

FastIFXModules

COLLABORATORS

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REVISION HISTORY

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Chapter 1

FastIFXModules

1.1 HHsFastImageFXModules - Overview

FastImageFXModules 6.3

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| The fast and flexible loader/saver modules for all ImageFX users |
| * fast loading of more than 20 file formats (incl. e.g. PhotoCD) |
| * support for Datatype loading |
| * downscaled loading support (load big pictures with few memory) |
| * TrueColor animation creation saver for CyberGraphX or EGS users |
| new: now with extended IFF-DEEP loading support (useful for TVPaint 3 users) |
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Please note: The demo version loads and saves only in greyscale (but the speed and format support is the same, so that you can try if they fit your needs)! Please pay the shareware fee to get color loading/saving...

-> New: Order the FastImageFXModules for low add-on prices with the new PhotoAlbum (picture management software for all OS3.x Amigas) <-

New: Registered module users can order my new PhotoAlbum (usable on all OS3.x Amigas) or the package of PhotoAlbum&CyberShow for special side-grade prices; see the PhotoAlbum documentation for details! The new PhotoAlbum software can e.g. be found on Aminet in gfx/misc.

Disclaimer, Copyright, Usage and Distribution conditions

-> Warning: Illegal keyfiles

Information about the supported picture file formats

General advantages of the modules

Installation

Usage for loading (incl. downscaled loading and ARexx support)

Usage for animation creation (free animation players available as well)

IFXAppWindow (Bonus program for AppWindow loading in ImageFX)

Shareware modalities (Ordering informations for full version)

Special Thanks
Version history

1.2 Illegal keyfiles

Warning:

I know that illegal/modified keyfiles of this module could exist. The use of such keyfiles ("hhsloaderkey.library") is strictly prohibited and can lead to undefined results and problems! For a program which you use you should also be willing to pay the shareware fee. Only if enough users register I will be able to do further improvements or create other graphic applications. You can also help me by sending me illegal keyfiles of this module which you find somewhere.

The future software development depends on the honesty of all users!

I also want to point out that all keyfiles contain visible and invisible marks which allow identification of the original user even if the keyfile is modified. Keyfiles which are found to be the base of illegal modified/distributed keyfiles become invalid immediately and (beside other consequences) any future use of such keyfiles is prohibited. (->Disclaimer, Copyright, Usage and Distribution conditions)

1.3 Supported file formats

The loader module currently supports the following file formats:

- * IFF-ILBM (all standard formats 1 to 8Bit, EHB, HAM6, HAM8, 24Bit)
 - * PhotoCD (Base format 768x512 or 512x768 (portrait); linear 24Bit colors)
 - * PPM/PGM/PBM (Pl&P4 b&w, P5 grey, P6 color)
 - * QRT (also known as dump format by PD raytracers as POV-Ray)
 - * Targa (RLE compr.&uncompr. 1/8/15/16/24/32Bit;incl. interleaved)
 - * PCX (compr.&uncompr. EGA1-4Bit, VGA 8Bit grey/Colormap and 24Bit)
 - * MacPaint (b&w compressed 1Bit format; datafork only)
 - * BMP (uncompr. 24Bit RGB,1Bit,4Bit or 8Bit Colormap; RLE compressed 8Bit,1Bit)
 - * TIF (packbit-compr.&uncompr. 24Bit,1-8Bit grey/Color Motorola&Intel formats)
 - * EGS7.x window iconification file format
 - * DEEP (compr.&uncompr. 24Bit and 32Bit)
 - * RGB formats (RGB8, RGBN, RGB5)
 - * ACBM formats (1 to 8Bit, incl. HAM6/HAM8)
 - * FBM formats (8Bit grey/color and 24Bit)
 - * IFF-PBM (DPII) format
 - * Sun raster (1Bit, 8Bit grey/color and 24Bit uncompressed)
 - * YUV (color 1:1:1, 2:1:1, 4:1:1 and greyscale)
 - * VLAB raw (color 1:1:1, 2:1:1, 4:1:1 and greyscale)
 - * HHSYUVS sequence format (sequential or random access; only first frame)
 - * HHSXRL formats (1-8Bit ColorMap incl. HAM6/8, 8Bit grey, 24Bit RGB compressed)
 - * binary-EPS bitmaps (RGB and CMYK; this function is experimental)
 - * TBCPlus frames/fields
- * Picture DataTypes (many formats are available as DataTypes for OS3.x users)
-

