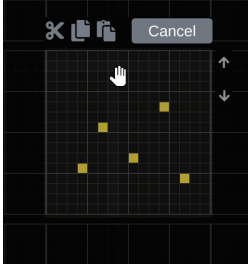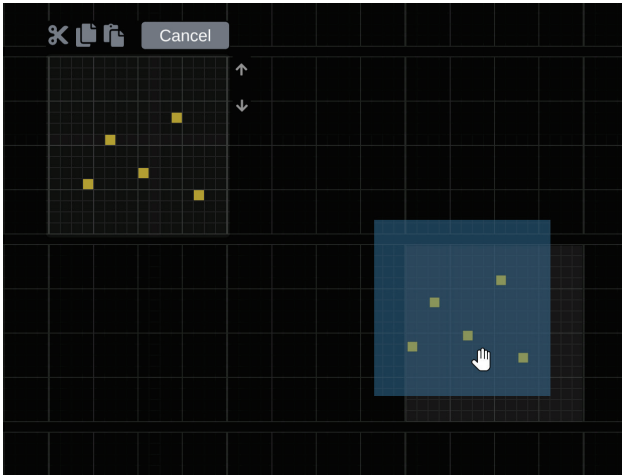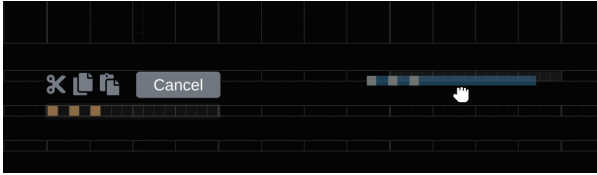**Click and drag** while holding down the **Alt key** to **copy** the grid:
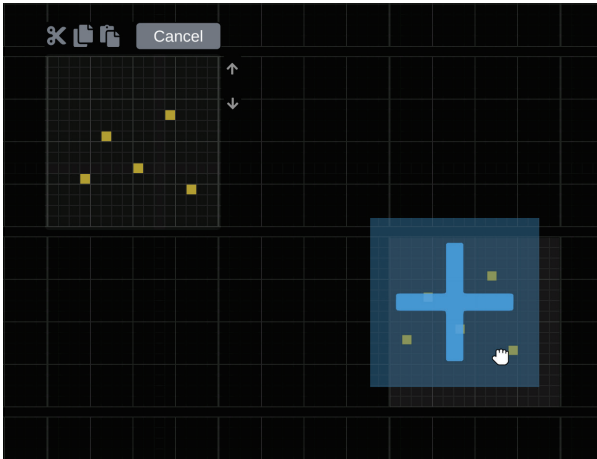
ⓘ **Note**

When copy buttons are visible, you can also use the keyboard shortcuts **Ctrl-X**, **Ctrl-C** and **Ctrl-V** to cut, copy or paste.

When copy buttons are visible, you can also move notes up or down, using these buttons (or using the **up and down arrows**):
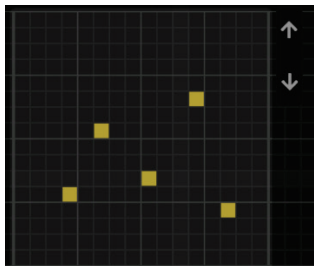
ⓘ **Note**

You can copy and paste from a drum to an instrument, and vice versa (**when it is on the 1st line**).

12. Loop certain parts (columns, blocks)

To loop a column, **click on the loop button** above the column number:
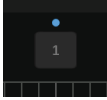
Click the symbol again to remove the loop.

ⓘ **Note**

You can play several **successive columns** in a loop:

Looped region

To loop a block, **click on the loop button** above the block:
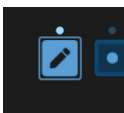
Click the symbol again to remove the loop.

> ### ⓘ Note
>
> You can play several **successive blocks** in a loop:
>
>
>
> Looped region
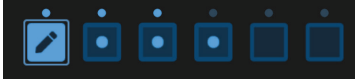
13. Choose an accompaniment

To choose an **accompaniment** for an instrument, click on the first group of buttons to select the desired **accompaniment type** (Bass lines, Chords or Fills):
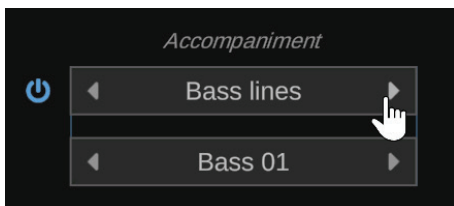
Click on the second group of buttons to choose one of the **presets**:
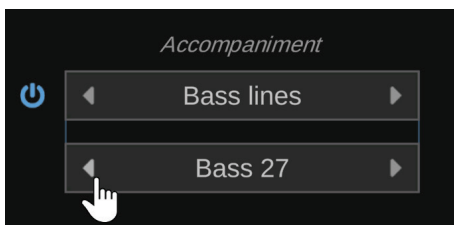
To turn an accompaniment on or off, click the **power button** to the left:
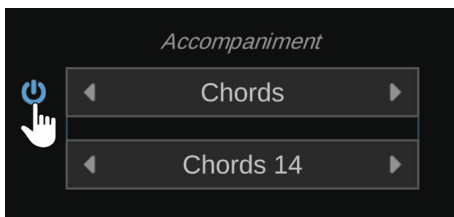
> ### ⓘ Note
>
> You can change accompaniments **during play** to see what works best.

