

Wzonka-Lad Guide

Ville Helin

COLLABORATORS

	<i>TITLE :</i> Wzonka-Lad Guide		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY	Ville Helin	August 22, 2024	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

Contents

1	Wzonka-Lad Guide	1
1.1	Minna-san! Ichiban yoi Gameboy emulatoru, Wzonka-Lad v0.99.8 to asonde kudasai!	1
1.2	Supplied preferences	2
1.3	Cracked/Patched Wzonka-Lads	2
1.4	About version 0.99.8	2
1.5	Questions	3
1.6	The keyfile	4
1.7	Sound emulation	4
1.8	The three executables	4
1.9	Shareware announcement - O-kane ga takusan hoshii n desu! ;)	5
1.10	20 Recent Cartridges menu	6
1.11	20 Favourite Cartridges menu	6
1.12	The tools directory	6
1.13	Copyrights	7
1.14	Installing	8
1.15	Read me before anything!	8
1.16	Requirements	8
1.17	Snapshots	9
1.18	Controls	9
1.19	Menu window	10
1.20	Misc settings	10
1.21	Visual settings	11
1.22	Sound settings	12
1.23	Preferences	13
1.24	Rom images	13
1.25	Emulation	14
1.26	Things to do	14
1.27	Information	14
1.28	Thanks to	15
1.29	The author	15

1.30	Final Words	16
1.31	Wzonka-Lad	17
1.32	Wzonka-Lad Palette Editor 1.06	17
1.33	Usage	18
1.34	History	18
1.35	Requirements	19
1.36	Compability	19
1.37	Wzonka-Lad Palette Editor	20
1.38	Features	20
1.39	History	20

Chapter 1

Wzonka-Lad Guide

1.1 Minna-san! Ichiban yoi Gameboy emulatoru, Wzonka-Lad v0.99.8 to asonde kudasai!

Before Starting...

ABOUT 0.99.8!!! READ ME!

CRACK INFO ; (

Read me

Requirements

Copyrights and copying

Installing

Shareware announcement

Windows

Menu

Preferences

Visual settings

Sound settings

Menu Lists

20 Recent ROMs

20 Favourite ROMs

Binaries

The three executables

Tools (directory)

Palette Editor

Supplied preferences

Programme Information

Controls

Rom images

Snapshots

Emulation

Sound emulation

Misc Information

The Author

Thanks to

Future

Questions

The keyfile

Final words

History

1.2 Supplied preferences

Some users have donated colour schemes to be used with Wzonka-Lad.

Game	Donator	Fixed by me ;P
Castlevania 1	Kelly Samel	yes
Castlevania 2	Ville Helin	yes ^_^
Contra	Kelly Samel	yes
Final Fantasy Mystic Quest	Ville Helin	yes ^_^
Kirby's Dream Land 2	Ville Helin	yes ^_^
Metroid 2	Kelly Samel	yes
Super Mario Land	Kelly Samel	yes
Zelda	Kelly Samel	yes

Thanks to all you dudes for the colours! ;^_^;

1.3 Cracked/Patched Wzonka-Lads

It has come to my knowledge that Etrigan/sCUMbAGs has coded a patch to disable the register window in Wzonka-Lad v0.98 (all praise to him for finding the correct intuition.library/OpenWindowTagList() -routine call), and I've seen this executable myself, too. The good things are that he will not never release sounds to the public (because he hasn't got them) and he liked about Wzonka-Lad ;) But the bad thing is the patch itself, modifying the copyrighted emulator.

It seems that there are third parties interested in hacking the executables. I bet the day when I am forced to stop developing Wzonka-Lad is one cycle closer...

Let's make a patch... nice... now have the keyfile, too! 0 day warez, dudez! ... excellent... Too bad that after that there will not be any more new Wzonka-Lad's to patch and crack and poison with keyfile duplicates.

One more of these patches and Wzonka-Lad is history.

Remember, every keyfile is individually coded. Every key can be traced to the owner. Alter the data in the keyfile and it certainly will not work. Change the name, yeah... I can still indentify the owner with 99.999%'s propability...

Have a nice day. You have been warned.

1.4 About version 0.99.8

Remember when you use Wzonka-Lad you are doing it on your own risk. You are fully responsible if something happens to your machine due to Wzonka-Lad.

If you are moving from v0.8x or older to v0.90 or newer you must delete the old preference files!

NOTE! Check out the new lowered keyfile prices! ^_^ Now it should be cheap enough for everyone to register!!!

NOTE! Use AHI Paula v4.19 device and DMA 8 bit Stereo mode to obtain the best and fastest sounds on any Paula-chip sound system machine! v4.19 is much better than the previous drivers (even the difference between v4.17 and v4.19 is hearable!!), so get it asap!!!

1.5 Questions

Q: The emulator doesn't work. In fact it quits right after starting. No window pops up at all!!

A: You have older than 0.9x preference files in your system. Delete ENVARC:Wzonka-Lad.prefs and ENV:Wzonka-Lad.prefs and it'll work.

Q: Game xxx has corrupted graphics.

A: Try first using Gfx -> Mode -> Full. If the graphics are ok, but you want more speed, switch to Gfx -> Mode -> x/153. Use different values for x to fix the output. Note that there are some problems which only Gfx -> Mode -> Full solves, but usually Gfx -> Mode -> x/153 is ok.

Q: I can't hear any sounds.

A: You'll need a keyfile to get them, so register fast! ;)

Q: If I put Wzonka-Lad on my homepage, will I get a keyfile?

A: Certainly not. I did once give a keyfile for that reason, but then I realized the world is filled with homepages, and anyone willing can make one by himself. So register, 15US\$/70FIM isn't that much!

Q: If I draw MahouWB/Wunderbaum icons for Wzonka-Lad, will I get a keyfile?

A: Get real! Luca Longone is the official Wzonka-Lad icon producer. ;) But I do take free-of-charge fan art.

Q: If I'll do xxx will I get a keyfile?

A: Unless the xxx isn't pretty fantastic you can bet your heart out you will not get it. Pay me cash!!!

Q: Keyfile!?

A: With cash! Or something else as cool... ^_^

Q: Can I register with Kronas/Deutch Marks/Nuggets/Credits/Copper coins?

A: No! I'll only accept Finnish marks (FIM) (from Finns only!) and US Dollars (US\$).

1.6 The keyfile

The keyfile must be kept in L: or PROGDIR: (the directory where Wzonka-Lad executable is) volumes. You can gain a keyfile by registering.