- * Animation DataTypes (many animation formats are available as DataTypes for OS3.1 users; currently only the first frame can be loaded with Animation ← DataTypes)

The saver module currently supports the following file formats:

- * HHsYUVSg animation format (upto size 360x310); create new animations (by specifying a new file) or append frames to an animation (select old file). Please note: Image width must be in the range 80 to 360 (even size will be generated); Image height must be in the range 64 to 310. To append frames to an animation, the image size in ImageFX must match the frame size of the file you want to append to. Otherwise (or if you specify not a HHsYUVSg anim file) the error "Unrecognized file format" occurs.
- * QRT (also known as dump format by PD raytracers as POV-Ray)
- * Targa (RLE compr.&uncompr. 24Bit, 8Bit grey, 8Bit color map, 1Bit color map)
- * HHsXRL formats (1-8Bit ColorMap incl. HAM6/8, 8Bit grey, 24Bit RGB compressed) with optional lossy reduction for TrueColor or greyscale pictures; this new file format series has surprisingly good (lossless) compression of raytraced 24Bit pictures or undithered color mapped pictures with 2 to 256 colors; also very usable with ClipArt...; this format can be saved in color even in the demo version (to check the good compression), but loading will be in greyscales in the demo as well.

1.4 Advantages of the FastIFXModules

The typical speed advantage factors on my configuration (see below) are:

DataTypes: depending on DataType, but usually loading will be significantly faster with my DataType support (compared to IFX 2.6 DataType support), e.g. about 1.5 for ZGIF DataType or REKO DataType...

IFF-ILBM: upto 4.75 (e.g. IFF 8Bit)

PPM/PBM: upto 7.2 (P6)

QRT: upto 4.4

Targa: upto 8.7 (uncompr.)

PCX: upto 11.2 (planar 4Bit)

BMP: upto 5.5 (24Bit)

TIF: upto 8.5 (packbit compr. 4Bit)

RGB: upto 3.7 (RGB8)

YUV: upto 5.6 (YUV1/4)

IFF-PBM: upto 1.3

SunRaster: upto 4.6 (grey)

MacPaint: upto 1.5

GIF: upto 2.1 (HHsFastIFXModules DataType loading with ZGIF-DataType compared with IFX-GIF loader)

PhotoCD: upto 2.0 (compared with PD-PCD loader in base size; in addition my loader usually rotates portrait pictures automatically to correct orientation)

(only loading times compared, not displaying; my configuration: Amiga 3000; 68030/25MHz; loading from Quantum harddrive; PhotoCD loading from NEC2x)

The loader includes many formats, which the original loaders (I compared with ImageFX-EGS 1.61) do not support: PhotoCD, IFF-DEEP, IFF-ACBM, FBM, Sun raster, VLab raw, DataTypes, RGB5, PBM4, TGA1, YUV grey, PCX grey, BMP compressed, EGS ← icons,

MacPaint (Datafork). Many of them are not supported by ImageFX 2.6 as well.

It also loads many formats, which are loaded with wrong colors (or other bugs) in some original loaders, e.g. IFF-ILBM-EHB, BMP1, PBM1, TIF1 grey, TGA grey. The original PCX loader also had massive problems with loading VGA pictures from CD-ROMs under the OS3.1 CD-file system. Although this is a bug in the file system, I could work around this so that my loader should work with CD-ROMs under the OS3.1 filesystem. Please note that some third party CD-ROM-file systems can cause massive problems as well, so I recommend to use the original Commodore OS3.1 filesystem.