> ⓘ **Note**
>
> After selecting an accompaniment, you can **change it** by adding or deleting notes (this will deactivate the accompaniment mode).

14. Choose an arpeggiator

To choose an arpeggiator for an instrument or to change it, **click on the arpeggiator** field:
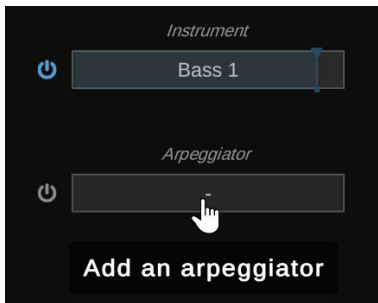
You can then choose from the list of proposed arpeggiators:

To turn an arpeggiator on or off, click the **power button** to the left:

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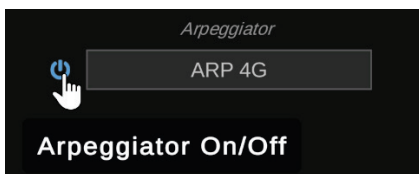
> ### ⓘ Note
>
> You can change arpeggiators **during play** to see what works best.

15. Create complex rhythms

You can use the rhythm generator to generate rhythmical patterns.

Click on the first group of buttons to add or space **primary beats**:
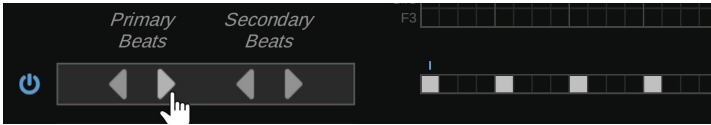
Click on the second group of buttons to add or space **secondary beats**:
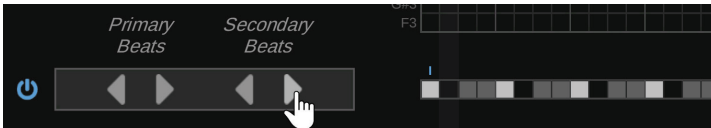
To move the beats to the left or right, click on the **arrows** to the right of each track:

To turn a rhythm on or off, click the **power button** to the left:
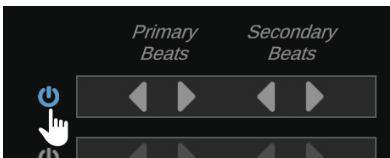
ⓘ Note

After creating a rhythm, you can modify it by adding or deleting notes directly on the grid (this will deactivate the rhythm generator).

16. Save the song

Click the Save button [■] to save the song in **.1bd** format.

> ### ⓘ **Note**
>
> You can also use the keyboard shortcuts **Ctrl-S**.

> ### ⓘ **Note**
>
> **.1bd** files can be opened directly by double-clicking on them.

.1bd files contain the following information:

› Main Volume

› BPM

› Scale and root note

› Effects (reverb and echo) on or off

› List of instruments

› List of drums

› Instruments on/off and volume

› Drums on/off and volume

› Blocks and notes

› Accompaniments

› Arpeggiators

› Rhythms

› Repeat buttons on or off

17. Export in midi format

Click the Midi button MID to save the song in **.mid** format.

This button exports all active tracks as a multi-track MIDI file.

18. Live mode

Press the **TAB** key to switch to Live mode.

Live mode allows you to **apply live effects** while recording a WAV. These effects stay on when you switch back to normal mode, but they are **not saved** with the song.

You can play with the following settings:

› Use the **XY controllers** to control two parameters at once (low pass and high pass filters):
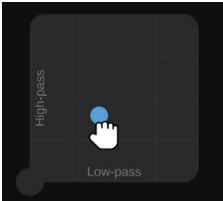
› Use the **modulation wheels** to filter in real time: set the amount of cutoff frequency when the modulation wheel is dragged up or down:
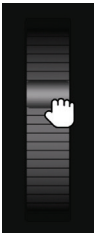
› Activate **high pass, medium pass and low pass filters**:
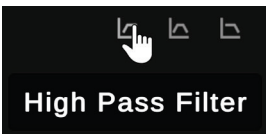
> ⓘ **Note**
>
> You can also change other properties while the song is playing (volume, scale, reverb, BPM, instruments, drums, accompaniments, arpeggiators, beats), allowing you to apply live effects while recording a WAV, but be careful, the changed settings will be **saved with the song**.

