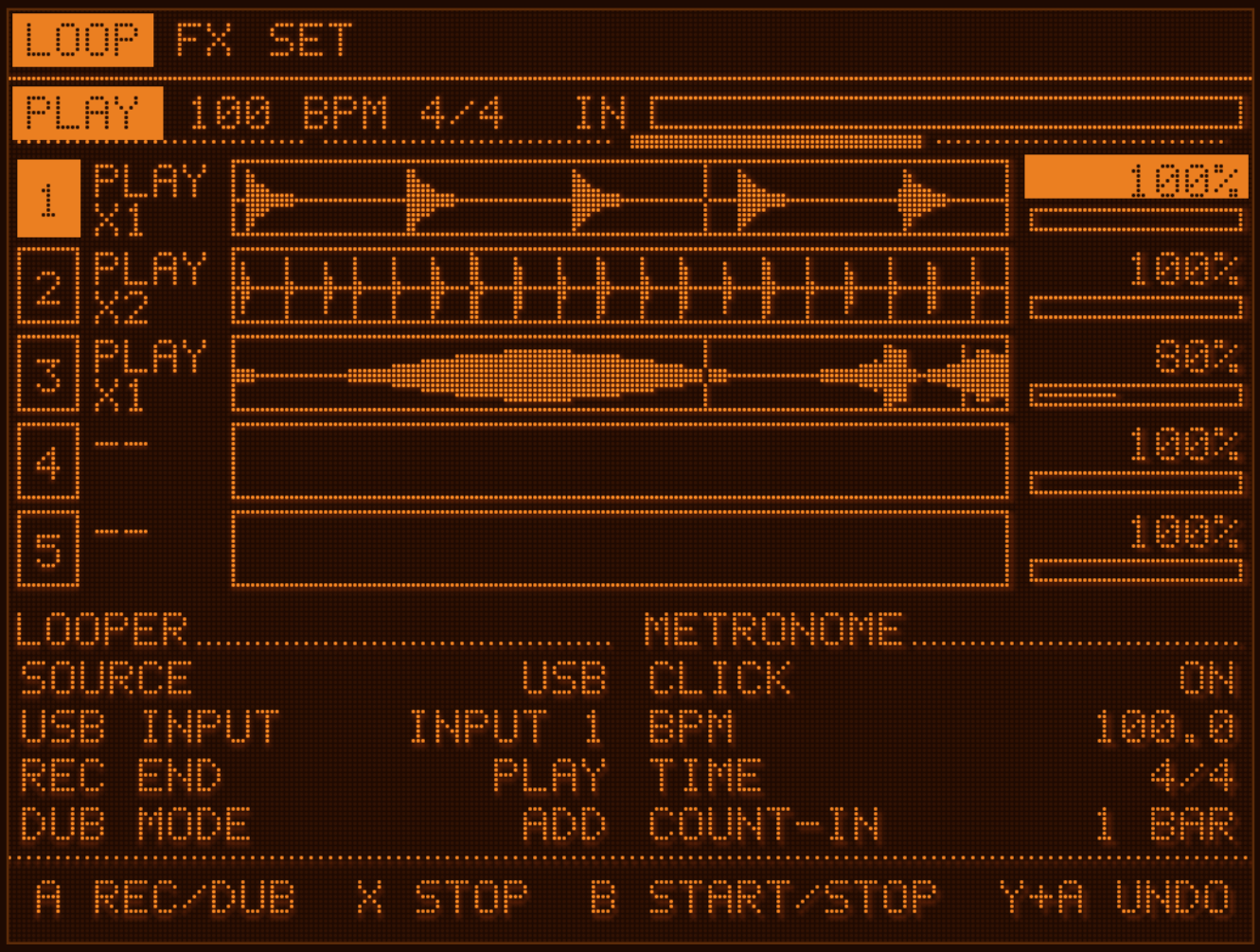
BrickLooper

User manual · version 1.5.2

A 5-track loop station for the TrimUI Brick



BrickWorld · free music apps for the TrimUI Brick · brickworldhub.com

Free software under the GNU GPL v3.

TrimUI and Brick are trademarks of their owners. BrickWorld is not affiliated with TrimUI.

