SNES

The Super Nintendo Entertainment System (SNES), known as the Super Famicom in Japan, is a 16-bit fourth-generation home video-game console released by Nintendo on November 21, 1990 in Japan. Just like with the NES, it was redesigned as the SNES and released one year later in August 23, 1991 in the US, retailing for $199.99. The redesign wasn't as drastic as as the original NES vs. Famicom, though strangely the US version got a unique purple/pink color scheme for its controller's buttons. The PAL region uses the US's console design and Japan's controller colors.

Batocera typically uses the Super Famicom's controller button layout when referring to generic controllers (A B X Y, Red Yellow Blue Green), however some may refer to them by their compass directions (East South North West,  respectively) to avoid ambiguity with some other consoles.

Emulation for the SNES is extensive and very mature. Two (three if you count the weak-hardware optimized PocketSNES) of the best emulators are used in Batocera.

shortname	snes
emulator/core(s)	libretro/bsnes libretro/bsnes_hd libretro/snes9x libretro/snes9x_next libretro/pocketsnes
rom format(s)	smc fig sfc gd3 gd7 dx2 bsx swc zip 7z

Emulators

libretro/bsnes

bsnes was originally a SNES emulator started on October 14th, 2004, known for being more accurate to the hardware than other emulators at the time. Eventually the project became so expansive including other cores and systems that it was renamed to higan in 2012. Higan was forked in 2018 to revive the bsnes emulator from the project, more in line with the original standalone SNES emulator. This standalone implementation has been 'libretro-ized' to work with RetroArch.

Configuration

libretro/bsnes_hd

A fork of the 2018 bsnes that adds various enhancements including HD Mode 7 (F-Zero tracks rendered in 4k! Doesn't upscale the textures themselves, just increases the viewport resolution), Widescreen support (best with the aforemention HD Mode 7, but can also work with traditional 2D games) and others.

Shares its configuration with bsnes.

libretro/snes9x

Snes9x is a mature SNES emulator that evolved from being a speed-focused Win95 standalone to one of the most accurate and performant current SNES emulators available.

Configuration

libretro/snes9x_next

A fork of Snes9x that includes some extra speed hacks to run full speed on weaker hardware, as well as including an overclocking option to increase FPS in games like Star Fox.

Shares its configuration with libretro/snes9x.

libretro/pocketsnes

Also known as Snes9x 2002, Pocket SNES is a lightweight but innaccurate libretro core available only on weaker systems. Notable for the standalone version running (albeit poorly) on the GBA of all things. You can run this emulator in the GBA emulators!

Configuration

zsnes

This isn't featured in Batocera but it deserves a mention. It was one of the earliest SNES emulators (1997) with an extremely characteristic frontend (snowflakes?) and stays relevant to this day due to running at full speed on systems as old as Pentium 1. It also featured decent netplay on older versions. You can emulate this emulator in DOS-Box! It focuses on speed over accuracy, and suffers from several in-game bugs. It hasn't been updated since 2007. Some early romhacks were designed around its problems, lending them to not function on other, more accurate emulators.

There was a severe ACE vulnerability which maliciously designed ROMs could use to run code on the host machine. No known exploit of this has happened, yet.

SNES MSU-1

There was going to be a disc-based add-on for the SNES just like the original Famicom's Disk System add-on. Nintendo was going to collaborate with the small and local but well-known hardware manufacturer Sony at the time, and despite getting far into the development phase, the project was cancelled due to licensing agreements. I wonder what Sony did with that disc-based video-game technology they were working on?

Although a prototype unit was discovered and repaired, it wasn't finished and had severe limitations. The MSU-1 is a fanmade custom hardware specification to emulate what would believed would be capable of the would-be SNES-CD. It's even compatible with a real SNES!

Of course, no commercial games have been released for the SNES MSU-1, but there have been romhacks and fan-patches that can utilise it. Place your patched roms into the `roms/snes-msu1` folder to add them. They'll even get their own system entry (though most themes don't seem to support it yet). The PocketSNES emulator doesn't support MSU-1 patched ROMs.

ROMs

Place your SNES ROMs in `/userdata/roms/snes` and your SNES MSU-1 `smc` or `sfc` ROMs in `/userdata/roms/snes-msu1`. ROMs can be compressed into `zip` or `7z` files.

Controls

The default button mapping to the SNES controller is as follows: