ZEsarUX documentation - 13/04/2023



ZEsarUX ZX Second-Emulator And Released for UniX Copyright (C) 2013 César Hernández Bañó

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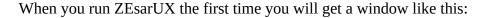
Introduction

This is not intended to be an exhaustive documentation for ZEsarUX emulator. Is just a brief description about how the emulator works, how the menus are structured, etc. If you want to know all the features of the emulator you should:

- Read the FAQ
- Read the README
- Read the different documentation files in zesarux-extra package
- Use the included help (try pressing F1 on menu items!) and read the menu items tooltips
- Try all the menus, submenus and settings in ZEsarUX. There are a lot of hidden and amazing features not found on other emulators!



First steps





It doesn't matter which operating system you use (Linux, Mac, Windows, etc), the emulator should look like exactly the same in all systems.

Everything in ZEsarUX runs in this window: emulated machine, menus, etc. So the first question people usually ask... Why are the menus different from my operating system? The answer is very simple: ZEsarUX manages its own windows, its own menus and I try not to be dependent from your operating system, so as I said first, it should look like the same on all systems.

Sections in ZEsarUX window

In the ZEsarUX window, we can see a different lower section:

ZX Spectrum 48k 50 PPS 8% CPU F5/Button Menu

This is called "Footer". Some information is displayed there:

- The first line shows the emulated machine
- The second line shows the current FPS (Frames per Second, should be 50 FPS for best performance), the cpu usage (this is your machine cpu usage, high values are not recommendable), cpu temperature (your physical cpu temperature)
- The third line is more dynamic, by default shows "F5/Button Menu", it tells you must press F5 key or left mouse button to open the menu. It can show also a Real Tape loading, MMC card reading, etc

Pressing the F5 key or the left mouse button opens the main menu:



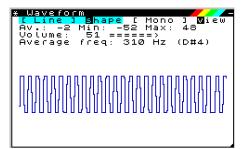
By default, the menu style is like the Spectrum 128 models, but it can be changed. These menus are called "ZX Vision" menus, it's a tribute to the "Turbo Vision" Borland menus, widely used in the 90's.

When you open a ZEsarUX menu, by default it's placed over the emulated machine display, the keyboard and mouse focus go to the opened menu, and not to the emulated machine. The emulated machine will continue running but it won't receive any keyboard key or mouse events.

What I call a window menu can include:

- Entries to other submenus (like this one shown on the main menu)
- A content window, for example the Audio Waveform window:





- Settings entries: like the different entries in Settings submenus:

```
# Audio Settings
Output Volume [100%]

[X] Autoenable AY Chip
[1] AY Chips
Show Piano: Graphic
[] DAC

[X] Beeper
[X] Real Beeper
[X] Real Beeper
[] 1 bit filter
[] 1 bit filter

Audio out to file []
[] Audio file inserted
[] Silence detector
Change Audio Driver

ESC Back
```

As a general rule, ZX Vision menus respond to the following keys or mouse actions:

- Esc/Right mouse button: closes the current menu and goes back to previous menu (if any)
- Cursor up, down, mouse movement: selects an item in the menu
- Cursor left, right, tab: selects an item on the left or right.
- Enter/Left mouse button: fires the selected action in the menu. It can open another menu, open a content window, or change a setting shown in this item.
- Space: some menu items (like breakpoints) can be enabled/disabled by pressing this key
- Letters from "a" to "z": they can fire an item in the menu, most items have a "hotkey", pressing that letter in a menu, it just fires that action (it's equivalent to select that one and press Enter). Hotkey letters are shown in inverted text colour (and hidden the first seconds). For example:



Pressing the "r" key in the menu Debug it just resets the machine.

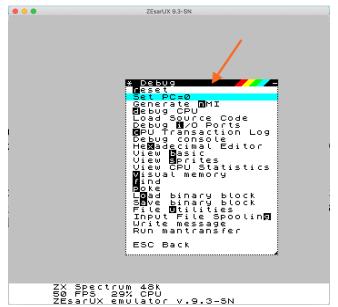
These hotkeys are by default hidden when you enter a menu, but they are shown after a few seconds.

Window actions

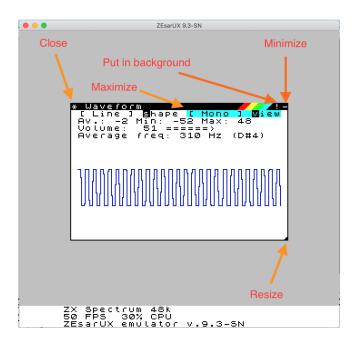
Most ZX Vision windows respond to different events:



- Move window: you can move a window by keeping pressed the left mouse button on the window menu and moving the mouse. Remember I'm always referring to menus inside the ZEsarUX window, so for example:



You must press the left button (and kept it pressed) where the arrow points at, and move the mouse. It's like moving your operating system windows but in this case, this window is **inside** the ZEsarUX window.



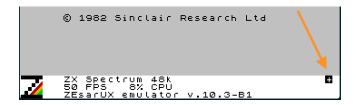
- Resize window: you can resize a window by keeping pressed the bottom-right section on the window menu and moving the mouse. Not all windows remember the previous size: as a general rule, menu windows doesn't remember the previous size, and many (but not all) content windows remember the previous size.
- Pressing the '*' symbol, closes the window (just like pressing ESC key)

- Pressing the "-" symbol, minimizes the window
- Double click on the window title, maximizes the window.
- Pressing the "!" symbol (or pressing F6 key) sends the window to the background. Not all windows allow this, usually many content windows can be run on the background (Note: background windows are not allowed by default, you must enable them in Settings → ZX Vision → Background Windows)
- Switch window: pressing Shift+Cursor Right will switch to another background window
- Clicking (left mouse button) outsize a ZX Vision window will return keyboard focus to the emulated machine, but keeping the menu opened.



ZX Desktop

As we have seen in the previous chapter, the menu interface is placed by default over the emulated machine. But it can be changed, we can have a larger ZEsarUX interface window, so we can place menus on the right. We will have other advantages as we will see. This extra space is called "ZX Desktop". To enable it, go to Settings \rightarrow ZX Vision \rightarrow ZX Desktop Settings \rightarrow Enabled, or just click on the "+" button on the bottom right footer



Then the ZEsarUX window will be extended like this:



An extra space appears on the right, but also additional buttons:

- Buttons on the top access to main menu actions: ZEsarUX menu, Smartload menu, Snapshot menu, etc. There are two extra buttons on the right: Close all windows and Exit emulator. These default actions can be changed on menu Settings \rightarrow ZX Vision \rightarrow ZX Desktop Settings \rightarrow Customize Buttons
- Buttons on the bottom access to machine devices. By default, when no device is inserted, they will appear monochrome. But when inserted a device, they will get some colour to indicate a device is present. And when a device is in use (reading or writing) it will change its colour to inverse.

As we see in this settings menu, we can:

- Change width: selecting this item the ZX Desktop will be bigger
- Custom width: just write an exact size
- Open menu on ZX Desktop: by default, menus will be centered horizontally on the total width of the ZEsarUX window. Enabling this setting, will force windows to be centered on the ZX Desktop space

You can play with all the other settings there.