Contents

1. What is BrickLooper
2. Install and update
3. First start
4. The LOOP page
5. Your first loop
6. More tracks
7. Overdub, replace and undo
8. Playing live
9. Metronome and count-in
10. The FX page
11. The SET page
12. Projects and files
13. Limits
14. All the controls
15. Problems and fixes
16. Licence and credits

> **Tip** Hold **SELECT** on the Brick at any time to see the controls of the page you are on.

1. What is BrickLooper

BrickLooper turns your TrimUI Brick into a small loop station. You record a short phrase, it plays round and round, and you add more parts on top of it. Bass, then chords, then a melody: one track at a time.

- **5 stereo tracks**, always in time with each other
- **Overdub** (add layers) or **Replace** (record over a part), with **undo / redo**
- **Metronome** with BPM, time signature and a one-bar **count-in**
- **FX** on the output: drive, filter, delay and reverb
- Loops saved with the **project**, as WAV files you can also use on your computer

What you need

- A TrimUI Brick with KNULLI (tested on KNULLI Scarab).
- Something to record: a USB audio interface, a USB mic or a synth with USB audio. The Brick's built-in mic works too, with one limit (see chapter 13).
- Headphones, or a cable from the Brick's headphone jack to a mixer, audio interface or speaker.
- Optional: a MIDI controller with knobs, to move the FX.

2. Install and update

1. Download the zip from **brickworldhub.com** (BrickLooper page).
2. Unzip it on your computer.
3. Copy everything inside the **BrickLooper_v1.5.2** folder to **roms/ports** on the Brick's SD card: **BrickLooper.sh**, the **.keys** files and the **bricklooper** folder.
4. Put the card back in the Brick and start **BrickLooper** from **Ports**. The first start takes a few seconds more (it unpacks NumPy).
5. Not in the list? Update the games list in the KNULLI menu.

Update

Copy the new files over the old ones. Your projects, loops and settings stay.

Close the app

SELECT + START saves and quits. **MENU + START** also closes the app.

3. First start

BrickLooper opens on the **LOOP** page. First, choose what you record from.

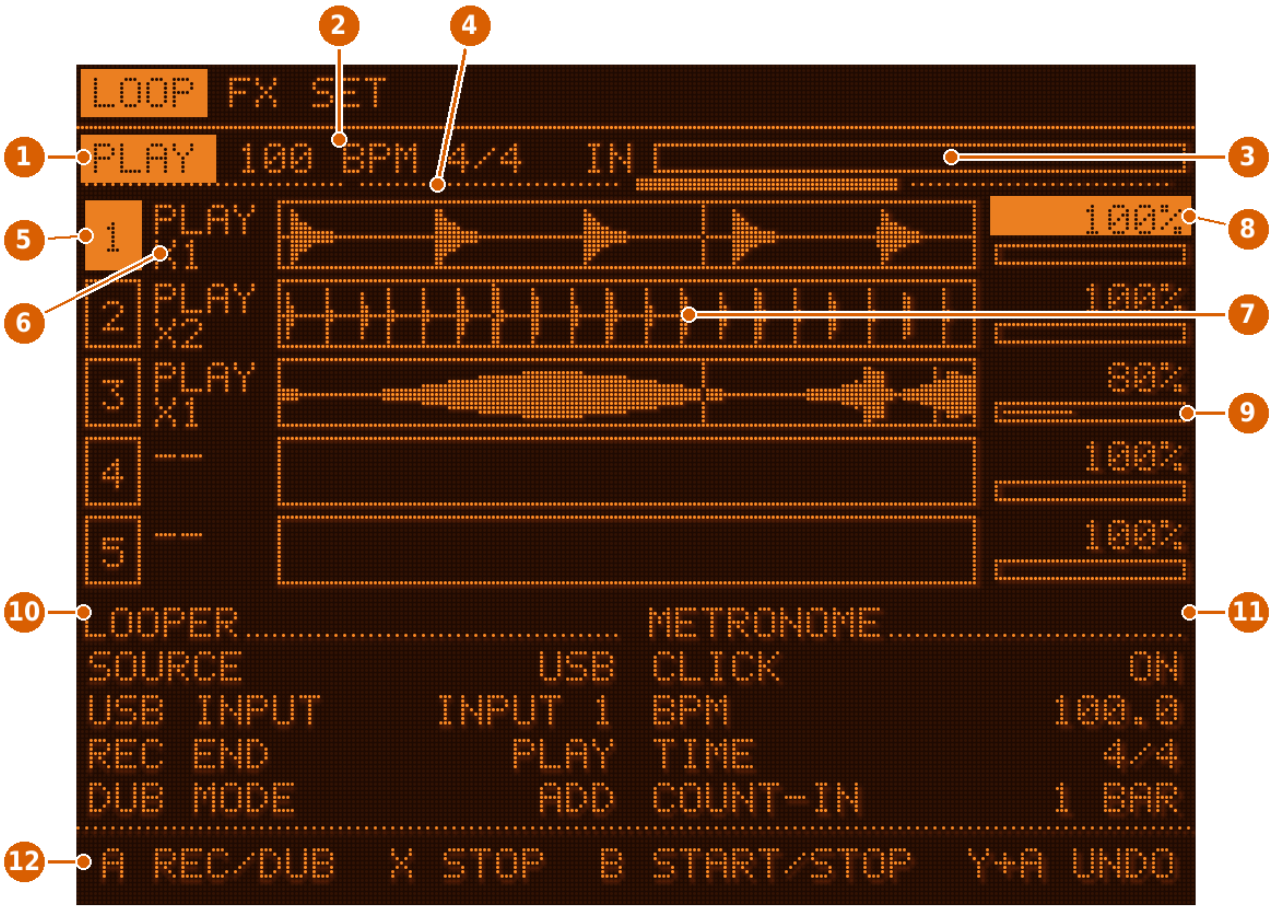
1. Plug in your USB audio device (interface, mic or synth). It opens a few seconds after you plug it in, even while the app is running.
2. On the LOOP page go down to **SOURCE** and press left / right: **USB** or **Internal mic**. With two USB devices you see USB 1 and USB 2.
3. Under it, **USB INPUT** picks which input of the device you record from: Input 1, Input 2... Some adapters have more than one, for example a mic in and a line in. With one input it stays on Input 1. Each USB device remembers its own input.
4. Play something: the **IN** meter at the top moves.
5. Want to hear the input through the Brick? Go to **SET** (press R1 twice) and set **MONITOR** to ON. It is on by default.

