

PNG-Box

COLLABORATORS

	<i>TITLE :</i> PNG-Box		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY		December 31, 2022	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

Contents

1 PNG-Box	1
1.1 PNG-Box_Documentation	1
1.2 copyright	2
1.3 disclaimer	3
1.4 distribution	3
1.5 PowerPC (powerUP) support	4
1.6 purpose	5
1.7 installation	6
1.8 updatenote	7
1.9 usage	7
1.10 evaluationrestr	7
1.11 history	7
1.12 correspondence	9
1.13 Making use of 680x0 CPUs	11
1.14 thanks	13
1.15 About PNG - successor of GIF	13

Chapter 1

PNG-Box

1.1 PNG-Box_Documentation

PNG-Box V2.10 (20.12.1997)

- SHAREWARE -

© 1997 by Andreas Ralph Kleinert. All rights reserved.

A PerSuaSiVe SoftWorX PRODUCT.

Needs Kickstart V2.04. Kickstart release 3.x compatible.
GUI created with StormWizard 2.0

Actively supports PowerPC (TM) via powerUP (TM)
and ppc.library.

REGISTER NOW

Copyright

Disclaimer

Distribution

The program's purpose

How to install it

Free algorithms...

PNG: successor of GIF

...and free speech !

68020-68060

Where to obtain Updates from

How to use it

Evaluation restrictions

Correspondence

Thanks

Version-History

PowerPC (powerUP) support

What can be expected ?

— // —
Only \X/ Amiga makes it possible.

Please visit:

PNG-Box Support Site
<http://www.amigaworld.com/support/png-box/>

SuperView WWW Sites
http://home.t-online.de/home/Andreas_Kleinert/
<http://www.amigaworld.com/support/sview/>

Simon Edward's Image Engineer WWW Site
<http://yallara.cs.rmit.edu.au/~sbe/>
(Image Processing program produced by Simon Edwards)

1.2 copyright

The program PNG-Box in this version and its documentation files are (C)opyright 1997 by Andreas R. Kleinert. All rights reserved.

The right of using this program is granted to you by paying the SHAREWARE-fee of 20 DEM (12 U\$) [email] to the author.

You will receive a personal KEYFILE.
See registration form for details.

PNG-Box makes use of SuperView-Library, which is (C)opyright 1993-97 by Andreas R. Kleinert and comes separately. It has its own distribution and usage conditions. Read carefully.

This software is based in part on the png reference library (including libpng and zlib), which allows being used e.g. for freely distributable and commercial programs.

libpng:

libpng 1.0 beta 6 - version 0.96
Copyright (c) 1995, 1996 Guy Eric Schalnat, Group 42, Inc.
Copyright (c) 1996, 1997 Andreas Dilger

zlib:

zlib 1.0.4
(C) 1995-1996 Jean-loup Gailly and Mark Adler

Some of the mentioned names or products above may be copyrighted by companies or trademarks of companies.

Should any of the listed terms and clauses within this document not be valid in conjunction with the law of certain countries this does not affect the validity of the other clauses.

1.3 disclaimer

The author takes no responsibility for any results of the use of this program.

This software is provided "AS IS" and there is no warranty of any kind, so that you use this software at your own risk.

The author reserves the right to discontinue development of the program.

1.4 distribution

Registered users which paid the SHAREWARE-fee get the rights described on the registration form.

The REGISTERED version of PNG-Box MUST NOT be redistributed.
The Distribution of Keyfiles is FORBIDDEN.

The following only applies to the unregistered evaluation (EL) version of PNG-Box:

The program PNG-Box in this version is freely distributable (SHAREWARE). You may copy it, if the copyright notice is left intact and all of its parts are included in the distribution. This program must not be included in commercial packages or commercial program collections without my written permission. This program must not be sold in any way, but it is allowed to take a nominal fee including the costs for copying.

This program may be put on public domain disks or included in public domain disk libraries.

Special permission hereby goes to Fred Fish's AmigaLib-Disks and the german series (in alphabetical order):
AmigaSzene, BerndSPD, FRANZ, GPD, SaarAG, TAIFUN and TIME.

This program may also be distributed via electronic mail and may be put into mailboxes as long as the redistribution conditions are respected in all points.

By using or distributing this program you automatically agree to all of the above conditions and terms.