With the keyfile you can use the sound preferences window to select the preferred AHI output devices and settings. Without the keyfile the window cannot be accessed and the sounds are not emulated.

You'll also get a chance to use CD\$^3\$\$^2\$ and SEGA pads, more than three XPK libraries, GBS loading and saving and GameGenie (tm) patch codes when you register!

You must not spread the keyfile as it is not a very nice thing to do. Keep it to yourself!

1.7 Sound emulation

You can get yourself the sounds, aka a keyfile by registering. ;)

The emulation is not perfect, but due to the lack of good documents I cannot enhance it much.

NOTE! Always check out <http://www.lysator.liu.se/~lcs/ahi.html> (AHI homepage) for new updates!

NOTE! It's recommended to keep the channel four shut down as the emulation for that channel is incomplete. With some games channel four works just fine, with some it doesn't. You'll just have to find it out.

NOTE! If you are using default Amiga sounds chips for output, use Paula DMA 8bit Stereo driver as it gives the best result by being fast, clean and sharp in sound. Use Paula driver v4.19 or better if possible!

NOTE! Due to the way things work, FAST and WARP executables work best with y Hz -mode.

1.8 The three executables

- FULL --> This one offers a full GB Z80 emulation with all the CPU flags. Every GB-Z80 command can access RAM and ROM and write to hardware registers.
- FAST ---> As the name indicated this one is faster, but lacks the emulation of H and N flags and the DAA command. GB-Z80 CALL, RST and PUSH opcodes can only write to RAM, and RET and RETI can only read from RAM. RES x, (HL), SET x, (HL), EX HL, (SP), INC (HL), DEC (HL), RLC (HL), RRC (HL), RL (HL), RR (HL), SLA (HL), SRA (HL), SWAP (HL), SRL (HL), LD (xx), SP, LDI (HL), A and LDD (HL), A commands can handle only RAM.
- WARP ----> WARP uses the same GB-Z80 CPU emulation with FAST. To make things warp TIMER, CMP and LCD interrupts are left away and only VBR interrupt is emulated.

NOTE! Due to these defects in FAST and WARP executables some games may have errors with sounds, graphics and/or compability.

1.9 Shareware announcement - O-kane ga takusan hoshii n desu! ;)

During the long time of developement I've listened to user's requests and made most of them to come true. Now it's my time to ask you a favor.

Wzonka-Lad is shareware. Register Wzonka-Lad to get all the missing features! And by registering you can make sure the developement will continue!

KEYFILE VIA	YOU SEND ME	FINNS	FOREIGNERS
email	email/snailmail	50FIM	10US\$
snailmail	email/snailmail	70FIM	14US\$
snailmail	email/snailmail + disk	60FIM	12US\$

Send the cash to my address:

Ville Helin
Suomenlinna c54 b14
00190 Helsinki
FINLAND

Or pay to my account and send me a copy of the receipt

Merita, 1009 Helsinki
100950-474070

I CAN'T ACCEPT MONEY ORDERS OR CHEQUES OF ANY KIND!

I can also exchange a keyfile to few manga magazines or an original NTSC/PAL anime tape with English subtitles, but you'll have to contact me first.

The Following features are only available for registered users:

- Sounds
- GameGenie patch codes
- GBS saving and loading (realtime and snapshotting)
- More than three XPK libraries
- CD\$^3\$2\$ joypad, SEGA pads with 2 and 4 buttons and 2 button joystick controllers

If I ever see a pirated version of Wzonka-Lad or a keyfile in public distribution, I will stop working.

By registering you won't only get the missing features, you'll support Amiga!

1.10 20 Recent Cartridges menu

This menu list is only available via Menu window.
The 20 recently loaded rom images are displayed on this menu.
Selecting a name from the list will reload the cartridge.

NOTE! Only 15 characters of the file are saved with this list, so keep those names short. Note also that the data is loaded from the selected default rom image storage directory.

The list is saved on exit to the prefs file.

1.11 20 Favourite Cartridges menu

This menu list is created from an external file, which is not modified by the emulator. This is also only accessible via Menu window.

Inside this menu you can place the 20 favourite games of yours. The names are in ASCII, located in favourites/favourites.list.

favourites/favourites.list file is loaded on every start up and the menu will be shown only if it is available. It must be located in PROGDIR:favourites/!!!

You can edit the file with your normal text editor.

NOTE! The instructions for editing are inside favourites/favourites.list!

1.12 The tools directory

- prefs_to_cfg --> Converts Wzonka-Lad .prefs files to Virtual GameBoy .CFG files. SYNTAX:

```
prefs_to_cfg "[INPUT NAME]" [OUTPUT NAME] [ENTER]
```

NOTE! Background colours are also extracted as window colours to create a whole .CFG file.

- gbs_to_sav --> Converts Wzonka-Lad .gbs files to Virtual GameBoy .SAV files. SYNTAX:

gbs_to_sav [INPUT NAME] [OUTPUT NAME] [ENTER]

NOTE! It's up to you to check out if the cartridge has got battery backed RAM. The best way to check this out is to run VGB with the desired rom image and look if it searching for .SAV file.

NOTE! This utility is made to extract battery RAM data from .GBS files to be used with VGB.

NOTE! Loader supports xpk packed files!

- sav_to_gbs --> Converts Virtual Gameboy .SAV files to Wzonka-Lad .GBS files. SYNTAX:

sav_to_gbs [INPUT NAME] [OUTPUT NAME] [ENTER]

1.13 Copyrights

Wzonka-Lad Palette Editor and Wzonka-Lad the Emulator are copyrighted by Ville Helin 1996-98. Wzonka-Lad Palette Editor cannot be copied separately from the Wzonka-Lad emulator distribution archive. File removing and data altering are prohibited.

Wzonka-Lad archive is freely distributable as long as

- no payment is taken.
- the archive is complete.
- no files inside the archive are altered.

If you are doing an article or a review of Wzonka-Lad then you must send me a copy of the magazine!

If Wzonka-Lad is put on a cd, then you must send me a copy of it.

If you've registered Wzonka-Lad and you've recieved a keyfile, it must not leave your computer. You are not allowed to spread the keyfile.

Generally, if Wzonka-Lad is involved in something I must be told. ;)

Gameboy is naturally copyrighted by Nintendo. ;)

If any of these rules is broken I will stop developing of Wzonka-Lad.

1.14 Installing

Installing the emulator would not be easier; Just click on the icon and Installer (tm) does the job for you.

