



This article needs some TLC. Read at your own risk.

# VTech Laser 310

The VTech Laser 310 is a home computer developed by Video Technology. It was released in 1984. A version of this system was also released as the Dick Smith Electronics VZ-300. [Here's a cool article about it on oldcomputers.net.](#)



This system scrapes metadata for the "laser310" group and loads the Laser310 set from the currently selected theme, if available.

## Quick reference

- **Accepted ROM formats:** .vz, .wav, .cas, .zip, .7z
- **Folder:** /userdata/roms/laser310

### Emulators

libretro: [MAME](#)

[MAME](#)

## BIOS

| MD5 checksum                     | Filename     | Description       |
|----------------------------------|--------------|-------------------|
| 42c8f9e6c2133ae0e953b89ccbdb7e2  | vtechv20.u12 | BASIC V2.0        |
| f7e5d9a3eb2b57bf5f4e2a4565318a8f | vtechv21.u12 | BASIC V2.1 (hack) |



What's the difference between the two? Why use one over the other?

## ROMs

Place your VTech Laser 310 ROMs in /userdata/roms/laser310/.

Using snapshot (.vz) files is recommended, as these are binary memory dumps with a simple header, which can be automatically bootstrapped by MAME. Cassette formats will require keyboard interaction from the user (CLOAD followed by the F2 key to start the tape).

# Emulators

## RetroArch

RetroArch has [its own page](#).

### libretro: mame

#### libretro: mame configuration

Standardized features for this core: `laser310.autosave`, `laser310.netplay`


| ES setting name <code>batocera.conf_key</code>                        | Description ⇒ ES option key_value  |
|---|--|
| <b>Settings that apply to all systems this core supports</b>          |  |
| <b>OVERCLOCK (UNSTABLE)</b><br><code>global.mame_cpu_overclock</code> | Enhancement. Reduces system slowdown. Causes issues in some games.<br>⇒ default default, 30 30, 35 35, 40 40, 45 45, 50 50, 55 55, 60 60, 65 65, 70 70, 75 75, 80 80, 85 85, 90 90, 95 95, 100 100, 105 105, 110 110, 115 115, 120 120, 125 125, 130 130, 135 135, 140 140, 145 145, 150 150.      |
| <b>RENDERING RESOLUTION</b><br><code>global.mame_altres</code>        | Enhancement. Increase the rendering resolution. Makes 3D objects clearer.<br>⇒ 640×480 640×480, 800×600 800×600, 960×720 960×720, 1024×768 1024×768, 1280×720 1280×720, 1600×800 1600×800, 1920×1080 1920×1080, 2560×1440 2560×1440, 3840×2160 3840×2160.  |
| <b>SPECIAL CONTROL LAYOUTS</b><br><code>global.altlayout</code>       | Controls for 5/6 button games and other unique controls<br>⇒ Default Only default, SNES Style snes, Genesis/Megadrive Style megadrive, Modern Fightstick Style fightstick, Neo Geo Mini Pad neomini, Neo Geo CD Pad neocd, Twin Stick with Triggers twinstick, Rotated 4-Way Stick (Q*Bert) qbert. |
| <b>HIGH SCORE PLUGIN</b><br><code>global.hiscoreplugin</code>         | Enable or disable high score saving<br>⇒ Enabled (Default) 1, Disabled 0.  |
| <b>COIN SOUND PLUGIN</b><br><code>global.coindropplugin</code>        | Play a coin drop sound effect when an insert coin button is pressed<br>⇒ Enabled 1, Disabled (Default) 0.  |
| <b>SHARE MAME ARTWORK</b><br><code>global.sharemameart</code>         | Use the same art paths as standalone MAME - not recommended if using decorations or shaders.<br>⇒ On (Default) 1, Off 0.   |
| <b>CROP ARTWORK</b> <code>global.artworkcrop</code>                   | Crop MAME artwork to maximize the game screen and only fill unused space.<br>⇒ On (Default) 1, Off 0.  |
| <b>CUSTOM MAME CONFIG</b> <code>global.customcfg</code>               | Set system-wide controls via MAME menu<br>⇒ On 1, Off 0.   |

| ES setting name batocera.conf_key                         | Description ⇒ ES option key_value  |
|---|--|
| <b>OFF-SCREEN RELOAD BUTTON</b><br>global.offscreenreload | Set gun button 2 to reload.<br>⇒ On 1, Off (Default) 0.  |
| <b>Settings specific to laser310</b>                      |  |
| <b>SOFTWARE LIST</b> laser310.softList                    | Use MAME software lists to identify ROM<br>⇒ Don't Use (Default) none, Dick Smith Electronics VZ-200/300 cassettes vz_cass, Dick Smith Electronics VZ-200/300 snapshots vz_snap. |
| <b>MEMORY SLOT</b> laser310.memslot                       | Choose hardware for the memory expansion slot<br>⇒ Laser 310/VZ-300 16k Memory laser310_16k, Laser/VZ 64k Memory (Default) laser_64k.  |
| <b>MEDIA TYPE</b> laser310.altromtype                     | Type of ROM file to load.<br>⇒ Cassette cass, Snapshot snap.   |
| <b>UI KEYS</b> laser310.enableui                          | Toggle with hotkey + D-pad up or Scroll Lock in-game.<br>⇒ Off at Start 0, On at Start 1.  |
| <b>CUSTOM CONFIG</b> laser310.pergamecfg                  | Enable per-game custom configuration via MAME menu.<br>⇒ On 1, Off 0.  |