The saver module can be used as normal (QRT and HHsYUVSqAnimation only for true color/greyscale buffers; Targa and HHsXRL also usable for rendered images from 2 to 256 colors). The individual formats and variants are listed at the beginning of the list of savers in the SaveAs window. The typical speed advantage for the fast saver module:

QRT: upto 3.5

Targa: upto 5.3 (compressed 24Bit) or 7.7 (compressed greyscale)

Beside the speed advantage, the general compression is also better (compared to ImageFX 2.6). Targa compression is sometimes 25% better with my saver than with the original. The Targa saver also supports the true greyscale format for greyscale pictures and allows compression of rendered images as well. Rendered 1Bit images will be saved in 1Bit Targa format. For good compression of e.g. raytracing pictures I recommend my own file formats "HHsXRL", usable from 1Bit to 24Bit. This format is also supported by my universal image viewer "CyberShow" and my picture management program "PhotoAlbum".

The fast loading functions have all been written by me in assembler and optimized for fastest speed. I did this for my famous shareware programs like the new PhotoAlbum or CyberShow etc. When new formats are implemented for my other programs (or the speed is improved further), I will usually also update the modules, which registered user can then use due to the keyfile concept.

1.5 Installation

To install the loader/saver modules, just use the included install script.

This will copy the files named "-HHsFastImageFXLoader-" and "-HHsFastImageFXScaler-" to your ImageFX:modules/loaders directory and "-HHsFastImageFXSaver-" to your ImageFX:modules/savers directory. In addition your keyfile will be installed to LIBS: if you start the install script from your original full version disk.

If you also want to use the ARexx scripts for easy animation creation or the IFXAppWindow tool, you have to install them manually by dragging them wherever you like them to be.

The modules should work with standard ImageFX (1.5x, 1.6x, 2.0, 2.1, 2.6, ...) as well as with ImageFX-EGS. I have tried them e.g. with the new ImageFX 2.6 and EGS-ImageFX 1.6 (thanks to NOVA design). The speed advantages have been measured with the new ImageFX 2.6. Compared with ImageFX-EGS 1.6 some of them were even slightly higher (in addition ImageFX-EGS comes with fewer

standard loader modules).

1.6 Usage for loading

The file format is automatically detected for loading except for the DataType formats. If you want to load a picture with a DataType, you have to use the "Load As" function from ImageFX and select "-HHsFastImageFXLoader-" manually as loader module. The name of the loader module begins with a "-" so that it appears first in the list of loader modules and thus is used before all other loader modules.

Downscaled loading: To load an image in downscaled form you have to explicitly select the special loader variants with "50%_size" or "25%_size" by using Buffer/LoadAs in the loader list. Those downscaled loading functions do currently not support Datatypes if selected manually. For most of the supported file formats, the picture can be loaded line by line and loading in downscaled form will thus need much less memory. Finally a way to load even biggest pictures without slow virtual memory...

ARexx support: If you want to load pictures in downscaled form from ARexx scripts, you can select even more downscaling factors. To use this you should NOT specify the xx%_size loaders but instead use LOADBUFFERAS -HHsFastImageFXLoader- ...picturename... Scale # where you replace # by a single digit from 1 to 9, which will then be used as a downscaling factor (e.g. 2 for 50%, 4 for 25%). In this case also DataType pictures can be loaded in downscaled form.

Please note: The HHsFastImageFXScaler module does not contain any loading function itself. Instead it invokes general loading with the Scale # parameter. This only works if the HHsFastImageFXLoader (or another loader which supports this) is installed as well.

1.7 TrueColor animation creation

The HHsYUVSqAnimation saver can be used to create new animation files (if you specify a new file) or to append the current picture to an existing HHsYUVSq animation file which has the same frame size (if you specify an old HHsYUVSq animation file). The recommended file extension for HHsYUVSq animation files is ".seq".

You can play the animations with my freeware player programs CyberTVPlayer and EGSTVPlayer.

For easy creation of HHsYUVSq animations two ARexx scripts are included:

- a) MakeAnim.rx will ask for a source directory and a destination file. It will then load all pictures in the source directory (in alphabetical order) and create/append them into the HHsYUVSq animation. If necessary, downscaling will be applied. Please note that all pictures should have the same size!
- b) ConvertAnim.rx will ask for a source animation and a destination file. The source animation can be in any animation format which ImageFX supports. All frames will be loaded and then saved/append into the

HHsYUVSq animation file (downscaled if necessary).