Thanks to Lennart Johannesson (95lenjo@ostrabo.uddevalla.se) for the script. Without him we wouldn't have the option of automatic installation. ;) Cheers!

1.15 Read me before anything!

Read the documents first before sending me any mail!!!

Do not send me mail about the following things. If you do send me mail with one of the listed subjects included I will not answer to your mail.

I don't want to hear about

- Requests for ROM images.
- SEGA PAD's behaviour. Contact the library's author, it's not my fault.

PS. If something seems to be wrong when first trying out a new version of Wzonka-Lad, delete the old prefs file first, before sending me mail. If that doesn't help, then please write me a line or two.

But do write about

- Emulator bugs.
- Brilliant ideas (brilliant = exceptionally good).
- Current compability with your gfx/sfx card (with system configuration).
- How much you like this emulator. ^_^ Or how little. ;P
- Features you'd like to see in the future releases (these must, too, be brilliant suggestions aswell).

1.16 Requirements

Real Requirements:

- MC68020+
- About 3MB of memory.
- regtools.library version 38+
- wzonka.font for the screen (zapot or topaz fonts will do it if wzonka font isn't found, but the view is optimized for wzonka font).
- OS3.0 (OS3.0 routines are used!).
- AHI sound system installed, any version of this will do fine, but the newer the better. Only used in the registered version of Wzonka-Lad.

Things good to have:

- Keyfile to hear the sounds.
-

- A cd32 compatible joypad.
- lowlevel.library for the cd32 joypad routines.
- controlpad.library if you are using a Sega controlpad alternatively.
NOTE! You need an CP-1 CONTROL PAD ADAPTER to utilize all the buttons.
Get ControlPad.lha from Aminet for more details.
- A fast processor (030/~40 MHz should guarantee enjoyable playability in all graphics modes, I guess). At least my 030/50 plays most of the games at full speed.
- xpkmaster.library and some good sub libraries to pack the rom images and ram snapshots with.
- NewIcons system to see the excellent Wzonka-Lad newicon icons!
- A Graphics card, OS3.1 and 040+ if you are really going to use the Workbench window drivers.

1.17 Snapshots

Wzonka-Lad allows you to save a snapshot of the RAM to disk. This way you can freeze the Gameboy and continue the game later.

Please make the files end to .GBS to indicate that the format really is Wzonka-Lad's own snapshot format.

1.18 Controls

	A	B	START	SELECT	(PAUSE)
KEYBOARD:	left alt	left shift	right shift	right alt	p / esc
CD32 PAD:	blue	red	yellow	green	pause
SEGA 4B :	a	b	start	c	p / esc
SEGA 2B :	fire 1	fire 2	right shift	right alt	p / esc
JOY 1B :	fire	left shift	right shift	right alt	p / esc
JOY 2B :	fire 1	fire 2	right shift	right alt	p / esc

If you have a keyfile, the following keys apply to all control modes:

TMP GBS :	1	2	3	4	5
SAVE GBS:	F1	F2	F3	F4	F5
LOAD GBS:	F6	F7	F8	F9	F10

In CD32 PAD mode you can use the following buttons to load/save TMP GBS 1 file in realtime:

TMP GBS1:	SAVE	LOAD
CD32 PAD:	reverse	forward

Note that these five GBS files are saved into T: and have names Wzonka-Lad.RT.GBS(1-5).GBS. Wzonka-Lad will delete all these

temporary GBS files on exit.

1.19 Menu window

ROM

- ```
- Load --> Load a ROM image.
- Run ---> Start / continue the emulation.
- Info ----> Display ROM info data.
```

GBS

- ```
- Load      -->    Load a RAM snapshot file (.GBS).
- Save      --->    Save
```

Check out controller preferences info for runtime shortcuts for GBS loading and saving!

Edit

- ```
- Gfx --> Edit graphics preferences.
- Sfx ----> audio .
- Prefs -----> universal .
- Misc -----> misc .
```

<Misc>

- ```
- About      -->    Display emulator information.
- Status line -->    Displays misc info.
```

1.20 Misc settings

Misc

- Multitasking --> Executes `exec.library/Forbid()` at the beginning of the emulation loop, and ends the emulation loop to an `exec.library/Permit()` call.

These two procedures control the multitasking. With this box unchecked you can turn off the multitasking with system routines to gain a little speed.

Disabling the multitasking and enabling the sounds is not recommended, though testing results show that it's ok. ^_^

- OS screen speed limit ---> Uses graphics.library/WaitTOF() to sync the screen drawing into the beam. Use this only if you've got a very fast Amiga and games run far too fast on the OS screen you use.

- Bitmaps in FAST RAM ----> Place all bitmaps to FAST RAM instead of CHIP RAM in OS Screen and Window modes.

All displayable bitmaps should be placed in CHIP RAM, but graphics cards and AmigaOS GUI hacks might work with FAST RAM'ed bitmaps. Use at your risk!

GameGenie patch code

- <The three boxes> --> Put three uppercase letters/digits into every three boxes. Currently only the older version of GameGenie codes is supported, so nine digits are needed.
- Patch ----> Patch the ROM file with the provided code.

NOTE! You can use as many cheats per ROM as you like as long as they don't alter the same memory location. You can discard the patches by reloading the ROM file.

1.21 Visual settings

Mode

- Full --> Process graphics data after every scanline. Slow.
- x/153 ----> Draw the whole screen on scanline x. Fast.

Driver

AGA

- PAL --> Output to a PAL hardware screen.
- NTSC ----> NTSC .

Screen

- Select --> Select the used screenmode.

Window

- Solid --> Use a fixed 160x144 window.
- Scalable ----> Turn on the window scaling. Window width must be a multiplication of 16 (automatic fixer used). You'll better have a graphics card to use these modes!

Variables

- x --> The scanline where the screen will be drawn if x/153 mode is used.
- Frame skip ----> The amount of skipped frames.

Colours

- Obtain --> Fetch the colour values from the Palette Editor.
- Load ---> When unchecked this button disables colour data loading from ROM's own preference file. If you have a very nice colour scheme saved as default and don't want to use the ugly predefined palettes, but still need the ROM's variable x, uncheck this.

1.22 Sound settings

Master

- Audio --> Disable / enable audio.
- Volume ---> Change the master volume (ranging from 1 to 16).

Audio

Quality

- High --> Perform the best audio emulation available. Slow.
- Low ---> Leave out envelope and frequency sweeps. Fast.

High and Low modes update the sound output when the registers are written into. Doing this you'll gain very accurate emulation, but it costs some speed by breaking the emulation.

