

# **AmiGenerator**

**COLLABORATORS**

|               |                                |                 |                  |
|---------------|--------------------------------|-----------------|------------------|
|               | <i>TITLE :</i><br>AmiGenerator |                 |                  |
| <i>ACTION</i> | <i>NAME</i>                    | <i>DATE</i>     | <i>SIGNATURE</i> |
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# Chapter 1

## AmiGenerator

### 1.1 AmiGenerator - The Sega Genesis/MegaDrive emulator for your Amiga!

AmiGenerator, version 1.06 (990503)

Copyright (c) 1999 Mathias "AmiDog" Roslund

Introduction

- What is this?

Requirements

- What does it require?

Features

- What can it do?

Installation

- How to install?

Usage

- How do I use it?

Settings

- What can I set?

Speed

- How fast is it?

Disclaimer

- Who's responsible?

Development

- How is it done?

Bugs

- Are there any known bugs?

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History

- What's new?

Future

- What will be added?

Contact

- How to contact me?

Thanks!

- Which have helped me?

This product includes software developed by James Ponder.

Visit the homepage at <http://www.amidog.com/amigenerator/>

## 1.2 AmiGenerator - Introduction

This is a Sega MegaDrive/Genesis emulator for PPC and 68k Amigas.

It's based upon the Sega MegaDrive/Genesis emulator called Generator, developed by James Ponder for X-window systems.

## 1.3 AmiGenerator - Requirements

Hardware:

- \* Amiga (040/060 or PPC)
- \* AGA or CGFX
- \* 8 MB of RAM
- \* OS 3.0+

Software:

- \* `lowlevel.library` for CD32 pad support.

## 1.4 AmiGenerator - Features

This is what's being emulated:

- \* ... (to be written)

## 1.5 AmiGenerator - Installation

Copy the version for your CPU to any place on your HD and rename it to AmiGenerator.

---

## 1.6 AmiGenerator - Usage

\* Starting AmiGenerator:

1. Open a shell window.
2. Increase the stack, 100k (stack 100000 <ENTER>) should be enough.
3. Type AmiGenerator <ENTER>.
4. The GUI will open.
5. Select a screenmode.
5. Select a ROM using Open.
6. Press Start emulation.

\* The keyboard support uses:

ESC           - Quit  
A, 1          - A Button  
B, 2, S       - B Button  
C, 3, D       - C Button  
Enter         - Start  
Arrow keys   - Left, Right, Up, Down

\* CD32 pad support uses:

ESC           - Quit  
Red button    - A Button.  
Blue button   - B Button.  
Yellow button - C Button.  
  
Play button   - Start.  
Left, Right   - Left, Right.  
Up, Down      - Up, Down.

## 1.7 AmiGenerator - Settings

Display

- \* Size    - The size of the emulated display.
- \* Layers - You can toggle any layer - they are listed in the order of priority that they are plotted. Turning off layers that a game doesn't use will speed the emulation up.
- \* Frames - If you find your machine cannot cope, you can ask the emulator to not display all frames. The game will not be affected.

CPU

- \* Cycles - We execute approximately 8 million 68000 clock cycles every second. Most games do not need all these clock cycles per frame in order to update the screen. Hence, you can reduce the number of clock cycles given per scanline.
  - \* Adaptive - This facility will look to see if the game has finished the
-

next frame and is waiting for the end of frame interrupt. When this occurs we force the interrupt as otherwise we would just be wasting time emulating instructions that do nothing. If this works for the game you are using then you may like to increase the number of clocks to 150% or 200% - this will provide more clock cycles and hence can fix slowdown experienced on a real system when the processor can't cope with the amount of work needed.

## 1.8 AmiGenerator - Speed

\* ... (to be written)

## 1.9 AmiGenerator - Disclaimer

Remember! You use this piece of software at your own risk! I can never be held responsible for any sort of damage caused to your software or hardware by the use of this product!

Bugreports and suggestions might be sent to one of my addresses.