> **Tip** If the IN meter stays empty, raise the level on your interface or synth. The setting is saved, so next time the app opens your device by itself.

Pages

There are three pages: **LOOP** (your tracks), **FX** (effects) and **SET** (settings). Change page with **L1 / R1**. On every page **up / down** picks a line and **left / right** changes the value; hold **Y** for fine steps.

4. The LOOP page



1 **PLAY / STOP**. Shows if the loops are running. **B** starts or stops everything.

2 **Tempo**. With the click on: BPM and time signature. With the click off: the loop length in seconds (NO LOOP before the first take).

3 **IN**: input level, left and right. With the built-in mic you see MIC; NOT CONNECTED means the USB device is not there.

4 **Where you are**. With the click on, one block per beat, the current beat lit. With the click off, a line that fills as the loop goes round.

5 **Track number**. The lit one is the **current track**: A, X, Y+A and Y+X act on it.

6 **State**: -- empty, CNT count-in, REC recording, PLAY, DUB overdub, REPL replace, STOP. Under it the length: X1 = one loop, X2 = two loops.

7 **Wave** of the track, with a line where it is playing now. Dotted when the track is stopped.

8 **Volume** of the track, 0–150%. Left / right when the cursor is on the track row.

9 **Level** of the track.

10 **LOOPER** settings: Source, USB input, Rec end, Dub mode (chapters 3 and 7).

11 **METRONOME** settings: Click, BPM, Time, Count-in (chapter 9).