- y Hz ----> Update the sound information y times a second. The bigger the y, the more often the sounds will be updated, and the more slower the emulation.

AmiGameBoy is using a sound emulation very similiar to this mode with y = 60 (?).

NOTE! Realtime changing effects for eg. channel three (sample) can't be heard with this mode as they update the sample buffer more than 60 times a second (usually >100 times faster).

Channels

- Turn --> Disable / enable channel.

AHI mode

- Select --> Select the AHI driver and playback frequency.

Variables

- y --> Ranging from 1 to 60, this value is the amount of times to update the sound registers in a second. The bigger the better the audio will be, but the slower the emulation is going to get.

1.23 Preferences

Paths

- ROM --> Set the path for ROM images .
- GBS ----> GBS files .
- Prefs -----> ROM .prefs files.
- Battery -----> ROM .sav files .
- Get -----> Use a requester the select the path.

XPB packing when saving

Battery RAM

- On --> Use the selected XPB library to pack the battery backed RAM.
- Off ---> Don't pack battery backed RAM's.

GBS

- On --> Use the selected XPB library to pack the RAM snapshot.
- Off ---> Don't pack RAM snapshots.

<List of XPB libraries>

- Select the used XPB library.

Controller

<List of controlling methods>

- Select the used controlling method.

Save preferences

- Default --> Save the preferences as default ones. Everything is saved to ENVARC:Wzonka-Lad.prefs
- ROM ---> Save ROM image preferences. Only the colours and variable x are saved.

RAM

Battery

- On --> Save battery backed RAM files.
- Off ---> Battery has run out of power. ;)

1.24 Rom images

You can load your own rom images assuming that you have some ;) I recommend those shipped with the Virtual Gameboy, because almost all of them run without any problems 8D

Tictactoe:

Made by Norman Nithman. I got his permission to use the rom image.
Thanks, Norman. ;)

1.25 Emulation

Not very far from perfect. ;) There are two things that are not done in the graphics emulation. Sprites to h/w window priority and colour changes on a scanline basis are left out for your's sake. They would eat up too much resources.

It's a real Gameboy emulation this time, no fakes here! ;)

Runs a lot faster than the medicore unix-port Virtual Gameboy, which is though a far better emulator in the terms of compability.

Here is some misc information about the emulator programme.

1.26 Things to do

Very imminent additions:

- Fix all the bugs.
- Enhance the sound quality.
- Code a sound driver banging directly Amiga's Paula chip get gain more speed and quality on machines without soundcards.
- More compability.
- Speed up the cybergraphics drivers alot!

In the reserve:

- Multiplayer support via TP/ICP link or two Wzonka-Lad's running in one machine.
- Select a background image to be displayed inside the Wzonka-Lad WB game window.

1.27 Information

- 100% assembler code.
 - Assembled with PhxAss MC680x0/68851/6888x Macro Assembler v4.37
Copyright 1991-97 by Frank Wille. Thanks Frank!!!
 - 020 / 32bit instructions used. Very little additional memory access while doing the z80 emulation (With FAST and WARP executables the amount of memory accesses is divided by ~seven).
 - GB-Z80 instruction timings 100% supported.
 - Uses optionally Sega ControlPad Library, Copyright ©1995 by Joseph Carlson and Randall Richards <xrichard@csu.fullerton.edu>.
-

1.28 Thanks to

- Jarkko Vattjus-Anttila for great help, suggestions, information, source codes and for being such a nice geezer ;) Without him this emulator would look much more boring (Check out BFBPlayer, Marbles and SinED in Aminet!!!).
- Big thanks to Marcel de Kogel (Author of VGB-DOS) for the great help with the sounds!!! Thanks!!! Without him the sounds were much grainier. Cheerio Marcel!!!
- Marat Fayzyliln for the most valuable information 8D He's one of the three guys who helped me through the development and stayed calm, though my mails filled his account's hd-space ;) VGB inspired me to do Wzonka-Lad!
- Chaos-Knight for the documents.
- Hans Guijt, the author of 100% asm fMSX, for z80 example codes, information and source codes. Without him this emulator would not exist. Brilliant, Hans! Good work with the fMSX! And thanks again for the help with the GUI!
- Morgan Johansson [orbit / giants] for (his everstopping whining about when the emulator is ready ;) Check out this dude! He's making a NES emulator!!! (A\NES <http://home2.swipnet.se/~w-28134/ANES/>).
- Brothers Sandgren for their help with os-code and graphics.
- Luca Longone for his marvellous newicons!
- Lennart Johannesson for the installer script!
- Paul Barker for beta testing and excellent ideas!
- Jon Åslund for the magic-wb drawer icon.
- Jeff Frohwein for his brilliant GameBoy homepage and the variety of documents available there. Keep that robot rolling!
- Sampo Kytömäki for VGB preference files and info!
- And all the others for encouraging me to continue the work. Cheers!
- Sebastian Schlesinger who sold me his old Blizzard IV card! ;)
- D. Domínguez for the Spanish guide!
- Jussi Lindgren for cybergraphics testing and ideas!
- Special hidden secret thanks to an anonymous individual! ;) Thanks! 8D
- Big handshake to another secret person for the French guide! ^_^
- Yahoo! to Tim Favro for the most coolest registration letter so far! ^_^
- My eternal thanks to Nocas\$h for the documents and help!!!
- Doomo arigatou to Rodney Zaks for his "Programming the Z80" book (and Helsinki University of Technology's Computer Science library for lending it to me). ^_^

1.29 The author

I'm happily living here in Finland. Age is 20 and I'm studying computer science at the Helsinki University of Technology.
After the school I'll be a lot older and Master of Technology. =D

Hardware used for development: A1200/030/50MHz (+FPU) + 16MB'S OF FAST
+ 1.6GB HD + CD\$^3\$^2\$ JOYPAD + "DRACULA X" -
AUDIO CD ;) + LOADS OF ANIME TAPES.

