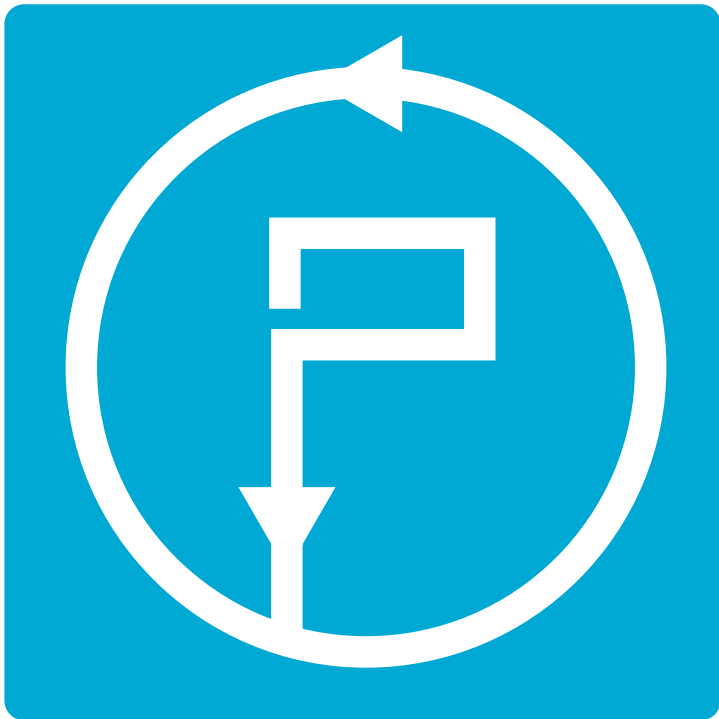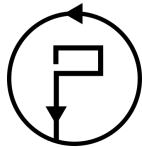# Picoloop Manual

Picoloop Tutorial (PocketChip version)

Welcome to **Picoloop**!

 Picoloop is a synth and a step sequencer made by Yoyz. In this tutorial, we'll make a tour of the basic functionalities of **Picoloop**. The commands described here are adapted for the usage on PocketChip.

Contents

Starting

First, get **Picoloop** at
https://github.com/yoyz/audio/

Run the **Picoloop** binary. You will be presented to a setting panel. Navigate with ←, →, ↑ and ↓ and choose the color theme (palette) you prefer.

Then make sure the AudioInput matches your soundcard. Eventually make it select "default".

```
   Current palette : 4
   Current Bank    : 0
 > AudioOutput     : 1/1 : default
   MidiOutput      : 0/1 : Midi Through 14:0
   MidiInput       : 0/2 : Midi Through 14:0
   MidiClockMode   : Internal
```

To exit this panel and start making music, validate with Right Shift. In the case it crashes, it might be because the soundcard configuration was not correct. Restart the binary and select another card setting.

You will be presented to the **Picoloop** main window.
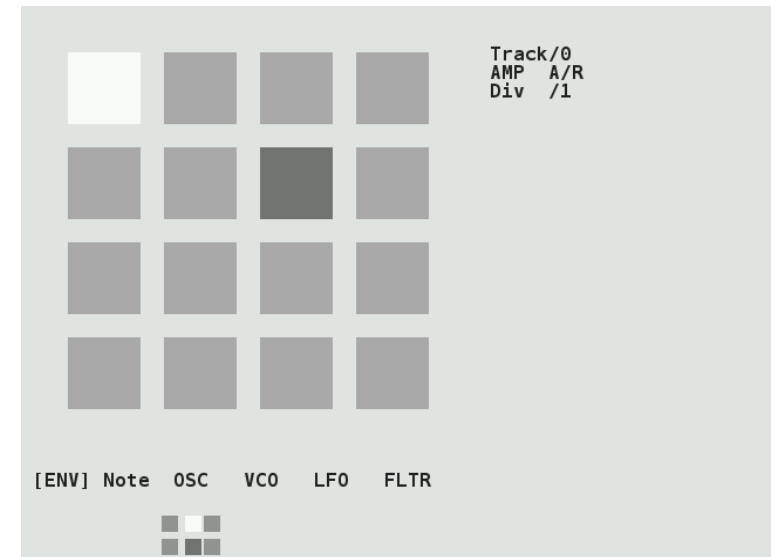
With this color scheme, the 16 steps are in light grey. The moving dark grey cursor is the current sounding note. The cursor for edition is in white and you cannot move it right now

(you're in *Menu mode*). Below the 16 steps is the menu. It displays:

```
[ ENV ]  Note  OSC  VCO  LFO  FLTR
```

Move left or right to select the parameter you want to use.

Entering notes

At the moment, select Note with the [Right Ctrl] key. Now you are in *Edit mode*, and you can navigate within the 16 steps with the ←, →, ↑ and ↓ arrows. Insert your first note with the [Right Shift] key. It will be a C2.