12 The main keys, as a reminder.

5. Your first loop

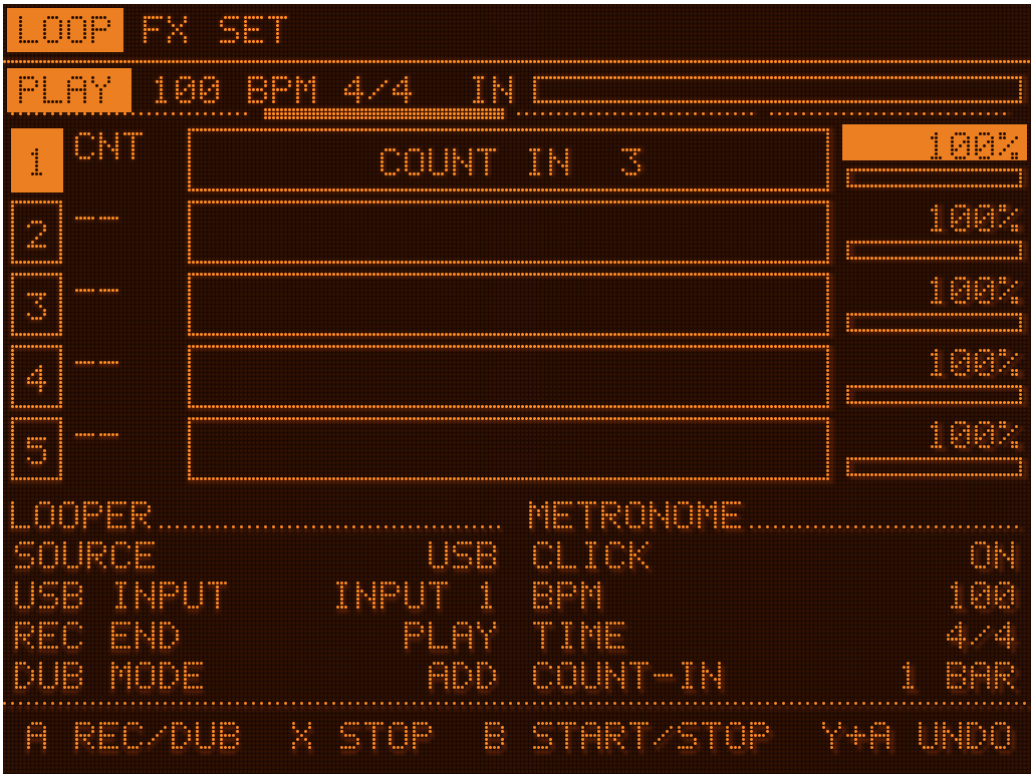
Free length (click off)

1. Choose track 1 with up / down (its number is lit).
2. Press **A** and start playing. The track shows REC.
3. Press **A** again at the end of your phrase. This sets the loop length, and the track plays it round and round (PLAY).

A take shorter than 0.2 seconds is ignored, so a quick double press does nothing.

In time with the click, with count-in

1. In **METRONOME** set **CLICK** to ON, then choose **BPM** and **TIME**.
2. Press **A**. The click starts on beat 1 and plays one bar: the track shows CNT and **COUNT IN 4, 3, 2, 1**.
3. Start playing on the next beat 1. Recording starts by itself (REC).
4. Press **A** near the end of a bar. The loop is always a whole number of bars: a little early or a little late is fine.



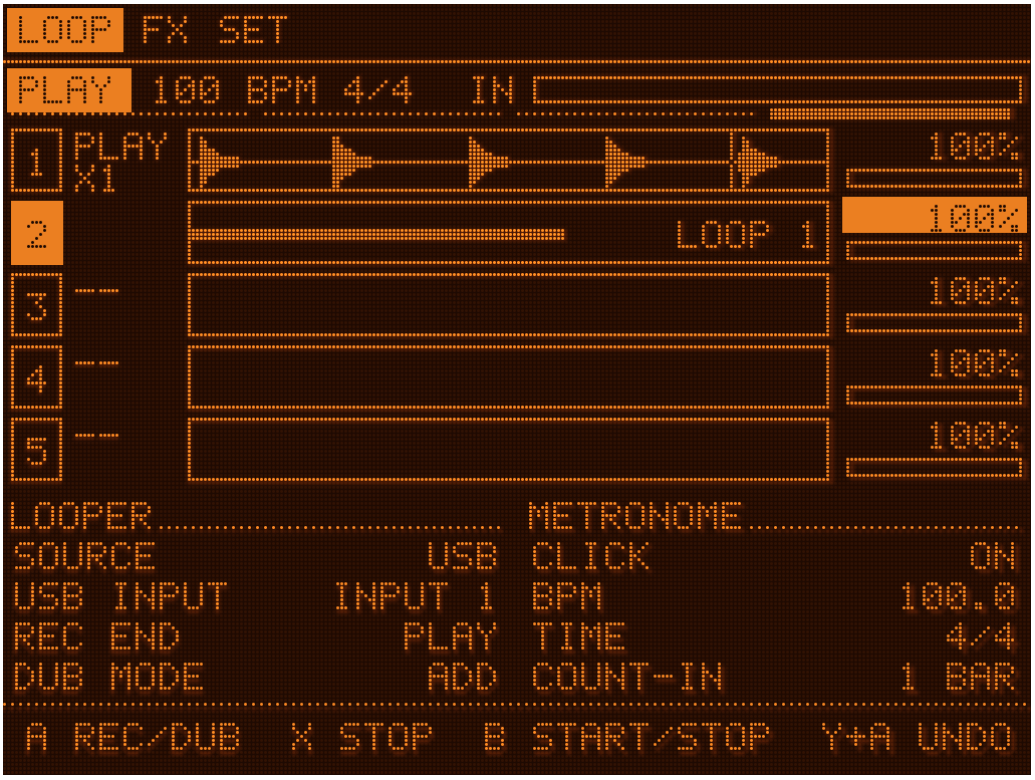
The count-in: one bar of click before the first take.