NOTE! NUMEROUS URUSEI YATSURA, SLAYERS, RANMA ½, BAKURETSU HUNTERS,
TENCHI MUYO, ARMITAGE III, VAMPIRE PRINCESS MIYU, Y'S, PHANTOM
QUEST CORPORATION, RECORD OF LODOSS WAR, MARMALADE BOY, PRETTY
SAMMY, ALL PURPOSE CULTURAL CAT GIRL NUKU NUKU, DIRTY PAIR FLASH

(I&II), MAZE, AH! MEGAMI SAMA, EL-HAZARD, LUPIN III, PATLABOR, HERE'S GREENWOOD, NEW CUTEY HONEY, GOLDEN BOY, HYPER DOLLS, PROJECT A-KO, FUSHIGI YUUGI, SHAMANIC PRINCESS, KO CENTURY BEAST (I&II), GHOST SWEEPER MIKAMI, FUSHIGI YUUGI EPISODES, BASTARD!, KIKI'S DELIVERY SERVICE, CHILD'S TOY, WHISPER OF THE HEART, CITY HUNTER, BUTT ATTACK PUNISHER GIRL, VIDEO GIRL AI, MAHOU TSUKAI TAI, AIKA, ADVENTURE OF KOTESU, DNA\$^2\$, CURSE OF THE UNDEAD YOMA, GALAXY FRAULEIN YUNA, IDOL PROJECT, COMPILER, GUNDAM W, AKAZUKIN CHACHA, VISION OF ESCAFLOWNE, THOSE WHO HUNT ELVES, NAUSICAA OF THE VALLEY OF THE WIND, AI NO KUSABI, YADAMON, BIRDY THE MIGHTY, LANDLOCK, I'LL MAKE A HABIT OF IT, MINKY MOMO, FAM AND IRI, JOJO'S BIZARRE ADVENTURE, IRRESPONSIBLE CAPTAIN TAYLOR, KEY THE METAL IDOL, DRAGON BALL Z, X, NADESICO ANIME, FAIRY PRINCESS REN AND CRAYON SHIN-CHAN FLICKS WERE WATCHED DURING THE TIME WHICH SHOULD HAVE BEEN USED TO CODING/STUDYING. ;)

REGISTER WZONKA-LAD and support my anime hobby! ^_^

--> Free commercial <--

Disney's bullshit! GET ANIME NOW! ;)

Did you know that Disney cloned Jungle Taitei anime and gave it the name "Lion King"? Ok, they didn't 100% replicate it as the main character's name is Simba, not Kimba like in Jungle Taitei's English version which was released in the 60's. BOOOOOOOOOOOOOOOOO!

I just wonder where Walt copied Mickey and Donald from...

e-mail: vhelin@cc.hut.fi

snail-mail: Ville Helin
Suomenlinna c54 b14
00190 Helsinki
Finland

www: <http://www.hut.fi/~vhelin> (The page with information about Wzonka-Lad and other ~normal stuff).

<http://www.niksula.cs.hut.fi/~tursas> (This is for people capable of reading Finnish. Take a look at my school related home page ;).

1.30 Final Words

If you think you could improve on some parts of the program, then let me know.

Help wanted: ;)

If anyone has very good information about GB's sound channel 4, well, I

could use some help here ;)

And if you confess you are hiding some good interrupt documents, I won't punish you, but please send them to me! ;)

Any cartridge type \$13 (Wario Land II) information?!?!?!?! ;^_^;

Please send me mail if you find a 1.0/1.1/1.2/1.5/2.0MB cartridge!!!

1.31 Wzonka-Lad

So, where does this silly name come from? Many have guessed that Wzonka stands for Game and Lad for Boy in finnish, but that's not it! Wzonka-Lad is the first name that came into my mind when it was time to choose a title for this emulator. I often like to name things like this, though it sounds as an act of lunacy ;) Anyway, it's much better than something like "MagiGB", "GoggleBoy" or "AmiGameBoy", well not better than GoggleBoy, but anyway. ;)

1.32 Wzonka-Lad Palette Editor 1.06

In General

The Palette Editor	Features
Compability	Requirements
History	Usage

Gadgets

.iff

- Load --> Load colours from an iff file. Only the first 8 colours are processed.

.prefs

- Load --> Load colours from a Wzonka-Lad .prefs file.
- Save ---> Save colours to a Wzonka-Lad .prefs file.

.cfg

- Load --> Load colours from a VGB .cfg file.
- Save ---> Save colours to a VGB .cfg file. Note that -xc(0-3) tags are used.

Colours

- Obtain --> Obtain colours from Wzonka-Lad the Emulator. Wzonka-Lad must be running in the background, or this gadget will be shadowed. To have this button activated you need Wzonka-Lad version 0.90 or greater.

Background and Sprite colours

- Interpolate --> Compute the two colours between the first and the last one to form a smooth slide of shades.
- < --> Copy colour to left.
- > ---> right.
- R --> Change the amount of Red in that colour.
- G ---> Green .
- B ----> Blue .

1.33 Usage

Use the sliders and interpolate and copy gadgets to alter the colour values, and save, load and obtain gadgets to exchange data with external processes.

You can check out the effect of the current palette on Wzonka-Lad the Emulator's game window by looking at the two provided example images located at the bottom of the Wzonka-Lad Palette Editor window. Note that if your Workbench hasn't got enough pens available, some of the colours will not show correctly. By using Wzonka-Lad with Screen or AGA modes this problem is solved, because they don't rely on Workbench's dimensions.

1.34 History

1.06 (19.05.98)

Palette Editor does now FindPort() 75% less often. Deadlock's propability to occur now is 99% smaller if the user closes Wzonka-Lad and rapidly presses Palette Editor's obtain button.

1.05 (05.12.97)

Added iff palette loading. When idle, the CPU usage is only 20% of what it used to be. Fixed a bug that might cause Palette Editor to fail to locate Wzonka-Lad.

1.04 (17.10.97)

The background bitmap was one scaline too short. When pressing the colour copy gadget the RGB values were not copied if the visible colour on Workbench screen was same in the both units.

1.03 (10.10.97)

Fixed a grave bug in gfx routines. If OS3.1 and chunky to planar conversion hardware are detected, the example images will be drawn with WriteChunkyPixels() instead of WritePixelFormat8(). Simplified the font sensitivity code a lot. Changed the example images. First public release.

1.02 (04.10.97)

Now the .prefs directory is loaded from Wzonka-Lad.prefs.

1.01 (04.10.97)

Added font sensitivity to the GUI.

1.00 (04.10.97)

Initial release for internal beta testing.

1.35 Requirements

Wzonka-Lad Palette Editor requires

- OS 3.0.
- Wzonka.font, Zapot.font or Topaz.font.
- A mouse. ;)

If you want to edit Wzonka-Lad .prefs files, you need some of them previously saved with Wzonka-Lad. Note that Wzonka-Lad Palette Editor cannot create .prefs files from nothing as they contain more data than just the palette.