1.5 PowerPC (powerUP) support

Concept: loadable PPC-Modules for use with ppc.library V44+

The most time-consuming routines of certain modules of SuperView-Library have been ported to native PowerPC code and perhaps will profit a lot from the presence of an installed powerUP system.

These "native modules" are located in a new subdirectory of LIBS: called "svppc/", with subdirectories for each of SuperView-Library's module types.

If any "native modules" are present, these will be used whenever applicable. Should none of these modules be available, then this does not matter, since the plain 68k code (which may be optimized for a certain 68k CPU, though) will be used instead (fallback option).

Note, that SuperView-Library's native modules won't replace any of the existing libraries or modules as such - they only do supply specialized routines in native code for certain tasks.

When running any PowerPC code, you should have made sure, that there's enough RAM on the powerUP board available - at least in an A4000 the RAM interface from the CPU card (e.g. A3640) to the mainboard is so slow, that even a 68040 could not access Fast RAM with full speed, so possibly a PowerPC would suffer from the same problem.

You should take care, that there's still enough "fast" Fast RAM available, even if all the libraries and code have been loaded: usually the graphics are loaded at last - a 1024x768 graphics in 24 Bit will just take 2.4 MB and in a dithered version again around 790 K.

If there's enough "fast" Fast RAM available, you can expect high speed increases with most basic operations, especially when internal representation conversions do take place.

(See the documentation of the single modules for further information. PowerUP support usually is marked separately, on top of the module documentation.)

Availability

NONE OF THE PPC MODULES ARE FREeware - THEY WON'T APPEAR ON AMINET.

40 modules (+/-) are made available in a special powerUP PPC plugin module package, which e.g. can be bought by registered SuperView/SViewNG users or will be included with some commercial programs.

Also, there will follow some PPC modules, which will only be available for exclusive shipment with some commercial programs (as also are the concerned SV modules).

This is high end software, and its development must be financed
 - so you have to pay for it to help ensuring further development.

1.6 purpose

PNG-Box is a program that has been designed to write PNG files for WWW usage as easily as possible.

It can read any file format SuperView-Library does support and can make a PNG file out of it (see USAGE section for details):

- support of external Fileformat-Libraries (SVOjects):
 - IFF-ACBM - Windows,OS/2 BMP - PNM (PBM,PGM,PPM)
 - IFF-ILBM - JPEG (JFIF v6) - IMG (GEM Graphics)
 - IFF-DEEP - PhotoCD - WPG (WP Bitmaps)
 - IFF-FAXX - TIFF - MacPaint MAC
 - IFF-PBM - PCX - EPS (Header/PS)
 - IFF-RGB8 - Atari Degas - C64 (Koala, Doodle)
 - IFF-YUVN - Windows Icon - CDR-Previews
 - QRT/POV Raytrace - Mac PICT-2 - SGI
 - SVG - Targa - Pictor/PCPaint
 - SunRaster - UtahRLE - PNG
 - FBM - XWD - Amiga Icons (WB/Magic/New)
 - IFF-RGFX

as well as all OS3-Datatypes
 and 24 Bit DataTypes (picture.datatype V43).

Many formats with 24 Bit-Support.
 Reads XPK- and PP20-packed data via Unpack.svobject.

Writes C-Sourcecode in chunky/RGB notation.

Together with external third party programs also the following file formats seamlessly can be embedded:

File Format	needs program	also needs support for
- AMF	MetaView	(ILBM)
- DXF/AutoCAD (tm)	MetaView	(ILBM)
- FIG	AmiFIG	(Postscript)
- CGM	GPlot	(Postscript)
- IFF-DR2D	MetaView	(ILBM)
- Limbo	Limbo 4.0	(PNM)
- Postscript (TM)	Ghostscript	-
- WPG-Vector	MetaView	(ILBM)
- WMF	MetaView	(ILBM)

- support of external periphial devices (DEVICE-access SVOjects):
 - Scanner (scanner.device of ScanQuix)

1.7 installation

Even if you use the supplied Installer-Script, you should read the following notes. If you do not own the standard Installer-Program you should read them even more carefully and follow the instructions given.

Note: Should after starting the installer script appear an error message "Can't find program 'Installer'" (or similar), you have to enter the correct path to your Installer program via the Workbench menu Icon/Information.
Please do also not forget, to obtain and install SuperView-Library !

If you own a KeyFile, place it to "S:", or place it elsewhere and change the environment variable "KEYPATH" to the corresponding directory.