> **Tip** Press A again during the count-in to cancel it.

6. More tracks

Choose track 2 (down, or R2), press **A** to record and **A** to stop. You can start whenever you like: the new track lines up with the loop by itself.

- New tracks are always **whole loops**: X1, X2, X3… So a track can be two or four times as long as the first one, for longer parts.
- Stop a little **early**: the track keeps recording to the end of the loop (you see …).
- Stop a little **late**: the extra bit is put on the start of the loop, so nothing is lost.
- While it records, the track shows LOOP 1, LOOP 2… so you know how long it is getting.



Track 2 recording, still in its first loop.

Only one track records at a time. Pressing A on another track closes the take that is recording and starts the new one.

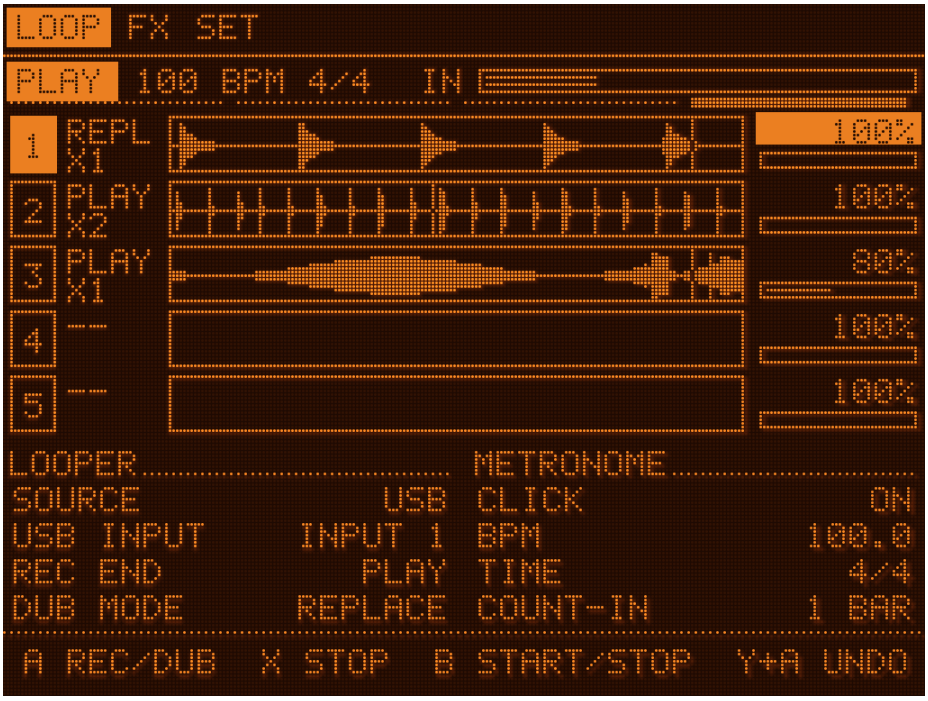
7. Overdub, replace and undo

Overdub

Press **A** on a track that plays: the track shows **DUB** and what you play is added on top, while you keep hearing the track. Press **A** again to go back to PLAY.

Replace

In **LOOPER** set **DUB MODE** to **Replace**. Now A records **over** the old part instead of adding to it. The track shows **REPL** and you don't hear the old part while you record. Only the part you record over changes.



Track 1 in Replace (REPL).

Rec end

REC END says what a new take does when you close it: **Play** (default), or **Dub** to go straight into overdub.