1.8 Animation players for the HHsYUVSq animation format

You can play the TrueColor animations (HHsYUVSq format) with the following free player programs:

1) CyberTVPlayer

Usable on all Amigas with at least OS3.0. Displays in TrueColor or HighColor on graphic boards with CyberGraphX or in reduced color (slow) on AGA Amigas.

2) EGSTVPlayer

Usable on Amigas with EGS software installed; displays in TrueColor under the EGS environment on EGS compatible graphic boards.

Both should be available on Aminet in gfx/board. If you order the module you will also receive the latest version of CyberTVPlayer or EGSTVPlayer.

1.9 Shareware modalities

ImageFXModules is Shareware. This means that you have to register with me, the author, and pay a shareware fee if you want to use it for more than 4 weeks. The unregistered version does also only load and save in greyscale. After registration you receive a keyfile together with the latest full version. The keyfile disables all restrictions. The keyfile concept allows you to use later demo version (which can e.g. appear on Aminet) as full versions.

The cheapest way to order the module is to order it together with one of my applications PhotoAlbum (the new intuitive and fast picture management software for all Amigas with at least OS3.0; incl. TrueColor support for CyberGraphX) or CyberShow (the fast slideshow presentation and viewer program for all Amigas with at least OS3.0; incl. TrueColor support for CyberGraphX). The add-on price for the module is then only 10DM or 7US\$. Please make use of this special offer if possible!

If you just want to order the module, the following prices are valid:

FastIFXModules for new users: 20DM or 18US\$

FastIFXModules for registered users of one of my other modules or programs like PhotoAlbum, CyberShow: 15DM or 14US\$
(see registration form for other accepted currencies)

(Special note for users in germany only: Wenn Sie schon registrierter Benutzer eines meiner Shareware-Programme sind und sich Ihre Anschrift nicht geändert hat, können Sie die Module direkt per Überweisung bestellen. Als Verwendungszweck geben Sie bitte "IFXModule für" an, wobei Sie das Programm was Sie schon haben und die Registriernummer angeben.

Zusätzlich möglichst auch noch Name/Anschrift; die Bankverbindung:
 Konto-Nr. 5740147 BLZ 310 500 00 Stadtpark. Mönchengladbach)
 (No bank transfers from outside germany!)

To register you must send in the filled in and signed registration form
 (included in demo version) and send it to my address together with the
 shareware fee as cheque, banknotes or pay by (international!) postal
 order / postal money order

My adresse: Helmut Hoffmann
 Rubensstraße 4
 D-41063 Mönchengladbach

Deutschland

After registration you receive your keyfile and the latest
 version of the program. The keyfile allows usage of later
 demo versions as full version. Please allow some time
 for handling/delivery. Usually this will be done very quickly
 (only few days), but under raw circumstances it can take upto
 some weeks.

By the way: Similair modules are available for Photogenics (UniversalGIO)
 and XiPaint (XiPaintModule) as well.

1.10 CyberShow: flexible slideshow and viewer program

CyberShow Professional is my universal image viewer featuring
 SlideShow presentation (incl. transition effects) and much more.
 It offers a great range of parameters and configurability to be
 used in every kind of image viewing task.

The loading functions are nearly identical to those in the module.
 The system requirements are also similar: CyberShow can be used
 on all Amigas (and Dracos) with at least OS3.0. The maximum
 picture viewing quality can be reached in conjunction with
 graphic boards used under CyberGraphX.