1.36 Compability

Wzonka-Lad Palette Editor is compatible with all the versions of Wzonka-Lad. VGB compability is greatly extended to support almost all the colour values and options.

Supported VGB .cfg colour tags:

-c(0-3)	-bc(0-3)	-backgroundcolor(0-3)
	-wc(0-3)	-windowcolor(0-3)
	-sc(0-3)	-spritecolor(0-3)

Supported VGB .cfg colour names:

yellow, green, brown, black, cyan, red, white, pink, blue, orange, magenta, dkcyan, dkmagenta, dkcyan, dkgreen, dkred, dkblue, gray and dkgray.

NOTE! I have no exact 24-bit values for gray and dkgray, so I had to use my imagination to add the support for those colours. If you have the true values for gray or dkgray (or something else, that's completely missing from the previous list), please send me a note.

NOTE! -wc(0-3) and -windowcolor(0-3) are ignored if -c(0-3), -bc(0-3) or -backgroundcolor(0-3) tags are found. If not, then the background colour is obtained from window colour tags.

NOTE! As Wzonka-Lad doesn't support window colour editing, the

background colours are outputted as window colours, too.

1.37 Wzonka-Lad Palette Editor

People who are not interested in messing around with colour values can forget Wzonka-Lad Palette Editor, the emulator will work without it very nicely, indeed. But those who'd love to create wild colour schemes for different games to suit their tastes Wzonka-Lad Palette Editor will be the perfect tool.

Forget unimaginative hex values. Wzonka-Lad Palette Editor will provide you with all the gadgets and example images required for fast and easy colour editing.

1.38 Features

Wzonka-Lad Palette Editor

- Applies intelligent pen allocating/deallocating scheme to achieve the best results.
- Allows you to select and edit the colours used by Wzonka-Lad.
- Is 100% asm code.
- Is free of any charge. ;) No keyfile is required to use Wzonka-Lad Palette Editor to the maximum.
- Is fully multitasking.
- Window is font sensitive.
- Runs inside a window on Workbench screen.
- Shows you the results in real time without even starting the emulator.
- Supports Wzonka-Lad .prefs, VGB .cfg and Amiga .iff files.
- Uses gadtools.library for the GUI.

1.39 History

v0.99.8 (27-May-98)

Even more manufacturer ids! Now all the windows have WA_AutoAdjust set to TRUE. OS Screen is centered now before it's opened. Wzonka-Lad does FindPort() 75% less often. Enhanced the installer script. Deadlock's propability to occur now is 99% smaller if the user closes Palette Editor and rapidly presses Wzonka-Lad's obtain button. Small audio code security fixes. Fixed interrupt emulation, now eg. Best of the Best, Funpack 1, Slam Dunk and Super Bikkuriman work. GBS load requester loaded a file even if the user pressed cancel. If ROM loading was cancelled the old ROM was invalidated. Optimized scanline loop. Registered users can now enjoy the 2 button joystick support, and they can load and save a TMP GBS file in realtime with cd32 joypad's forward and reverse buttons. Slowed the opening of an AGA screen by 40ms. Bitmaps in OS Screen and Window drivers can now be placed in FAST RAM with a checkbox. Fixed a bug in GB's LCD status register handling (could cause the emulator to crash!!!). Optcodes "ADD HL, ss" and "CCF" in FULL CPU emulation compute now correctly the H flag.

v0.99.7 (17-May-98)

Fixed many GB hardware registers' values on startup. GB's internal RAM contains now random values when a ROM is started. Added more manufacturer ids. Fixed cartridge type \$13's mapper emulation a little. Fixed LCD state emulation, now eg. Bubsy 2, Donkey Kong, Kirby's Blockball, Undoukai and Zork 1 work! Scanline loop got a little faster. Fixed the CPU to execute 70224 cycles per screendraw. Added support for SMC ROM captures. Now only ROM files with supported sizes are runnable.

v0.99.6 (12-May-98)

Colour loading from ROM's preference file can now be disabled with a button. Added quite a many new manufacturer ids. Emulation failed if ROM banks were switched when the PC was in RAM. Now sound channel three's sample data is initialized when the emulation is continued. Fixed the bank switching scheme to a dynamic one, not mapper restricted. Fixed one small interrupt bug. Now eg. Popeye 2, Aerostar, Boy and His Blob, Jurassic Park 1 & 2 and Pac in Time work once again. Wario Land 2 works a little better, but freezes after a while.

v0.99.5 (05-May-98)

Information window shows if the ROM is SuperGameBoy enhanced or not. Manufacturer id of SuperGameBoy ROM is now correctly decoded. Added a few new manufacturer names to the id list. ROM checksum is computed and if incorrect the ROM fails to run. Wzonka-Lad could fail to find the favourites list when started from WB, but not anymore. Wzonka-Lad.KEY can now be kept in Wzonka-Lad dir. If for some reason the auxiliary window for preferences can't be opened, Wzonka-Lad doesn't go into a deadlock.

v0.99.4 (04-May-98)

Made the GUI a little more font sensitive. Now only GB ROM files with sensible property index tables are runnable. ROM bank precalc tables are now allocated dynamically so smaller games need less memory. Added support for 1MB ROM files, but couldn't get mapper \$13 to work (no documents). Added a very experimental support for HuC1-mapper (Pocket Bomberman seems to work ok), documents about HuC1 are gladly accepted! Wzonka-Lad doesn't crash anymore if you don't have AHI installed and you open the sound preferences window. Fixed the old problem with startup.i, so no need for scripts in launching via icons anymore! Fixed the default Z80-GB flag positions when starting a ROM. Now the OS screens center themselves!

v0.99.3 (12-Apr-98)

Now instead of poking the hardware registers, AGA modes open a solid one plane OS screen and inherit its frequency settings resulting in very compatible PAL and NTSC modes. Adding master volume controller. Changed the look of Sfx preferences window a little. Bugfixed volume envelope emulation. A typo limited the range to eight levels, now fixed to 16. You can hear the difference in many games, eg. Zelda, Castlevania 2... Sound superb!

v0.99.2 (05-Apr-98)

Added two new gadgets; One to control multitasking and one to control the use of a speed limiter in OS screen mode driver (for fast CPU users only!). Fixed one bug in the English guide file, now Edit -> Prefs -window's documentation is accessable. Added new texts to the status line and fixed the old output data a little. Added support for GameGenie patch codes for registered users.

v0.99.1 (01-Apr-98)

