

# Steem SSE 4.2.0 release notes

## Atari ST

The Atari ST was a legendary 16bit computer of the Eighties.

## Steem Engine, by Anthony & Russell Hayward

Steem is a legendary Atari ST emulator for the PC, both accurate and easy to use thanks to its great user interface.

## Steem SSE

Steem SSE stands for **ST Enhanced EMulator Sensei Software Edition**. It is an updated version of Steem. Some say an improvement, some say it's worse! Sensei Software Edition is a growing company.

## Licence

Steem is free open source software. The licence is GPL3 as chosen by Steem authors.

## Installation

Extract files to a folder of your choice. There's no setup program.

Windows builds: Steem32D3D is the main 32bit build, Steem64D3D is the main 64bit build.

When you run a Steem SSE build for the first time, based on the file name, it proposes to add a link to the new version in your start menu if you care about that.

Steem SSE can work with various plugins, please check *Third-party* in the manual.

Linux builds: check doc/steem sse linux readme.txt, Steem SSE won't run without some libraries.

## v4.2.0 Notices

Windows builds: Windows 2000 not supported anymore, Windows XP or later required, this is because of DirectMusic support.

GUI changes:

- Left click and right click have been reversed for hard disk icons. Left to switch on/off, right to open the settings.
- Wrench icon for configurations removed from tool box (configs still available in settings and disk manager)

Linux builds: RtAudio and PortAudio not supported anymore, Steem SSE supports Pulse Audio.

## v4.2.0 Features

### Native support for STX images (Windows, Linux)

If the `pasti.dll` plugin isn't available, Steem SSE will try to load those disk images on its own. This is based on the unofficial Pasti file format documentation by DrCoolZic and especially sarnau.

There's no option, if the plugin is present it is used. The plugin is only available as a 32bit Windows library, which means that the feature is especially useful for the 64bit builds and the Linux builds of Steem SSE.

Native handling of STX images is less precise than the plugin, it isn't cycle-accurate (technically, it is based on the scanline timing and not CPU cycles).

You can also convert STX images to STW (v2) through a simple right click on the disk image, but it will not always create working images.

### TCP/IP connection (Windows)

New TCP/IP option for I/O ports. With this, you should be able to connect with someone else on the internet through Steem SSE. One instance of Steem SSE can play server (write *server* as address), the other can play client (type the address or the IP of the server). Reselect the TCP/IP option to start the connection if you change the address or the port. The server should be started first. It will probably trigger your firewall. The server can have multiple clients, if you think it's a bad idea or if your machine is client, just leave the option at 1. To terminate the connection, select the *None* option.

### Imitation of the GEM Control Panel (Windows)

This is a major extension of the former *keyboard click* option. Now you can also change the colours. You find this in the settings window.

### Emulation parameter controls (Windows)

Also available (if the *all settings* option is checked) are some emulation parameters. Normally they should be left alone, but it may help if some program isn't properly emulated. For example, emulation of the MFP (MC68901) is still trouble, adjusting parameters may compensate that.

### Support for DirectMusic MIDI (Windows)

The DirectMusic drivers allow greater precision and potentially eliminate MIDI jitter, provided your audio interface has the correct drivers. This uses the DirectMidi library by Carlos Jiménez de Parga.

### Monochrome

Smaller bottom border size for normal size if no overscan option is enabled

### Mega Turbo button (hack)

The thing was missing on the real Mega STE, there wasn't even an option to set the CPU to 16MHz in the GEM.

It also works with the Mega ST, emulating an AdSpeed card.

### Mouse auto-release

It's like "auto" but the mouse will be released each time a program is run. Useful if you need the mouse only to launch the program in GEM.

### Display: Old sync

Use this if your computer has trouble with the way recent versions of Steem SSE handle video synchronisation.

When it's checked, settings for microseconds and the hard loop have no effect.

### Disk Manager option Protect image files

If this is checked, Steem won't modify image files of floppy and hard disks.

## v4.2.0 Emulation improvements

### Software Overscan

Support for high resolution bottom border removal

### TOS 2.06 on STF

It is possible again to run TOS 2.06 on STF-like models, Steem imitates the hardware hack that intercepts TOS address range decoding.

## Steem SSE Web site

<http://sourceforge.net/projects/steemsse/>

There you will find a blog, a forum, all versions of Steem SSE and the source code (subversion repository).

## R0

Initial release, full of bugs

20 July 2025

## R1

Fix bug in archive handling

25 July 2025

## R2

Fix blitter read Lines per Bit-Block register

Fix debugger IO labels

10 August 2025

## R3

Various bugfixes

24 August 2025

## R4

Windows builds:

On starting, Steem SSE looks first in the application folder for your current steem.ini file, then in Documents/steem then in the registry and lastly in the roaming "AppData/steem" user folder.

If it can't find it, it asks you where it is or it should be created. All your settings will be recorded in that file.

Steem also needs a temp folder for archive handling and such. First it checks in the steem.ini file if the path is specified ([Main]TempPath). If not it tries to use "AppData/steem", if not writable the system temp folder (adding /steem), if not writable the place where steem.ini is, if not writable the folder where the executable was started.

21 September 2025

## R5

Numerous bugfixes

03 December 2025

## R6

Bugfixes TOS1.0 4MB, ghost disks

Linux builds: pseudo status bar, more options, fix display issues, more embedded files (steem.new, HD6301V1ST.img, ym2149\_fixed\_vol.bin not necessary anymore)

19 December 2025

## R7

Christmas bugfix release: TOS interception (some GEMDOS hard drive games)

27 December 2025

## R8

Removed "Seek sound variant" setting that had no effect

Fix Space Racer CTR, STEKMAG1

Debugger: load GST symbols instead of crashing

24 January 2026

## R9

Fix GEMDOS hard drive FSEEK from end of file

Fix possible debugger crash on tracing line-command

Thx Cyprian for the reports

8 February 2026

## R10

Fix SCP to STW conversion

21 February 2026