You can change the value of this note by holding [Right Ctrl] and typing on the arrows. ← or → for decreasing or increasing 1/2 tone, ↑ or ↓ for increasing or decreasing 1 octave. Make it for example G2. Now select other empty cases and type [Right Shift] for adding more notes and [Right Ctrl] for changing their values. Delete an existing note with [Right Shift]. The next note entered with

[Right Shift] will be the previous value which was deleted (delete an A3, next one with be A3 then).
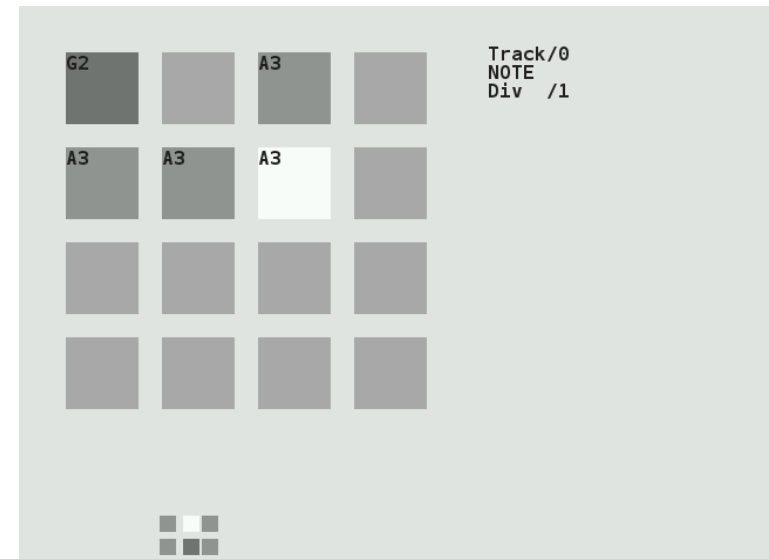
There are 4 tracks which can play together. To change the current working track, go back to the menu with the [ESC] key. Use the ↑ and ↓ arrows to select the track. It will display Track/0, Track/1 etc. Now you can enter more notes in this other track.

To change the sound of the current notes, select ENV in the menu, and validate with [Right Ctrl], the menu will disappear, meaning

you can enter notes or change values. In the ENV parameters, you can alter the sound with ⎡Right Ctrl⎤ + arrows. Try to play with the two parameters. You end up with something like that:

```
                              Track/1
                              AMP  A/R
                              Div  /1
```
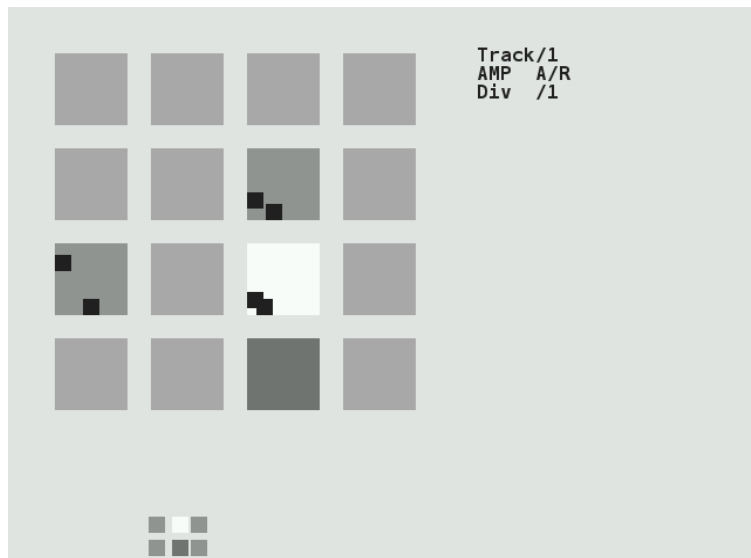
Now if you type the ⎡Enter⎤ key, you'll access more parameters, which you can change in a similar way. In this mode, you alter parameters for individual notes, if you want to change all the inserted notes for the current track, exit the *edit mode* with the ⎡ESC⎤ key, and use

⎡Right Shift⎤ + arrows to change all the steps together.

Saving and loading music
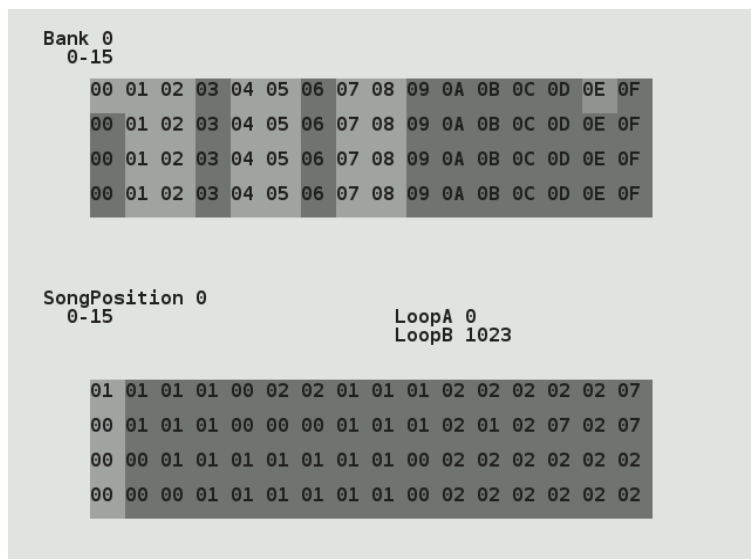
Now it's time to save your work!