19. Record in WAV, MP3 or FLAC format

Click the "Record a .wav, .mp3 or .flac file" button ⬤ to save the song in **.wav** format (44.1 kHz, 16-Bit, stereo), **.mp3** format (320 kbps, 44.1 kHz, stereo) or **.flac** format.

Click the "Record a loop (.wav, .mp3 or .flac)" button 🔄 to export **the looped region** as a **seamless loop** file.

The **looped region** consists of:

› **the looped columns** of the **current block**,

› or of **the looped blocks**, if there is no looped column on the current block

20. FAQ

Q. How can I learn 1BITDRAGON?

R. Read the User's Guide. Watch the videos:

https://youtube.com/playlist?list=PLkmPS6SmZ1IacgmlOmGxg81_ln4BYjcU1

Q. Can I distribute songs made with 1BITDRAGON?

R. Yes, you can distribute, sell or copyright any production rendered from 1BITDRAGON. You don't need to credit me :)

Q. Can I use the finished music loops in a song I make?

R. Yes, you can use the loops in your own music compositions and sell your songs. You cannot claim the copyright to the instruments and drum samples themselves.

Q. Do I get updates?

R. Yes, you do. With your purchase you will be able to download updates from itch.io and you do not have to repay. When you buy something on itch.io you don't need an account. When purchasing without an account your purchase is tied to your email address. You just have to redownload 1BITDRAGON. If you ever lose the link, you can request it to be resent to your email:
https://itch.io/docs/buying/already-bought

Q. How do I access my purchase on itch.io?

R. After your purchase your browser will redirect to your download page. You will also receive an email from support@itch.io confirming your transaction. This email contains a link to your download page.

Q. If I buy 1BITDRAGON on itch.io, will I receive a DRM-free version?

R. Yes, if you buy 1BITDRAGON on itch.io, you will receive a DRM-free version.

Q. If I buy 1BITDRAGON on itch.io, will I receive a Steam key?

R. Yes.

Q. How to get a Steam Key from my itch.io purchase?

R. You can claim your key on your itch.io download page. You should have a link to that page in the email that you received from itch.io after purchasing 1BITDRAGON. If you need that email sent again, go here: https://itch.io/docs/buying/already-bought and you can request a fresh download email be sent to you.

Click "Get Steam Key" and follow the instructions to get your key. You will use that key to put the application in your Steam library, so copy it to your clipboard.

In the Steam app, go to your Library and click Add a Game in the bottom left of the window and choose "Activate a Product on Steam" and paste the Steam key.

You can now download, install and launch 1BITDRAGON from your Steam library!

Q. Is 1BITDRAGON supported on Apple silicon / M1 computers?

R. Yes, 1BITDRAGON is compatible with Apple silicon computers through Rosetta (select the app, press Command-I and tick the "Open using Rosetta" check box).

Q. Ahhh! I found a bug!

R. Keep calm and report the bug here:
https://itch.io/board/968507/bug-reports

21. Quick Reference

Main Toolbar

▶	PLAY
⏸	PAUSE
■	STOP
	NEW SONG: erase all
	OPEN SONG: open a .1bd file
	SAVE SONG
	UNDO
	REDO
MIDI	EXPORT MIDI FILE
⏺	RECORD A WAV, MP3 OR FLAC FILE
	RECORD A LOOP (WAV, MP3 OR FLAC): export the looped region as a seamless loop file
?	HELP

Keyboard & Mouse Shortcuts

PLAYBACK

Space bar	Play / Pause
Double tap on the space bar	Stop

NOTE EDITION

Click	Create notes
Click + Alt	Create attenuated notes
Click + Shift	Paint notes
P	Turn "pixel-perfect" mode on / off
Click + Ctrl and drag	Copy notes
Right click	Delete notes
Click and drag	Move notes
Click and drag at the ends	Change the length of a note

SAVE

Ctrl + S	Save the song

COPY & PASTE

Press the Ctrl key for one second on a square grid	Copy and paste a grid
Press the Ctrl key for one second on a column	Copy and paste a column
Press the Ctrl key for one second on a row	Copy and paste a row
Press the Ctrl key for one second on a block	Copy and paste a block
Ctrl + X, Ctrl + C, Ctrl + V *(when copy buttons are visible)*	Cut, Copy, Paste

UNDO / REDO

Ctrl + Z	Undo
Ctrl + Y *or* Ctrl + Shift + Z	Redo

FULL SCREEN MODE

Alt + Enter (Windows) *or* Command(⌘) + Enter (Mac)	Full screen on / off

ZOOM IN AND OUT

Mouse wheel up	Zoom in
Mouse wheel down	Zoom out
M *or* Middle mouse button	Move around the window

LIVE MODE

TAB key	Live mode on / off

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