

CoolNESs-guide

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COLLABORATORS

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Chapter 1

CoolNESs-guide

1.1 CoolNESs 'the speed of the CPU-emulation rocks'

CoolNESs a cool NES-emulator for Amiga
By Fredrik Olsson
version 0.45 [1997/09/29]

New in V0.45: Better sprites, minor speedup in cpu-code.

Features:

Support for Mapper: 1, 2, 3, 4, 7, 9, 11.
Support for 2 joysticks (CD32-pad) and keyboard.
Screenscrolling.
Battery save.
Soundsupport. *Registered users only*
Keyfile support.

Copyright

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Author

Thanks

Picture

1.2 Thanks

I would like to thank the following people for their help in obtaining information regarding NES emulation.

Marat Fayzulin, Would never have started without his doc!
Yoshi, Thanks for the docs on sound.
Alex Krasivsky, He started the research on the NES-hardware.
Juan Antonio Gomez Galvez, Thanks a lot, for hints on the code and stuff.

Thanks to all Amiga-Users.....
All who registered Thanks alot for the moral support.
Specially to all who have payed for it:
Blonde Lion,
Martin Chantler,
SnuskBob,
Olov Sandell,
Björn johansson,
Nikolaos Theologou,
Fredrik Eriksson,
Josef Andersson,
Robert Karlsson.

All the WarD-members.
Guru, for alwas wondering "how is it going with CoolNESs?" ;)
Tesla, for some crazy ideas for CoolNESs and help with the keyile+GUI.
Ash, hopefully providing some gfx soon.
Axe, for being the best friend ever =)
xTs, code on man.
Classes, same to you, man.
CaB, for maintaining the WarD homepage.

3LE, the kewlest elks in town :)

Spot/3LE, for always pestering me to make my Zelda-simulator ready.

Ida Evertsson.

Nintendo???

More to come.....

1.3 Copyright

This guide and the executable CoolNESs-file is copyright 1997 Fredrik Olsson. This is shareware so spread it as much as you like, non altered. And don't spread the keyfiles.

This Software is provided "As is", so if your computer or anything else bursts into flames or starts leaking or anything else unpleasant happens and you think you can blame me, you'r wrong. You are responsible. Don't use this if you don't like it.

This product may only be used on an Amiga compatible computer.

It may not be sold for profit.
If published on a coverdisc/cd with a magazine I would like a copy of the magazine or atleast be noticed about it.

You are not allowed to use this software in the creation of weapons.

If you cant read this text then you MUST ask a friend or a parent to read it for you ;)

If you happen to crack the keyfiles I would like one registered on me ;)

1.4 Contact Me

I'm a 22 year old unemployed male. I've just finnished my ←
military service.

I love music, I can't live without it, I listen to very different kinds of music, my newest CD is "SPAWN the album". HardRock and Techno.

I also have a Tamagotchi, right now it is very dead, but I think I'll revive it soon.

My computer is a trusty old A4030 with CD-player and some memory.

I also have a bunch of other consoles/computers.

I'm a member of the demogroup WarD (/\\), we've created productions like "Once upon a time" and "Black Hair Tounge Deceas".

I often go to Gothenburg to se my friends there, when I get a jobb and earn some money I hope I can move there.

Right now I'm doing a Networkscourse, so the work with CoolNESs will slowdown ←
:(

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FluBBa

For registration see
Limitations

1.5 Introduction

I was looking for a cool NES-emulator but all around me was darkness. ;)

Well it all started out a couple of years ago when I started on a Zelda-simulator, first we started recreating the graphics, and then some routines but the more I coded the more I saw how much time this would take. So when I heard of Nes-emulator for the Amiga I thought.....

Eeeh well at least I tried to think :)

So here is the result of some weeks thinking and some weeks of coding. (Actully it begins to look like months now....)

Zelda is working now! =)

CoolNESs!

1.6 Usage of CoolNESs

Kind of simple actualy, just run it from cli or WB.
Select a *.nes file and away you go.
Soon a GUI will be added, with things to select.

Return or Yellow works as Start.

Right_Shift or Green works as Select.

Left_Alt, Fire1 or Red is B.

Left_Amiga, Left_Shift, Fire2 or Blue is A.

Arrow_Keys or joy is direction.

F1 selects normal joy1.
F2 selects CD32joy1.
F5 selects Zapper2 emulation with mouse2 (test).
F6 turns on joy2.
F7 selects CD32joy2 (not in function yet).
Esc or Play is used to quit.
F10 or Forward is reset.

1.7 Requirements of CoolNESs.

To start the emulator you need AGA and a 68020 or better.
Right now a PAL-monitor is required too. Maybe changes in the future.
To get good speed (50fps) you will need a 25MHz+ processor
and fast-mem. Many intros and some games still only needs
14MHz and fastmem for 50fps. You tell me if this is "fast".

A 2button+ joystick is nice but not necessary.

It needs a total of 200k chip and 250k any mem.
Plus mem for the cartridge. Varys from 24k to 768k.