Demo version e.g. available on Aminet: "gfx/board/cybershow###.lha"

1.11 PhotoAlbum: Picture management for all Amigas and Dracos with at least OS3.0

New: ->->-> PhotoAlbum <-<-<-

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+-----+
| The fast and intuitive picture management software for all Amigas with OS3.x: |
| * Supports upto 256 colors on AGA Amigas                                     |
| * Supports TrueColor/HighColor on graphic boards with CyberGraphX          |
|   (TrueColor displaying supported for thumbnails and full picture windows)   |
| * Supports more than 20 picture formats (incl. PhotoCD, IFF, JPeg (incl.    |
|   Progressive), TIF, PCX, BMP, Targa, PPM, YUV, ... and DataTypes)          |
+-----+
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```
| * Open any number of picture windows incl. fast scrolling and zooming |
| functions, conversion functions, direct transfer functions, ... |
| * Font sensitive picture subtitles and gadget bar (fonts configurable) |
| * Many options can be configured (by Tooltypes or in menus) |
| * Support of several preview file formats (highly compressed to save space |
| or uncompressed for high speed access etc.) |
| * Functions for creation of picture databases across multiple volumes |
| * Configurable thumbnail cache memory * Editable picture comments |
| * new: now finer Jpeg scaling (optional) to better fit pictures in frames |
+-----+
```

Demo version e.g. available on Aminet: "gfx/misc/photoalbum##.lha"

The loading functions are nearly identical to those in the module.
The system requirements are also similar: PhotoAlbum can be used
on all Amigas (and Dracos) with at least OS3.0. The maximum
picture viewing quality can be reached in conjunction with
graphic boards used under CyberGraphX.

1.12 HHsIFXAppWindow

This is a small program meant as add-on for ImageFX users
which opens a small "AppWindow" on the Workbench.

Just start this program from Workbench or CLI at any time
you want (it can be started before or after ImageFX).
To quit this program simply use the window close gadget.
To load pictures into ImageFX just drop the icons of
them onto this window to get them automatically loaded
into ImageFX. This should work with both old (ImageFX 1.x)
and new versions (ImageFX 2.x). This program can not be
used with EGS-ImageFX. If something fails (no ImageFX
found), the display will "beep".

IFXAppWindow versions:

V1.0 (10th Oct. 1995)
V1.1 (11th Dec. 1995)

1.13 Special Thanks

My special thanks go to Mr. Kermit Woodall, Mr. Thomas Krehbiel and
NOVA design for their kind support
and to all registered HHsFastIFXModule users (located currently in 19
countries all over the world...).

1.14 Disclaimer, Copyright, Usage and Distribution conditions

Disclaimer

This software (program and documentation) is provided "as is" and comes with no warranty, either expressed or implied. The author is in no way responsible for any damage or loss that may occur due to direct or indirect usage of this software. You use this software entirely at your own risk.

Copyright and Distribution

HHsFastImageFXModule (modules and documentation) is copyright by

Helmut Hoffmann
Rubensstrasse 4
D-41063 Moenchengladbach
Germany

The demo version may be freely distributed and used as long as the following conditions are met:

- 1) All files have to be kept together
- 2) No file may be modified or crunched/packed.

The only official way to distribute the demo packed is the original fastifxmodules.lha archive.

The modules may not be disassembled or analysed. The limitations integrated in the demo version may under no circumstance be removed or bypassed.

- 3) Distributors may only charge for the duplication process (including media) and not for the software. These charges may not exceed the following limits:
 - a) Demo on a PD-disk: 7\$ (US-dollar) including postage&packing (in Germany: 10DM)
 - b) Demo on a PD-CD-ROM: 40\$ (US-dollar) including postage&packing (in Germany: 60DM)
 - c) Demo on a BBS/Mailbox/ftp-site or other electronically callable system: Maximum charge 3\$ (US-dollar) (in Germany: 5DM) for downloading

Anyway, it must be made explicitly clear to the buyer, that he does not pay for the modules (demo) itself but only for the duplication service.