Added French and Finnish guides. Lowered the registration prices and added new ways of paying. ^_^ Extended favourite and recent menus to hold 20 items each. Removed timed VRAM protection since many badly coded demo ROMs and few games (eg. Donkey Kong Land 3) refused to function properly, and so Wzonka-Lad needs now 512kb less memory and is a little bit faster! Added runtime GBS saving and loading for registered users via F1-F5 and F6-F10 buttons.

v0.99 (05-Feb-98)

Fixed the Gameboy hardware window emulation, now eg. Ayakashi no Shiro works better. Added an example iff to help editing the palette. Speeded up the x/153 modes a little. Rewrote the sound routines. Enhanced channel 4 (noise) emulation a little. Added correct read/write protection for a few registers. Unrolled and optimized the scanline loop for maximum speed. Fixed a bug in controller list creator which caused the in-game controller detection to fail if not all the additional libraries were found. Y Hz audio mode is faster than ever! High Quality audio mode is now very close to the original Gameboy, and eg. Kirby 2 and Zelda sound extremely good!!!

v0.98 (23-Jan-98)

Optimized CPU (especially FAST and WARP ones), interrupt and DMA emulations. Fixed a few tiny GB-Z80 emulation bugs. Fixed the interrupts a lot, now eg. Samurai Shodown, Space Invaders and Worms work again! Added LCD state dependent RAM protection. Fixed sprite flipping bug making eg. Bubble Bobble 2, Castlevania and R-Type 2 to work nicely! Optimized y Hz audio mode. Cartridge information window shows now the used rom type. Final Fantasy Mystic Quest works!! Loading a cartridge with previously saved preferences doesn't pop up Visual settings any more.

v0.97 (23-Dec-97)

If a cybergfx screen was used by default, the driver wasn't recognized correctly at the startup. Added third (WARP) executable. Now only variable x and the palette colours are used in ROM preferences saving. Merry Christmas release! ;)

v0.96 (06-Dec-97)

Added direct cybergraphics support with autodetection. Now OS screen mode works with a graphics card supported by cybergraphics.library. Removed the Spanish guide from the Wzonka-Lad distribution archive and placed it into an archive of its own. Added a new sound emulation mode. Now the AHI information string supports millions (!) of Hz's. When idle, the CPU usage is only 20% of what it used to be. Made Screen -> Mode -> Full and x/153 modes to use the same output routine. Removed example RAM snapshots and battery RAM's, as I've heard that it's illegal to spread them.

v0.95 (16-Nov-97)

Fixed some amigaguide bugs, thanks to D. Domínguez for the report. Added a Spanish documentation made by the very same dude! Now the screenmode is updated if OS screen driver is activated and a new screenmode is selected. Speeded up the OS screen driver x/153 mode a lot!

v0.94 (12-Nov-97)

The .prefs path could be max 30 letters long. Corrected to 120 letters.

Altered menu window dimensions. Added emulator status line to the menu window. Added finally AGA PAL and NTSC modes.

v0.93 (01-Nov-97)

Returned iconstartup.i as it seems to work perfectly now. Fixed a major compability problem!!!

v0.92 (25-Oct-97)

A huge bug caused Wzonka-Lad to fail on systems with no Wzonka-Lad.KEY. Made the memory allocation / deallocation routines fool proof. Now the game window doesn't flash after a game has been started. A fast bug fix - version.

v0.91 (24-Oct-97)

Fixed Window driver palette bug, and speeded up the driver. Deleted "Palette Editor Guide" as it was included in the "Wzonka-Lad Guide". Optimized Window 320x?, 320x144 and 320x288 modes a lot! Battery RAM file was cleared if a game with battery RAM was loaded, but not played. Enlarged the game window's dimensions. Added a close gadget to the preferences window. Now the preferences window doesn't pop up on start up. ROM prefs file loader supports now v0.83 prefs and older. Added emulation of the last interrupt - serial interrupt. Optimized "Wzonka-Lad FAST" CPU emulation. Luca Longone drew a new icon for the "Palette Editor". READ THE DOCS!

v0.90 (14-Oct-97)

Rewrote the whole GUI! Now gadtools.library is used instead of custom images. Fixed some very rare user interface bugs. GBS loader doesn't give anymore those two enforcer hits when loading an unpacked data file, and it behaves much better now. The hardware filter is now returned to its original state after a pause if the audio is turned on. Removed the iconstartup.i code as it started to give me enforcer hits out of blue. The emulator can still be executed from a icon, but a script must be used (done so by default). Added battery RAM (VGB, AmiGameBoy) support, a different Palette Editor executable, graphics card indirect support via window mode, audio quality selector and an easy path selector. WIN+SCR is replaced by Window on Workbench screen driver, and it's now resizeable, too! The emulator runs now on Workbench! Replaced the old window scheme with a new one. Now every driver allocates its own memory, unlike the old versions where all the memory required by the drivers was allocated on startup, shrinking the memory requirements. Now all AGA modes should have a maximum refresh value. Removed all debug capabilities. READ THE DOCS!

v0.83 (10-Aug-97)

Fixed few audio bugs and a one bigger interrupt bug. Fixed a tiny controller emulation bug, now eg. Rolan's Curse 2 works *much* better. Speeded up the audio routines once again.

v0.82 (27-Jul-97)

Optimized the sound emulation routines. Fixed few small sound bugs. Fixed a fatal interrupt bug causing timer interrupts to occur five times slower than normal. Super Mario 1 and Mega Man 2 among the others sound much better now...

v0.81 (21-Jun-97)

Enhanced the sound emulation, fixed some sound and interrupt bugs. Now the

selected mixing frequency for sound is used and saved along with the preferences. The frequency was always 4410, but now selecting something bigger will enhance the sound quality very much. The games will sound *much* better now!

v0.80 (08-Jun-97)

Greatly improved the speed of GB's memory handling, but the emulator needs now 256kB's more memory. Fixed a rare ROM bank switcher bug. The AGA modes do not steal the system's VBR interrupt, now only hooking is used, so better multitasking is achieved. Added a new FRAME SKIP value - ALL (no graphics are displayed). Lennart updated the installer script. Speeded up the DAA command emulation (in FULL executable). Fixed the .prefs to .cfg converter version number. Added a .gbs to .sav and .sav to .gbs file converters. Sounds (and the keyfiles) are now supported. Added a special Sound Preferences window for registered users to use.

v0.64 (01-May-97)

A "Happy Wappu To Everyone" release. ;) Fixed a sprite flipping bug (a bug due to fast optimizing). Fixed a bug in SCREEN mode graphic emulation style change, so no more trashed output.