The SuperView-Library has to be obtained and installed seperately, anyway !

Needed Workbench Resources

HardDisk-Users won't perhaps have to install any additional Workbench Resources to their HardDisk.

Disk-Users will have to copy the following libraries into their "LIBS:"-Directory, if these not already do reside in ROM (may depend on the version of the operating system):

- gadtools.library V37+
- asl.library V37+
- utility.library V37+
- workbench.library V37+
- icon.library V37+

Users of OS V2.04 or greater should also install the following libraries:

- amigaguide.library V34+
(please avoid using V34 - it's known to cause problems)

Other needed Resources

You will also have to copy the following libraries to your "LIBS:"-Directory (plus SVOjects, SVDdrivers and SVOperators):

- superview.library V19+
- superviewsupport.library V11+

GUI has been designed with StormWizard 2.0, so this program needs "wizard.library" V37+ (you can find a copy on Aminet under "biz/haage/WizardLibrary.lha").

For PowerPC support (optional modules) the following libraries are needed:

- ppc.library V44+

1.8 updatenote

General

~~~~~

Although the PNG-Box archive does contain most of the needed parts, you might wish to get updates sometimes.

The newest version usually can be found on Aminet under  
Aminet:gfx/conv/PNG-Box.LHA

SuperView-Library can be found under  
Aminet:gfx/show/SViewNG.lha

## 1.9 usage

The GUI is quite self-explaining:

You can load SuperView-Library support formats from:

- disk
- clipboard
- specific devices (Scanner, etc.)

and save these as PNG files with the following options:

- progression on/off
- transparency on/off (and set a color ranged 0..maxcolors)
- compression 0..9

The GUI will display some useful information about the work being done, there are also some useful menu entries.

That's it :-)

## 1.10 evaluationrestr

This is the evaluation version of PNG-Box, which is SHAREWARE.

It ticks down a 30 seconds counter in the "annoy" requester at startup.

## 1.11 history

V2.10 (20.12.97):

- GUI design (again) improved by Georg Rottlaender  
<Georg.Rottlaender@bonn.netsurf.de> under use of a  
'NewIcon' graphics by Philip Vedovatti  
<vedovatt@u.washington.edu> - included with kind permission

- by the 'Team NewIcons'
- updated docs
- added explicit mention of ppc.library
- updated powerUP information
- updated libpng and zlib (same as akPNG 43.130)

## V2.06 (24.9.97):

- small fix: transparency slider offered a range 0..256, now (correctly) 0..255 (-> Georg Rottlaender)
- small fix for ppc.library usage (pre-opening)
- there's now a PNG-Box homepage under <http://www.amigaworld.com/support/png-box/>
- updated docs and .readme

## V2.05 (10.9.97):

- release version

## V2.04 (7.9.97): [ internal beta version ]

- more GUI changes

## V2.03 (7.9.97): [ internal beta version ]

- removed 'hide' menu item

## V2.02 (6.9.97): [ internal beta version ]

- some more changes to the GUI (-> Georg Rottlaender <Georg.Rottlaender@bonn.netsurf.de>)
- and more

## V2.01 (6.9.97): [ internal beta version ]

- used Wizard-GUI with lots of improvements done by Georg Rottlaender <Georg.Rottlaender@bonn.netsurf.de>
- SuperView 7.21/18.2 is out now, and re-loading of transparency information (of paletted PNG pictures with only one color being fully transparent) does work correctly with it

## V2.00 (4.9.97): [ internal beta version ]

- now using wizard.library for supplying a fontsensitive and resizable GUI
- \*writing\* of PNG's interlacing scheme and \*reading\* \_and\_ \*writing\* of PNG's transparency scheme DID NOT WORK CORRECTLY !

For reading (re-importing):

Please also watch out for bug-fixed versions of akPNG.datatype (> 43.96) and SuperView-Library (> 7.20/18.1)

- task priority now 0, as usual
  - etc.
-

V1.50 (28.8.97):

- recompiled with SAS/C 6.58
- jumped from libpng 0.90 to 0.96
- updated docs
- superview.library V18+ required
- etc.

V1.40 (23.2.97):

- stupid: save size check was broken
- fixed various things
- debugged handling of 2..256 color pictures:  
make sure that you at least have PNG.svobject V4.9  
installed (coming with SViewFix580.lha or any library  
version greater than V16.1)

V1.30 (13.2.97):

- added support for superview.library V16+ transparency feature  
(GfxBuffer version V3) - transparent colors will be recognized  
and reflected on the GUI, just like with GIF before
- bugfix: transparent color could only be changed via keyboard,  
not mouse (argh!)
- remaining lock on source GIF file would not have been unlocked  
(transparency-extension check)

V1.20 (5.2.97):

- fixed transparency writing
- transparency checkbox toggled progressive mode as well (oops)
- added "extension mode (checkbox), where extensions source file  
names will be changed to ".png" automatically, if present  
(-> Philippe Duchenne)
- fixed transparency slider control
- added automatic transparency recognition for GIF files - if  
a GIF file had been loaded by an external loader or datatype  
it will again be scanned for transparency information and the  
GUI will reflect this (transparency gad is checked and color is set)  
(-> Philippe Duchenne)
- for all non-GIFs transparency settings will be reset always (yet)
- updated pnglib sources to V0.90

V1.10 (20.1.97):

- GUI now with better font-sensitivity  
(-> Patrik Nydensten)

V1.00 (18.1.97):

- first release

## 1.12 correspondence

---

PNG-Box Support Site  
<http://www.amigaworld.com/support/png-box/>