If somebody thinks 500k chip is too much, then tell me fast as h**l,
the next version will probably need that much to get rid of stupid
flickering when scrolling over screens.

A NES-rom would be fun also... =)
And NO! I wont send any to you! Not if its Copyrighted.

Maybe I write a demo for the NES. :)

1.8 What to come in the future.

There are a lot of things to come in the future.
To bad I can't predict the future ;)

XPK support.

Better sound, support noise and PCM.

A Nice Gui. =) A friend is working on it right now. It's coming.

Save of prefs.

NTSC/PAL selectable. Frequency and screenheight.

Splitscreen, tricky but it's possible.

Support for IRQ in Mapper#4.

Better sprites. Priority. (faster?)

Cycle-count and system-screen to allow for real multitasking.
And a non-AGA version???

FamilyBasic Keyboard???

NES-DiskDrive???

Zapper???

A kewl demo, to show off some gfx.

1.9 The history of CoolNESs

Ver 0.45 29 September 1997.
Fixed the sprites! =)
Minor speedup in the cpu routine SBC + memory access.

Ver 0.441 14 September 1997.
Fixed the mapper routin wich I screwed up in V0.44.

Ver 0.44 11 September 1997.
Added Mapper#4. Most Gfx seem okey now, no IRQ is supported yet.

Ver 0.43 5 September 1997.
Added CD32-joypad support.
Fixed the keyboardhandler.
Fixed dutycycles in sound(some games sound much better).

Ver 0.42b 27 August 1997.
Fixed backgroundcolour (again).
Added Mapper#11.
Major speed improvements.
Turned of filters (will be selectable).
Fixed border bug.
Rewrote soundroutines.

Ver 0.41b 11 August 1997.
Added Keyfile support. Thanks to Blonde Lion. =)
Rewrote some of the CPU emulation. Thanks to Juan Antonio Gomez.
Added minimal soundsupport.

Ver 0.40b 9 August 1997.
Added 16pixel high sprites.
Added battery save.
Mapper#1 Partially working. Zelda, KidIcarus, Metroid, Castlevania2.
Edited sprite-flag in PPUstatus register (again).
Fixed the background-color.
Minor update of the gfx&cpu-routine.

Ver 0.39b 2 August 1997.
Lowered vertical resolution.
Fixed Mapper7 and Mapper9.
(Have you seen the PunchOut-logo in Darkness?)

Ver 0.38b 1 August 1997.
Fixed sprite-flag in PPUstatus register (many more games work).

Ver 0.37b 30 July 1997.
Added First try on mapper9, Punch Out.
Rewrote some cpu-routines (saved 10 cycles on rotate-left).
Rewrote the gfx-routines (scrolling games faster).
Added keyboard-support (not good but it works).
No more NMI during MemSwapping, mapper2 works better.
Moved gfx-routines out of the interrupt. woops!
Added First try on mapper7, Wizards&Warriors etc.
Mapper3 changed to "Noncopying", pointer instead (faster).
Added MemAlloc for CartSize.

Ver 0.36b 17 July 1997.
Added Asl-requester.
Added RomInfo

Ver 0.3 never released
Fixed a groovy bug in the CPU-command SBC.

Ver 0.2 never released
Made screen-core.
Made cpu-core.

Ver 0.1 never released 29 June 1997
Started on the concept of a NES-emulator.
Downloaded Marats NES-Doc.

1.10 Limitations.

Are there Limitations!?!

If you are unregistered there is a time limit of 10 minutes and no sound. You'll need a keyfile to unlook these limitations. It doesn't support IRQ in Mapper4 (Super Mario2 doesn't work). Sprites dosn't flip or flop. But they jerk. ;)

This will change in the
Future
, but I want your response.
So if you want a full version then register.
If you have a keyfile you have no time limit plus sound.
This keyfile will work with all future versions of CoolNESs.

And from now on it will cost \$15/£12/100SeKr, cash please.
Or if you have an old Nintendo game cartridge, I may trade it for a keyfile, but then you must contact
me
first.

Games I'd like:
Metroid, RCProAm(2), CobraTriangle, TMNT(2), etc.

Send your full name, `_adress_` and money to:

Fredrik Olsson
Lars Kaggsgatan 111
504 43 Borås
Sweden

You will need an email-adress to receive keyfile.
or send me an error free disk plus \$2/£2/10Skr or enough stamps.

1.11 BUGS!!!!

Are there BUGS!?!

The CPU-emulation may have some kind of bug.
I Still have problems with the NMI+Mapper.
The Sprites are not good.
Joy2 has problems with some games.

There was a bug in V0.36b on the 68060 (some other?) which
caused a guru. Not anymore, I hope.....

Probably some more to....

Check

Limitations
also.

For Bugreports check
my adress

.

But please don't report about the Sprites, I know they're bad.
Remember to include computer plus processor info.
Any patches. Rom + Wb info. And wich game/mapper.

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Thanks