Exit the *edit mode* with ⎡ESC⎤ if you're still in it, and type again ⎡ESC⎤ to enter the second menu (*Menu2*).

It will display:

```
L/S  [ BANK ]  PSH  MAC  FX  BPM
```

Select L/S (*Load/Save*) and enter the menu with ⎡Right Ctrl⎤.

It will look like this:

```
Bank 0
  0-15

   00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
   00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
   00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
   00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F


SongPosition 0
  0-15                    LoopA 0
                         LoopB 1023

   01 01 01 01 00 02 02 01 01 01 02 02 02 02 02 07
   00 01 01 01 00 00 00 01 01 01 02 01 02 07 02 07
   00 00 01 01 01 01 01 01 01 00 02 02 02 02 02 02
   00 00 00 01 01 01 01 01 01 00 02 02 02 02 02 02
```

The menu on top represents your tracks. The cursor on this screenshot is on the top 0E column. To save an individual track, se-lect an empty slot and type [Right Ctrl] + ↓. Now the slot will be lighter (with this grey theme). To save all the 4 tracks (one pattern), type [Right Shift] + ↓, the whole column will be lighter.

To reload you tracks later, select a column and type [Right Shift] + ↑. To load an individual slot, type [Right Ctrl] + ↑. Beware, there is no warning so it might erase your current work.

Now you can assemble your tracks with the order list (under the Song Position label). Go into this list with the [Enter] key.

You can define Loop start position with [Right Shift] + ↑. As soon as you define this, the song with start to play. And you can de-fine Loop end position with [Right Shift] + ↓. Change the values of the list with [Right Ctrl] + ↑/↓

Exploring new horizons

As we've seen earlier, we can change the pitch value (note) of a step, but also some parameters such as A/R (enveloppe), OSC (oscillator), VCO (a kind of mixer), LFO and FLTR (filter).

But we can also change the whole engine, using the "MAC" menu in *menu2*. The different engines are (from up to down):

- Psynth (default) : PicoSynth, soustractive synth with 2 oscillators (lightweight).

- Mdrum : MDA Drumsynth

- Mdiout : midi out

- Tsynth : Twytch/Helm. Needs high ressources.

- 0303 : based on Open303, a free, open source emulation of the Roland TB-303 synthesizer. Needs high ressources.

- Csynth : Cursynth, a soustractive synth with 2 oscillators. Needs high ressources.

- PBS : PBSynth, another soustractive synth with 2 oscillators (lightweight).

- Pdrum : Picodrum, for making rythms (kicks, hats, snares...)

- OPL2 : FM synthesis

  On some less powerful machines, the high ressources engines are not enabled.

Picoloop Memo
(PocketChip version)
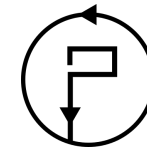
Menu mode	
← / →	move backward/forward the menu
↑ / ↓	select the track from 0 to track 3
Right Ctrl	do nothing
Right Shift + ←/→/↑/↓	edit all step at once
Right Shift	enter the edit mode
TAB	go to the next 16 step on the same track

Backspace	go to the previous 16 step on the same track
ESC	call menu2 or menu1

Edit mode	
← / →	select next step
↑ / ↓	select step+4, step-4
Right Ctrl	enter a note in a step, it works a cut/paste
Right Shift + ←/→/↑/↓	edit the current step
Right Shift	do nothing
TAB	go to the next 16 step on th same track
Backspace	go to the previous 16 step on th same track
ESC	call menu2 or menu1
Enter	cycle between the different p rameters

L/S menu

Bank	
Right Ctrl + ↓	Save the current track on the selected slot
Right Shift + ↓	Save your current pattern (group of 4 tracks)
Right Ctrl + ↑	Load a track (replace current)
Right Shift + ↑	Load a 4 tracks pattern

Song position (order list)	
Right Shift + ↑	Define Loop start position
Right Shift + ↓	Define Loop end position
Right Ctrl + ↑/↓	Change the values

⌈Right Ctrl⌉ + ←/→	copy value left or right
⌈Right Shift⌉ + ←/→	insert or delete value (shift patterns)

PSH menu	
⌈Right Shift⌉+↑	Increase the track size (16 steps block)
⌈Right Shift⌉+↓	Decrease the track size (16 steps block)
⌈Right Shift⌉+→	Increase the track size (1 step)
⌈Right Shift⌉+←	Decrease the track size (1 step)
⌈TAB⌉ and ⌈Backspace⌉	Navigate into the new steps (-16 or +16)

Other commands

Volume	
⌈ESC⌉+↑	Increase volume
⌈ESC⌉+↓	Decrease volume

Get picoloop at https://github.com/yoyz/audio/

Made by Garvalf (http://garvalf.online.fr) with the textallion word processor and the txt2tags syntax.