v0.63 (27-Apr-97)

Removed lowlevel.library from the archive due to copyright reasons. Now the screenmode is fetched again from the preferences (I blew it up in the previous version). Emulation can now also paused by pressing esc. Speeded up 144/144 and 1/144 modes (WIN+SCR & SCREEN) a little. Tweaked the AGA modes, too.

v0.62 (12-Apr-97)

Added crippled GB Z80 emulation executable for those who want more speed. Now ZELDA, SUPER MARIO 2 and FISHDUDE among others don't suffer from the counter reset! Fixed one corrupted word from the sprite x flipping table, so sprites should look better now. Added a new menu - 10 Favourite Games! Read the docs for more info. Added colour reset button to the colour editor window.

v0.61 (05-Apr-97)

You can now load a rom image by supplying the name in the commandline. Combined and enhanced the interrupt routines from versions 0.59 and 0.60. Optimized the cpu emulation.

v0.60 (02-Apr-97)

Now the default icons have OS2.0 look if NewIcons system is not used. Added support for 2 button Sega joypad and a normal joystick. Rewrote the input routines and enhanced the OS code sections a lot. Speeded up the emulation, and rewrote the interrupt part, which may affect some games. Enhanced the z80 emulation code. Now FRMSKIP, RENDER and REFRESH values are saved with the cartridge independent colour preferences. Wzonka-Lad is now shareware.

v0.59 (22-Mar-97)

A fast loader fix and bug removals executed. AGA 1/144 modes have now the limit of 50fps (not tested). ;)

v0.58 (21-Mar-97)

Fixed an AGA 1/144 mode sprite masking bug. Added Sega controller pad support and enhanced the controller autodetection. Added a 10 Recent Cartridges menu.

Speeded up AGA 1/144 modes and added the missing h/w window emulation. Keyboard handler is finally fully coded for every screen mode. Fixed a possible font allocator bug, and the version strings (both executables and guide) plus some rare gui bugs.

v0.57 (02-Mar-97)

Added automatic window activation in KEYBOARD mode. Now the CARTRIDGE, PREFS and GBS paths from the file requesters are saved along with the universal prefs. Colour loader defaults to prefs directory. Added close gadgets to the CARTRIDGE INFO, PREFERENCES, ABOUT and COLOUR EDITOR windows. Changed the background pattern image. ;) Added p-key pausing to KEYBOARD controller. Fixed a bug in NONE xpk library GBS saver. The colour editor now accepts VGB CFG files. Added a colour prefs to VGB.CFG file converter executable. The COLOUR EDITOR and PREFERENCES window gadgets are shadowed when the emulator is running. Luca Longone fixed the drawer icons! (Which I accidentally messed up). ;) Lennart Johannesson updated the installer script. Speeded up all graphics modes a little. Now the screens use the SA_AutoScroll tagitem. Moved S:WzonkaLad.prefs to ENVARC:Wzonka-Lad.prefs by request. Added AGA (unfinished) screen drivers.

v0.56 (03-Feb-97)

Added a new screen driver and introduced a new graphics emulation mode. Added reset button to the menu bar. Added colour editor window and possibility to save colours universally and cartridge independently. The SCREEN screen driver now inherits the main screen's ID. The SCREEN screen driver now works correctly with all modes. Joypad's pause button is now utilized. Removed window's priority over the sprites, because many games were suffering from invisible sprites on the window. Echo RAM emulation added. Added automatic screen to front popper in SCREEN + JOYPAD mode.

v0.55 (18-Jan-97)

Added window position saving with preferences. Added installer script by Lennart Johannesson! Thanks! Fixed screenmode requester cancel button bugs. Reordered the keys once again (!). This time they work perfectly on an A1200 (10hrs of testing accomplished). The 1st Aminet release.

v0.54 (15-Jan-97)

Compability boost release. Interrupt emulation and z80 bugs fixed. Once again reordered the keys to avoid A1200 keyboard bug. Fixed a sprite priority bug. Added a screenmode requester. Modified the GBS file format!

v0.53 (10-Jan-97)

Fixed a debug window update bug. Fixed some major z80 and h/w emulation bugs. "Zelda is working!" - release ;)

v0.52 (08-Jan-97)

Fixed some z80 bugs. Added new icons by Luca Longone. Reordered the keys and buttons to enhance the emulation ;) Fixed a GBS loader bug. Added xpk cartridge and GBS packing/unpacking support. Speeded up debug and cartridge info windows output. Visuals changed a bit, due to the addition of a preferences window. Fixed a bug which could cause a crash on exit. Added a primitive preferences saver. Added frame skipper.

v0.51 (03-Jan-97)

Speeded up the z80 emulation. Added icons by Rickard Sandgren to the icons directory. Switched from Asmone to PhxAss, because the bug I encountered

in Asmone wasn't funny. Boo! Added ram bank switching. Now the requester recalls its path. The emulator can be launched from wb. Drew myself a newicon. ;) Fixed some misc user interface bugs. Added ram snapshot loader and saver.

v0.50 (30-Dec-96)

Implemented the code for bank switching with look up table. Multibank games speed up! Fixed some more z80 bugs. Now uses OpenWindowTags and supports the 3d look mode, so there is no need for MultiCX anymore ;) Thanks to Johan Sandgren for this fix! Fix for the new button looks goes for Johan's brother, Rickard! (Though I did not do all the modifications he suggested). Anyway, great support! ;)

v0.49 (28-Dec-96)

Fixed a sprite palette bug (Reported by Morgan Johansson). Now requires 1 MB more memory for the bank switching table, which isn't yet in use. Fixed some bugs and speeded up the z80 emulation.

v0.48 (26-Dec-96)

Added emulation for sprite colours, and an amigaguide version of the documents.

v0.47 (25-Dec-96)

Rewrote the gfx routines. Now faster (much faster on slower machines) and better ←

Added emulation for sprite x and y flippings.

v0.46 (15-Dec-96)

Added emulation for the gameboy h/w window.

v0.45 (11-Dec-96)

Fixed some bugs and added the keyboard controller!

v0.44 (06-Nov-96)

Now you can load rom images by the power of regtools.library (assuming that you have it). ;) Added some more things to the debug window and made the emulator behave better.

v0.43 (30-Oct-96)

Added a little debug window. Modified the z80 emulation. Now faster and safer. Made the other windows nicer ;) Found irritating bugs... ;(

v0.42 (20-Oct-96)

The first public release.