Undo and redo

Y + A takes away the last thing you recorded on the current track: the last overdub, or the whole take if there is no overdub yet. **Y + A** again brings it back. There is one level of undo. Right after a take, wait a moment until it is finished.

> **Tip** To do a track again from scratch: **Y + X** clears it, then **A** records a new take.

8. Playing live

Key	What it does
X	Stop / play the current track. It fades out and in, no click, and it stays in time.
B	Start / stop everything. After a full stop the loops start again **from the top**.
L2 / R2	Previous / next track, wherever the cursor is.
Left / right	Volume of the track the cursor is on (hold Y for fine steps).
Y + X	Clear the current track.
Y + B	Clear all tracks. It asks first. This also frees the tempo for a new loop.



Y + B asks before it clears all the tracks.

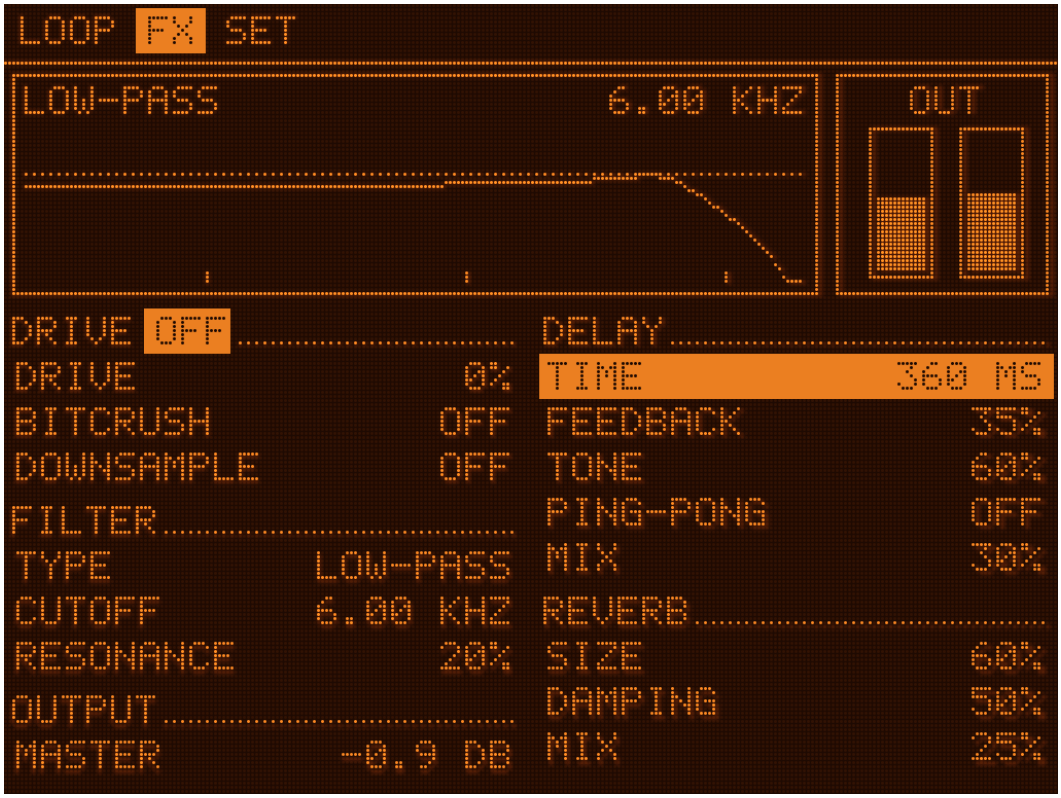
A, X and B always act on the current track, even when the cursor is down on a setting. So you can change a setting and still control your tracks.

9. Metronome and count-in

Setting	Values	What it does
Click	Off / On	Turns the click on. Beat 1 is higher.
BPM	40–240	Speed of the click.
Time	2/4, 3/4, 4/4, 5/4, 6/8, 7/8	Beats in a bar.
Count-in	Off / 1 bar	One bar of click before the first take.
Click vol (SET page)	0–100%	How loud the click is.

- With the click on, the first loop starts on a bar line and is a whole number of bars.
- Once there is a loop, the **click follows the loop**. The BPM shown is the loop's tempo and you can't change it until you clear all the tracks.
- Turn the click on after a free loop and it is matched to the loop (the nearest whole number of bars).
- The click is **only heard, never recorded**.
- The count-in is used for the first take only. After that, the loops playing are your guide.