## 1.10 AmiGenerator - Development

AmiGenerator is developed using:

```
.....-v1.02  A1300Ti -> 040/FPU/MMU'25, 603e'200, 2+128MB, AGA.  
v1.03-      A1300Ti -> 040/FPU/MMU'25, 603e'200, 2+128MB, BVision.
```

## 1.11 AmiGenerator - Bugs

These are the known bugs:

\* None.

## 1.12 AmiGenerator - Contact

Bugreports, suggestions, comments or anything else you may want to contact me about can preferably be sent by e-mail to:

amidog@amidog.com

You may however also contact me by normal mail:

Mathias Roslund  
Sveav. 2b, nb

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S-702 14 Orebro  
Sweden

## 1.13 AmiGenerator - Thanks!

I would like to thank the following persons:

- \* James Ponder - For developing Generator and releasing the source.

## 1.14 AmiGenerator - Future

These features are planned:

- \* Double buffering.
- \* Timing (to get right speed).
- \* Sound.
- \* ...

## 1.15 AmiGenerator - History

- v1.00 -990112  
-Reomved the memory trashing bug.  
-Started working on the GUI.  
-990113  
-The most important GUI functions are implented.  
-GFX-board support is added using WPA8 (untested).
- v1.01 -990115  
-If AmiGenerator quits due to some error, the screen and GUI will always ←  
get closed.  
-Some optimization in palette changing routine.  
-Of some reason, two ROMs can't be used after each other, using the same ←  
with different  
settings will however work flawlessly.
- v1.02 -990220  
-Removed palette bug (som games may have looked strange before).  
-Optimized the palette changing routine a bit more.  
-Removed some bugs when screen/window couldn't be opened.
- v1.03 -990401  
-Now works properly with a CGFX screenmode, the colors do however flicker ←  
when the  
palette is changed.  
-990405  
-The palette is now only changed when required, and not once per frame as ←  
before.  
This has reduced the flicker a bit.  
-The Name and Copyright fields in the GUI are now filled with the ←  
information.
-



- Cybergraphics library will now get properly closed.
  - 990406
  - Replaced the WPA8 call with a direct gfx memory copy routine, the speedincrease is so big that Sonic1 is playable in Every frame mode (on 603e'200), not Every other frame as before. On a 603e'240 it should even be enjoyable in Every frame mode.
  
  - v1.04 -990415
  - Compiled 68k version, I finally got the CGFX includes working.
  - Replaced some loops with memcpy/memcmp which should be faster.
  
  - v1.05 -990415
  - I just read the docs for lowlevel.library a few minutes ago, and I've gotten the direction buttons working now, but of some reason I only get two buttons, not all there is, might be that I need to set some attributes.
  - 990416
  - Of some reason lowlevel.library don't think that my 'Competition PRO' CD32 pad is a CD32 pad, so I had to force lowlevel.library into thinking that I do have a CD32 pad, and it works great!
  
  - v1.06 -990421
  - I screwed things up with the v1.05 release so that keyboard support didn't work, fixed.
  - Changed the GUI so that you can choose the input device.
  - Added the possibility to save the current settings, but remember that the default path that is saved will be the path that you loaded the latest ROM from, no extra gadget is used for setting the path.
  - Removed two 68000 CPU bugs (DIVU/DIVS and flag setting).
  - Removed bug when you pressed Start emulation before selecting a file.
  - 990501
  - Replaced the C only c2p in the 68k version with an asm optimized one which manages copyspeed on a 040'40MHz or faster. This one is however very slow on 030, but since AmiGenerator isn't usable on a 030 it shouldn't be a problem.
  - 990503
  - Changed the GUI a little.
  - If the screen can't be opened, the allocated bitmap is now deallocated (AGA).
  - Removed the bug which made it impossible to run two different ROMs after each other.
  - You can no longer quit by pressing the green button on the CD32 pad since someone reported that it easily can be done by accident. I couldn't agree more.
-