```
| You may reach me the following way. |
| Send bug-reports, money or whatever to: |
|-----|
| * SuperView Development & Registration * |
| * DRAFU Development & Registration * |
| * Image Engineer Registration Site Europe * |
| |
| PerSuaSiVe SoftWorX |
| |
| Andreas R. Kleinert |
| Sandstrasse 1 |
| D-57072 Siegen |
| Germany, Europe |
| |
| Any snail mail to the old address will still be routed. |
| |
| Phone: +49-271-22869 also FAX + AM |
| +49-271-22838 |
| |
| Weekdays after 17.00h. |
| |
| When calling via phone you may leave a message, |
| if I'm not available - but don't expect me |
| calling back to USA, Australia, ... since |
| german phone rates are HIGHLY expensive. |
|-----|
```

[http://home.t-online.de/home/Andreas\\_Kleinert/](http://home.t-online.de/home/Andreas_Kleinert/)

eMail:

Please send binaries via [ARK@News.wwbnet.de](mailto:ARK@News.wwbnet.de), and keep them smaller than 16 KB. Please think twice before sending them - my postbox is not unlimited in size.

- Fido Andreas Kleinert 2:2457/350.18  
- Usenet  
Andreas\_Kleinert@superview.ftn.neckar-alb.de (Fido-Gate)  
Andreas\_Kleinert@t-online.de (T-Online)  
ARK@News.wwbnet.de (Z-Netz)  
ARK@amigaworld.com (AmigaWorld)

- If nothing else works, try one of these public Fido-Usenet gateways:

In Germany:  
[Andreas\\_Kleinert@p18.f350.n2457.z2.fido.sub.org](mailto:Andreas_Kleinert@p18.f350.n2457.z2.fido.sub.org)

From USA or elsewhere:  
[Andreas\\_Kleinert@p18.f350.n2457.z2.fidonet.org](mailto:Andreas_Kleinert@p18.f350.n2457.z2.fidonet.org)

Please note, that the "superview.ftn.sub.org" domain will perhaps be renamed soon (it is BTW quite `_slow_`).

When reporting any bugs, please don't forget to include a detailed description of the bug and tell me, if it is reproduceable or not. Please also mention the version number of PNG-Box you used and describe your system configuration (Amiga model 500/.../4000T-060, Kickstart/OS, RAM, HardDisk, special configurations).

## 1.13 Making use of 680x0 CPUs

This program works WITHOUT any FPU, BUT...

If you do own an 68020/030+68881/882 FPU or 68040/060+FPU you may wish to make use of these.

Usually, Amiga OS' mathieeee-Libraries do automatically manage the coprocessor support, but for some reasons, these libraries are not used with this datatype:

- they can't be shared between processes
- they are not actually optimized for 68040/060+FPU as with OS 3.1

Unfortunately, the used mathtrans.library does not support an FPU at all.

But there's a solution: it is strongly suggested, to use some of the available math-library replacements and/or patches from Aminet.

1. FMath by Martin Berndt, for example does replace all of them:
  - mathieeedoubbas.library
  - mathieeedoubtrans.library
  - mathieeesingtrans.library
  - mathtrans.library

It is strongly recommended to install V40.6 or a newer version from Aminet (Aminet:util/libs/FMath406.LHA).

2. FFppatch by Jess Sosnoski additionally patches some functions of mathffp.library to use 68881/2 instructions. It currently makes use of some mathtrans.library functions for FFP/IEEE conversion and thus does require FMath as well. (There's a 'ffptest' program included, so that you can test, whether it improves speed or makes it worse.)

It is strongly recommended to install V1.7beta or a newer version from Aminet (Aminet:util/boot/ffppatch.lha).

On a A4000 with A3640 (68040-25) running FMath, it gave the following results:

[ before ]

---