- 4) It is not allowed to distribute this demo with any commercial product without a written permission by me. One exception is the distribution of the demo version with products not exceeding the above price limits (e.g. a cover-disk magazine for 7\$ or less).

The following companies have my explicit permission to distribute the demo with their products: NOVA Design, Ingenieurbüro Helfrich, MacroSystem.

- 5) The registered version may not be redistributed. It may only run on one machine per registration. It is allowed to make a backup copy of the original disk.

1.15 Version history

- V1.0 (17th feb. 95): Support for IFF-ILBM, PPM, QRT, Targa, PCX, BMP, TIF, EGS7.x, DEEP, RGB, YUV, VLab, HHsYUVSq, DataTypes (picture&animation)
- V2.0 (25th feb. 95): Added support for FBM (24Bit, 8Bit), IFF-ACBM, IFF-PBM(DPII), Sun raster (1Bit, 8Bit, 24Bit uncompressed), PBM-P1, BMP 4Bit and interleaved Targa formats
Slight acceleration of some loading functions (esp. ILBM)
Improved DataType handling
- V2.5 (1st march 95): Added support for MacPaint (1Bit compressed; datafork only), PBM-P4, PCX uncompressed and EGA-grey, Targa 1Bit, TIF packbit compressed and grey 1-4Bit
Many enhancements on various formats for more compatibility
- V3.0 (14th march 95): Introduction of the fast saver module to supplement the fast loader module (QRT, Targa 1Bit/8Bit/24Bit, HHsXRL)
Added loader support for HHsXRL (1Bit-8Bit, HAM, 24Bit)
Acceleration of some planar loaders (e.g. ILBM, DataTypes)
Improved HAM6 loading quality
Correction of Targa 1Bit loading for compressed pictures
- V3.1 (07th april 95): Acceleration of RGB8 and RGB5 loader function
- V4.0 (30th april 95): Added support for PhotoCD (Base size; incl. portrait ↔ orientation)
- V4.1 (09th may 95): Removed inconsistency in DataType-HAM8 handling for more ↔ compatibility
Filtering out of PCD overview files
- V4.2 (07th july 95): Correction of Sun raster 24Bit loading (wrong colors and problems with odd sized images)
Updated documentation to reflect speed advantage compared to ImageFX 2.1 instead of ImageFX-EGS 1.6
- V4.3 (12th july 95): Changed IFF-ILBM loading to not automatically load brushes containing a mask (you can still load them as pictures with my module by using the LoadAs function).
This was necessary as otherwise brushes could not be loaded together with their mask if the FastIFXModules were installed (as there is no Brush-LoadAs function).
- V4.4 (21st july 95): Support for RLE compressed 8Bit and 1Bit BMP files
Bug fix for loading function which could lead to crashes if certain non-picture files were detected as a picture
- V4.5 (5th aug. 95): Changed TIF loader for better compatibility with certain pics
Extended Targa loader by 15Bit and 16Bit HiColor loading
- V4.6 (29th aug. 95): Support for new file formats: binary-EPS bitmaps RGB, CMYK and TBCPlus frames
Correction of bug in datatype.library usage (which could lead to a crash under OS2.x when no datatype.library was present and LoadAs was used)
- V4.7 (9th oct. 95): Extended TIF loader to support "Intel" byte order files and more variants
-

- V5.0 (11th dec. 95): Extended saver module by HHsYUVSg animation saver function;
included ARexx scripts to automatically create such
animations from multiple pictures or from other anims.
Use CyberTVPlayer or EGSTVPlayer to play such animations.
Extended IFF loader to accept 0-sized chunks
Included bonus program "IFXAppWindow"
- V6.0 (12th feb. 96): Support for downscaled loading: Special loader support
module "-HHsFastImageFXScaler-" offers 50% and 25% size
loading for selection in the loader list.
With ARexx parameter "Scale" you can select
any downscaling factor from 1 to 9 directly for the
FastImageFXLoader.
Useful to load "too big" pictures without much memory
or extremly fast...
Extended IFF loader to accept unusual sized color maps
- V6.1 (24th march 96): Changed PCX loading for more compatibility
- V6.2 (29th april 96): Extended PCX loading for even more compatibility
- V6.2a (28th june 96): Converted documentation to AmigaGuide format
- V6.2b (15th july 96): Changed documentation to reflect speed comparisons with IFX2 ↔
.6
- V6.3 (13th aug. 96): Extended loading functions for new variants of IFF-DEEP
(e.g. as created by TVPaint 3)
- New: Registered module users can order my new PhotoAlbum (usable on
all OS3.x Amigas) or the package of PhotoAlbum&CyberShow for special
side-grade prices; see the PhotoAlbum documentation for details!
The new PhotoAlbum software can e.g. be found on Aminet in gfx/misc.
-