10. The FX page



FX page: DRIVE off, filter, delay and reverb on.

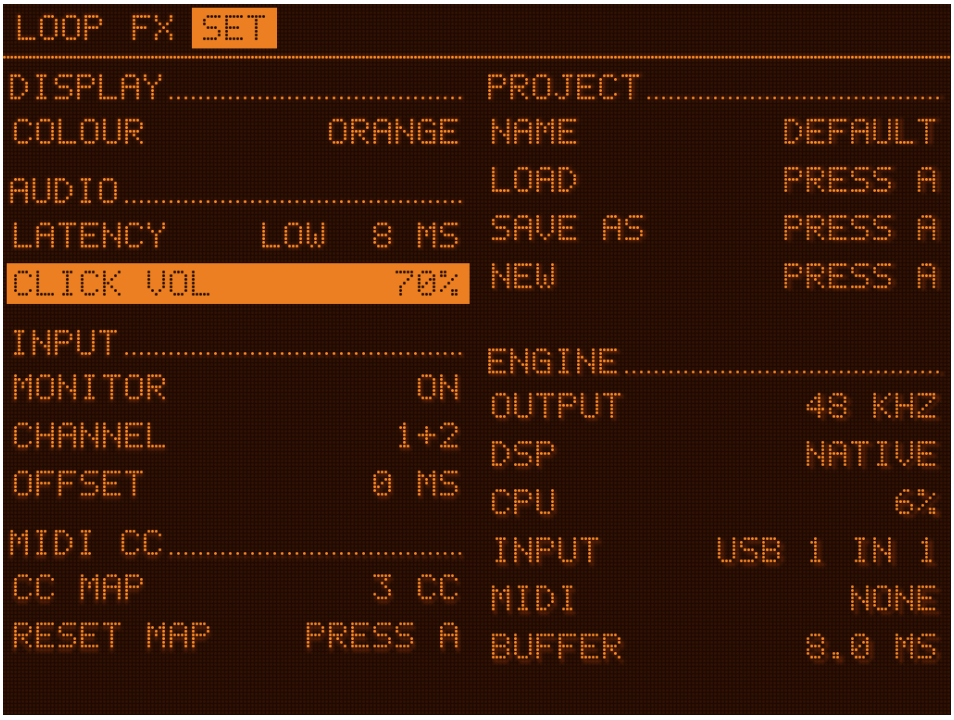
The FX work on everything the Brick plays: your loops and the input you monitor. **Recordings stay clean**, so you can change the FX later. Press **A** on any value of a section to switch that section on or off (OFF shows next to its name). Switching fades in and out with no click; delay and reverb switched off let their echoes and tail ring out.

Section	Values
DRIVE	**Drive** (soft clipping), **Bitcrush** (16 to 2 bit), **Downsample** (lo-fi)
FILTER	**Type** Off / Low-pass / High-pass / Band-pass, **Cutoff** 30 Hz–18 kHz, **Resonance**. The picture at the top shows the filter.
OUTPUT	**Master** level. The OUT meters show the output.
DELAY	**Time** 25 ms–2 s, **Feedback**, **Tone** (darker repeats), **Ping-pong** (left / right), **Mix**
REVERB	**Size**, **Damping** (darker tail), **Mix**

MIDI knobs

Press **B** on a value and choose **LEARN**, then move a knob on your MIDI controller. The same menu can learn a knob for the section on/off, and forget a knob. Ready-made: CC 74 Cutoff, CC 71 Resonance, CC 7 Master. BrickLooper only uses knobs (CC); keys and notes are ignored.

11. The SET page



Setting	What it does
Colour	Screen colour: Orange, Blue, Red, Green.
Latency	Low (8 ms), Mid (16 ms), Safe (32 ms). Use Mid or Safe if you hear crackles.
Click vol	Metronome level.
Monitor	Hear the input live through the Brick (USB input).
Channel	Which input of your interface: 1, 2, or 1+2 in stereo (1 left, 2 right).
Offset	Fine timing for the USB input, −100 to +200 ms. If what you record plays back a little late, raise it; if early, lower it. Most people leave it at 0.
CC map	List of the knobs you learned; change or remove them.
Reset map	Back to the ready-made knobs.
Name	Rename the open project.
Load	List of projects: load, rename or delete one.
Save as	Save the open project with a new name.
New	Start a new, empty project.
ENGINE	Information only: output rate, CPU, input (USB n IN m: which USB device and which of its inputs), MIDI device, buffer.