```
mathffp.library speedtest
© 1997 Jess Sosnoski
```

| Test Name | Time in Seconds |
|-----------|-----------------|
| SPAbs()   | took: 0.79 sec  |
| SPNeg()   | took: 0.80 sec  |
| SPAdd()   | took: 1.38 sec  |
| SPSub()   | took: 1.31 sec  |
| SPMul()   | took: 1.87 sec  |
| SPDiv()   | took: 2.05 sec  |
| SpFlt()   | took: 0.76 sec  |
| SpFix()   | took: 1.04 sec  |
| SpFloor() | took: 1.09 sec  |
| SpCeil()  | took: 1.99 sec  |

[ after ]

```
mathffp.library speedtest
© 1997 Jess Sosnoski
```

| Test Name | Time in Seconds |
|-----------|-----------------|
| SPAbs()   | took: 0.52 sec  |
| SPNeg()   | took: 0.48 sec  |
| SPAdd()   | took: 1.06 sec  |
| SPSub()   | took: 1.05 sec  |
| SPMul()   | took: 1.06 sec  |
| SPDiv()   | took: 1.32 sec  |
| SpFlt()   | took: 0.49 sec  |
| SpFix()   | took: 0.77 sec  |
| SpFloor() | took: 0.82 sec  |
| SpCeil()  | took: 1.73 sec  |

3. This one has nothing to do with the FFP libraries, but since there's also a bug in mathieeesingbas.library (which resides in ROM), you should install a patch for that:

- best solution is a newer SetPatch Version V43.x (available from ftp.amiga.de somewhere in "/pub/")
- if SetPatch V43 does not work with your OS version, you should try for example "SetMathPatch" (coming e.g. with GhostScript)

4. This one has nothing to do with the FPU, but if you do own a 060 and OS 3.0 you should perhaps consider to install "Mult64Patch", which claims to implement the 64 bit integer functions UMult64/SMult64 utility.library V39+ (which have to be software emulated on the 060) two times faster than the patches done by 68060.library and four times faster than the trap emulation. A speed test program is included.

It is strongly recommended to install the newest version from Aminet (Aminet:util/boot/Mult64Patch.lha).

If you do own a CyberStorm 060 board, just ignore what I said before and follow the instructions given in the 68060-Library documentation.

## 1.14 thanks

Thanks go to (in order of appearance ;-)

=====

(some of these people did register, others did make suggestions/bug reports - how about you ?)

- Roman Patzner (RomIcons)            - Patrik Nydensten            - Philippe Duchenne  
- Christian Hoklas                    - Georg Rottlaender         - Jon Peterson

Credits go to Georg Rottlaender <Georg.Rottlaender@bonn.netsurf.de> for improving my Wizard GUI and making it more user-friendly.

Beta Testers:

- Patrik Nydensten    - Philippe Duchenne    - Christian Hoklas  
- Georg Rottlaender   - Jon Peterson

## 1.15 About PNG - successor of GIF

PNG is the successor of the GIF file format. Other than GIF it is completely free of patent claims and has been designed with free data exchange in mind. Drop GIF for PNG - free algorithms are as important as free speech on the internet:

GIF is obsolete - you neither should use nor support it any longer. If you are doing WWW design, use PNG and JPEG instead. It's important !

For more information on PNG (pronounce: PiNG) for example look at:

- [1] PNG specification (AmigaGuide format)  
    -> Aminet:docs/hyper/PNG-guide.lha
- [2] PNG WWW homepage  
    -> <http://www.wco.com/~png/>
- [3] PNG upgrade tools like gif2png  
    -> Aminet:gfx/conv/gif2png-0.6.lha
- [4] programs capable of PNG, like PPaint, SuperView,  
    or  
        PNG-Box  
        , etc.