ZX81

The ZX81 is a computer developed by Sinclair. It was released in 1981, retailing for $99.95 USD ($302 in 2021).

The ZX81 was designed as the low-cost successor to the ZX80, accessible to the general public. It was a huge success.

This system scrapes metadata for the “zx81” group and loads the zx81 set from the currently selected theme, if available.

Quick reference

- **Emulator:** RetroArch
- **Core:** libretro: 81
- **Folder:** /userdata/roms/zx81
- **Accepted ROM formats:** .tzx, .p, .zip, .7z

**BIOS**

No ZX81 emulator in Batocera needs a BIOS file to run.

**ROMs**

Place your ZX81 ROMs in /userdata/roms/zx81.

To enable gamepad support, open RetroArch's Quick Menu with [HOTKEY] + , then Settings → Input → Input User 1 Binds and change User 1 Device type: Retropad to “Cursor Joystick”.

**Emulators**

**RetroArch**

*RetroArch* (formerly SSNES), is a ubiquitous frontend that can run multiple “cores”, which are essentially the emulators themselves. The most common cores use the *libretro* API, so that's why cores run in RetroArch in Batocera are referred to as “libretro: (core name)”. RetroArch aims to unify the feature set of all libretro cores and offer a universal, familiar interface independent of platform.

RetroArch configuration

RetroArch offers a **Quick Menu** accessed by pressing `[HOTKEY] + 🕹️` which can be used to alter various things like RetroArch and core options, and controller mapping. Most RetroArch related settings can be altered from Batocera's EmulationStation.

Standardized features available to all libretro cores: `zx81.videomode`, `zx81.ratio`, `zx81.smooth`, `zx81.shaders`, `zx81.pixel_perfect`, `zx81.decoration`, `zx81.game_translation`

<table>
<thead>
<tr>
<th>ES setting name batocera.conf_key</th>
<th>Description ⇒ ES option key_value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GRAPHICS API zx81.gfxbackend</strong></td>
<td>Choose which graphics API library to use. Vulkan is better, when supported. ⇒ OpenGL opengl, Vulkan vulkan.</td>
</tr>
<tr>
<td><strong>AUDIO LATENCY zx81.audio_latency</strong></td>
<td>In milliseconds. Can reduce crackling/cutting out. ⇒ 256 256, 192 192, 128 128, 64 64, 32 32, 16 16, 8 8.</td>
</tr>
<tr>
<td><strong>THREADED VIDEO zx81.video_threaded</strong></td>
<td>Improves performance at the cost of latency and more video stuttering. Use only if full speed cannot be obtained otherwise. ⇒ On true, Off false.</td>
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**libretro: 81**

The ZX81 emulator, also capable of emulating ZX80, ZX Spectrum, Sinclair Spectrum, Jupiter ACE, Timex TS1000, TS1500, TS2068, TC2048, Lambda 8300, Ringo R470 and MicroDigital TK85.

**libretro: 81 configuration**

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<tr>
<td><strong>COLORIZATION global.81_chroma_81</strong></td>
<td>This checks if the Chroma 81 expansion is installed, and if so, loads a program prior to the loading of the program. This allows for color to be added to the program, which will remain otherwise blissfully unaware that it's running with colors. Emulate Chroma 81 interface (colorization). ⇒ Autodetect automatic, Off disabled, On (forced) enabled.</td>
</tr>
<tr>
<td><strong>WRX HIGH RESOLUTION global.81_highres</strong></td>
<td>On the original ZX81, it was possible to do some hardware modifications to use a higher video resolution. It requires both the display and the game to support the higher resolution. Required for some homebrew. ⇒ Autodetect automatic, Off none, On (forced) WRX.</td>
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</tbody>
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**Controls**

Here are the default ZX81's controls shown on a [Batocera Retropad](https://wiki.batocera.org/):
Troubleshooting

Further troubleshooting

For further troubleshooting, refer to the generic support pages.