

# Pico-8

PICO-8 is a fantasy console [created by Lexaloffle](#) for playing tiny games inspired by the 8-bit consoles era. It has never been physically released, but runs as a software on computers like Windows / Mac / Linux and web browsers. Lexaloffle doesn't support all SBC, only the Raspberry Pi, and sells a commercial app for developing and running Pico-8 games and programs. If you like this piece of software, please [support Lexaloffle and purchase it!](#) It's well worth it.

Batocera Linux doesn't embed the commercial program, but can support a variety of pico-8 games through an emulator. That means that not 100% games will run perfectly, much like many other emulators.

## Fantasy hardware constraints

- Display: 128×128 16 colors
- Cartridge: embedded as PNG images, max 32kB
- Sound: 4 channel chiptunes
- Code: Lua
- Sprites: 256 8×8 sprites

## "Cartridges" and games format

Pico-8 games are distributed as PNG images with the actual code, sprites and sounds embedded in them. Those are actual, real image files, that stands as the cartridge art too. You have to "load" the PNG to run the game. You can download hundreds of carts [from the official page](#), the community is very active! Once you select a game, make sure you click on the "cart" link that downloads a .PNG file.

## Support for official Pico-8 engine

Starting with Batocera 32, you can add the official commercial Lexaloffle Pico-8 engine to run all Pico-8 games and explore the Splore universe! In order to do so, you need to do a few manual steps:

1- Buy it from [the official Lexaloffle website](#)

2- Download the corresponding Linux (x86\_64/64 bits) or Raspberry Pi binary (32bit ELF, not sure if our Rpi1/2/3 are still on 32bits systems, I could test only the PC x86\_64 version at the moment and I put a message on their forum to ask for a ARM 64 bit build, like many others). Extract the files from the zip into the /userdata/bios/pico-8/ directory. The files in the archive are:

```
lexaloffle-pico8.png
license.txt
pico-8.txt
pico8 (make sure this one is executable via "chmod +x", I assume nobody
uses a filesystem for /userdata/ that would be incompatible with this...)
pico8.dat
```

## pico8\_dyn

3- Copy the following ES system addition into  
/userdata/system/configs/emulationstation/es\_systems\_pico8.cfg:

```
<?xml version="1.0" encoding="UTF-8"?>
<systemList>
  <system>
    <name>pico8</name>
    <emulators>
      <emulator name="lexaloffle">
        <cores>
          <core default="true">pico8_official</core>
        </cores>
      </emulator>
      <emulator name="libretro">
        <cores>
          <core>retro8</core>
        </cores>
      </emulator>
    </emulators>
  </system>
</systemList>
```

4- Restart ES (or reboot). Then you can select **LEXALOFFLE / PICO8 OFFICIAL** as a core for Pico-8 games in ES.

5- If you create a file `splore.p8` or `console.p8` and launch it from Batocera-ES, you'll get access to Pico-8 splore universe with all the games to play and download from inside Pico-8 (a simple touch /userdata/roms/pico8/splore.p8 is sufficient to get access to splore).

Keys inside the emulator: [start] or [hotkey][south] opens the pico-8 menu and [hotkey][start] quits, [hotkey][L1] takes a screenshot, [hotkey][east] resets the cart. Right analog pad simulates the mouse, with [R1/R3][L1] for clicks.

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