## MAME

[MAME](#), the Multiple Arcade Machine Emulator, is a multi-purpose emulation framework which facilitates the emulation of vintage hardware and software. Originally targeting vintage arcade machines, MAME has since absorbed the sister-project [MESS](#) (Multi Emulator Super System) to support a wide variety of vintage computers, video game consoles and calculators as well. MAME doesn't use an individual "core" for each system like RetroArch does, instead the ROM itself usually contains the necessary information to accurately emulate it, thus making it specific to the version of MAME it was made for. Overall it's a very complicated subject, we have a [guide specific to arcade](#) just for it.

## MAME configuration

MAME offers a [Menu](#) in-game ([HOTKEY] +  or [Tab] on the keyboard). This can be used to manually adjust inputs or game settings. If you're having issues with a specific game, check the [MAMEdev FAQ for that game here](#). For MESS systems specifically, you might find more information on [MESS's wiki](#). All options can also be edited by opening the mame.ini file.

Standardized features available to all versions of this emulator: laser310.videomode, laser310.decoration, laser310.padtokeyboard

| ES setting name batocera.conf_key                           | Description ⇒ ES option key_value   |
|---|---|
| <b>Settings that apply to all versions of this emulator</b> |   |
| <b>VIDEO MODE</b> laser310.video                            | BGFX for post-processing, accel/opengl for raw image.<br>⇒ BGFX bgfx, Accel accel, OpenGL opengl. |
| <b>VSYNC</b> laser310.vsync                                 | Fix screen tearing, but may drop frames.<br>⇒ Off (Default) 0, On 1.                              |

| <b>ES setting name batocera.conf_key</b>                           | <b>Description ⇒ ES option key_value</b>  |
|--|---|
| <b>BGFX GRAPHICS API</b><br><b>laser310.bgfxbackend</b>            | Depends on video mode being set to BGFX. Vulkan is better, when supported.<br>⇒ MAME Detect automatic, OpenGL opengl, OpenGL ES gles, Vulkan vulkan.  |
| <b>BGFX VIDEO FILTER</b><br><b>laser310.bgfxshaders</b>            | Apply a post-processing effect.<br>⇒ Off None, Bilinear default, CRT Geom crt-geom, CRT Geom Deluxe crt-geom-deluxe, CRT Geom Deluxe (RGB) crt-geom-deluxe-rgb, CRT Geom Deluxe (Composite) crt-geom-deluxe-composite, Super Eagle eagle, HLSL hlsl, HQ2X hq2x, HQ3X hq3x, HQ4X hq4x. |
| <b>CRT SWITCHRES laser310.switchres</b>                            | Allows the use of switchres profiles if present.<br>⇒ Off 0, On 1.  |
| <b>VERTICAL ROTATION (TATE)</b><br><b>laser310.rotation</b>        | Rotates screen by 90 degrees. Intended for rotating displays.<br>⇒ Off None, Rotate 90 autorot, Rotate 270 autorol.   |
| <b>ARTWORK CROP</b><br><b>laser310.artworkcrop</b>                 | Crop artwork to only unused space, keeping the game as large as possible.<br>⇒ Off (Default) 0, On 1.   |
| <b>CUSTOM MAME CONFIG</b><br><b>laser310.customcfg</b>             | Set system-wide controls via MAME menu<br>⇒ On 1, Off 0.  |
| <b>DATA PLUGIN laser310.dataplugin</b>                             | Make game history, setup instructions, and special moves viewable in the menu<br>⇒ Enabled 1, Disabled (Default) 0.   |
| <b>OFF-SCREEN RELOAD BUTTON</b><br><b>laser310.offscreenreload</b> | Set gun button 2 to reload.<br>⇒ On 1, Off (Default) 0.   |
| <b>Settings specific to laser310</b>                               |   |
| <b>SOFTWARE LIST laser310.softList</b>                             | Use MAME software lists to identify ROM<br>⇒ Don't Use (Default) none, Dick Smith Electronics VZ-200/300 cassettes vz_cass, Dick Smith Electronics VZ-200/300 snapshots vz_snap.  |
| <b>MEMORY SLOT laser310.memslot</b>                                | Choose hardware for the memory expansion slot<br>⇒ Laser 310/VZ-300 16k Memory laser310_16k, Laser/VZ 64k Memory (Default) laser_64k.   |
| <b>MEDIA TYPE laser310.altromtype</b>                              | Type of ROM file to load.<br>⇒ Cassette cass, Snapshot snap.  |
| <b>UI KEYS laser310.enableui</b>                                   | Toggle with hotkey + D-pad up or Scroll Lock in-game.<br>⇒ Off at Start 0, On at Start 1.   |
| <b>CUSTOM CONFIG laser310.pergamecfg</b>                           | Enable per-game custom configuration via MAME menu.<br>⇒ On 1, Off 0.   |

## Controls

The default button mapping for the laser310's controls is as follows::



# Troubleshooting

For problems with MAME specifically, there are some tips on the [troubleshooting section on MAME's system page](#).

For further troubleshooting, refer to the [generic support pages](#).

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