12. Projects and files

Press **START** to save the project and its loops. The app also saves when you quit with SELECT + START. Only tracks that changed are written, in the background, so you can keep playing.

File (in bricklooper/)	What it is
projects/NAME.json	The project: settings, FX, volumes, tempo.
projects/NAME_LOOPS/T1.wav ... T5.wav	The loops: stereo WAV, 48 kHz, 32-bit float. Copy them to your computer to use them in any music software.
settings.json	App settings: colour, latency, input, offset, MIDI knobs.
log.txt	What happened on the last run. Useful when something goes wrong.

When you open a project its loops load **stopped**: press **B** to start them. Deleting a project also deletes its loops.

13. Limits

- 5 stereo tracks, up to **60 seconds** each.
- All tracks follow the first loop (whole loops). Tracks with their own free length may come later.
- **Built-in mic**: the Brick can't play and record from its own mic at the same time. While a take records from the mic, the sound stops; the loop keeps time, so the take still lands in the right place. Great for sketching ideas; to play along, use a USB input.
- One level of undo per track.
- MIDI: knobs (CC) for the FX only.

14. All the controls

LOOP page

Brick	Keyboard	What it does
A	Z or Enter	Record / overdub / play the current track
X	Space	Stop / play the current track
B	X or Esc	Start / stop all
Y + A	Shift + Z	Undo / redo
Y + X	Shift + Space	Clear track
Y + B	Shift + X	Clear all (asks first)
Up / Down	Up / Down	Choose a track or a setting
L2 / R2	, and .	Previous / next track
Left / Right	Left / Right	Track volume, or change the setting

Everywhere

Brick	Keyboard	What it does
L1 / R1	[and]	Previous / next page
Hold Y	Hold Shift	Fine steps when changing a value
A	Z or Enter	Switch an FX section on / off, open a menu
B	X or Esc	MIDI learn (FX page), back, cancel
Hold SELECT	Hold Tab	Controls of this page
START	Ctrl + S	Save
SELECT + START	Ctrl + Q	Save and quit
MENU + START		Close the app
Volume + / −		Output level

Hold SELECT (or Tab on a keyboard) to see the controls of the page you are on, right on the Brick.

15. Problems and fixes

Problem	What to do
NOT CONNECTED next to IN	Plug the USB device in and wait a few seconds. Check SOURCE is USB. Try another cable or USB-C adapter.
The IN meter moves but I hear nothing live	Set SET > MONITOR to ON.
Only noise or silence from a USB adapter with mic in and line in	Change **USB INPUT** on the LOOP page (Input 2 is often the line in). BrickLooper switches the input on in the adapter's mixer by itself; log.txt shows the level it gets.
The IN meter stays empty	Raise the output level on your synth or the gain on your interface. Check SET > CHANNEL (1, 2 or 1+2).
Takes from USB sound a little late or early	Change SET > OFFSET a few ms at a time.
Crackles	Set SET > LATENCY to Mid or Safe.
The sound stops when I record	Normal with the built-in mic (chapter 13). Use a USB input to hear while you record.
I can't change the BPM	A loop sets the tempo. Clear all (Y + B) to choose a new one.
Undo does nothing	Wait until the take has finished, then press Y + A again.
BrickLooper is not in Ports	Update the games list in the KNULLI menu.

Still stuck? The file **bricklooper/log.txt** on the SD card says what happened. Report a bug or share an idea from the feedback box on **brickworldhub.com**, or write to **info@brickworldhub.com**.

16. Licence and credits

BrickLooper is free software under the **GNU General Public License v3**. You can use it, share it and change it. The full source is inside the zip (bricklooper.py and native/bsdsp.c) and on GitHub: github.com/brickworldhub/brickworldhub.github.io (folder src/bricklooper).

Copyright © 2026 Alessandro Pietrosanti / BrickWorld. Inspired by GrainBrick by ETRNLIAM. Included parts keep their own licences: NumPy (BSD) and the DejaVu fonts.

Like BrickLooper? You can support the project on ko-fi.com/brickworld. Follow @brickworld_hub on Instagram.

TrimUI and Brick are trademarks of their owners. BrickWorld is not affiliated with TrimUI.