

**loaders**

**COLLABORATORS**

	<i>TITLE :</i> loaders		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY		July 10, 2022	

**REVISION HISTORY**

NUMBER	DATE	DESCRIPTION	NAME

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# Chapter 1

## loaders

### 1.1 PPT I/O Modules

This documentation is a short description of the different ↔  
file  
types PPT recognizes. Click on the name below to get to the point.

[ (\*) = Documentation not yet complete ]

BMP

C-code

IFF ILBM

Targa

JFIF/JPEG

Compuserve GIF

PNG

PNM/PGM/PPM/PBM

Psion PIC

Datatypes

YUVN

TIFF

PPT saves the I/O modules in the PROGDIR:modules subdirectory. ↔  
Any  
modules ending with ".iomod" taken to be an I/O module.

NB: V2 used a completely another style of I/O module that ended in  
".loader". If you happen to have these around, delete them. They're  
no use to anyone anymore and PPT wouldn't even load them even if you  
tried.

## 1.2 BMP.iomod

### REXX TEMPLATE

LOAD:  
SAVE: TYPE/K

TYPE - Either of strings "Windows" or "OS/2". You can just specify the first letter, though.

### LOAD FORMATS SUPPORTED

Windows and OS/2 BMP files from 1 to 256 colors.

### SAVE FORMATS SUPPORTED

Windows and OS/2 BMP files from 1 to 256 colors.

### EXTENSIONS SUPPORTED

None.

### DESCRIPTION

BMP file format is a non-compressed format (still) in use with the Windows world and is really beginning to show its age.

### NOTES

First appeared in PPT version 6.0.

Parts of this module are from the NetPBM package. Original copyright notice appears below:

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### BUGS

### SEE ALSO

## 1.3 datatypes.iomod

### REXX TEMPLATE

LOAD:  
SAVE: N/A

### LOAD FORMATS SUPPORTED

All picture datatypes you've cobbled your hard drive with.

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## SAVE FORMATS SUPPORTED

None.

## EXTENSIONS SUPPORTED

None.

## DESCRIPTION

This IO module will use the new OS3.0 `datatypes.library` in order to load images. You can find new datatypes in Aminet, in directory `util/dtype`.

Note that the current version of picture datatype is not equipped to handle more than 256 color images and thus all images you get have a maximum of 256 colors, even if the original image had more colors. This shortcoming has been corrected with CyberGfx `picture.datatype`, but so far PPT does not understand it.

## NOTES

The priority of this IO module is -100, so that it won't be tried until all other image loaders have failed to recognize the image. That way your own JPEG datatypes, for example, won't come into play before PPT's internal JPEG IO module.

## BUGS

Does not support the `DTM_WRITE` method. Is there really a need?

## SEE ALSO

Any good PD archive for a plethora of useful and useless datatypes.

## 1.4 Compuserve GIF

## REXX TEMPLATE

LOAD:

SAVE: INTERLACED/S,TRANSPARENT/N

INTERLACED - saves an interlaced file.

TRANSPARENT - set the given color to be transparent. Color 0 is always the background color.

## LOAD FORMATS SUPPORTED

GIF87, GIF89a. Interlaced images are supported. Transparent GIFs are supported from v1.1 onwards.

## SAVE FORMATS SUPPORTED

GIF87, GIF89a. Interlaced images are supported. Transparent GIFs are supported.

## EXTENSIONS SUPPORTED

None.

## DESCRIPTION

GIF is a very popular format in the PC environment and since it has been adopted as the standard for WWW, it has become extremely widely known. Unfortunately, UNISYS owns the patent for the LZW algorithm

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used in packing the image in the GIF file and decided that they wish their piece of the action and now you must pay money if you use GIF in a commercial or shareware program.

GIF will hopefully be superseded by  
PNG  
in the near future.

#### NOTES

GIF animations will produce a warning, but you can load the first image in, though. This will have to do until I finish the animation support... ;->

The GIF.iomod is no longer available. You should be noted that in case you have somehow found this module (from an earlier release) I have not paid the GIF license, which means that should you use any GIF files you have built using PPT, you (or your system operator) should pay the 5000USD license fee to Unisys ([www.unisys.com](http://www.unisys.com)). This license fee applies only to graphics published in the World Wide Web. For more information, see Unisys web page.

Alternatively, use a commercial program to touch up the images.

#### BUGS

#### SEE ALSO

PNG  
,  
PNG  
,  
PNG  
, ...

## 1.5 Amiga IFF ILBM

REXX TEMPLATE

LOAD:  
SAVE:

#### LOAD FORMATS SUPPORTED

Color: 1-8 bitplanes, 24 bitplanes.  
HAM6, HAM8, Extra Half-Brite.  
Both compressed and uncompressed images.

#### SAVE FORMATS SUPPORTED

Color: 1-8 bitplanes, 24 bitplanes.  
HAM6, HAM8, Extra Half-Brite.  
Only compressed images are supported.

#### EXTENSIONS SUPPORTED

Save: Annotation, Author.  
Load: Annotation, Author.

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## DESCRIPTION

The IFF ILBM format has been the most popular format in the Amiga community. Every graphics package supports it and it is the only format that can save Amiga-specific images like Extra-Halfbrite, HAM and HAM8 (short for Hold And Modify). Also, the OS gives a good support for reading and writing IFF file formats, since the `iffparse.library` has been standard from version 2.0 onwards.

However, the compression used by the ILBM algorithm is not very efficient and thus it loses in any competition for image size. For a much better compression algorithm, use

PNG

.

Of course, if you must save a HAM/HAM8 or ExtraHalfBrite image, only ILBM gives you the possibility to save Amiga viewmodes.

## NOTES

## BUGS

## SEE ALSO

## 1.6 Joint Photographic Experts Group

## REXX TEMPLATE

LOAD:

SAVE: COMPRESSIONLEVEL/N,PROGRESSIVE/S,OPTIMIZE/S

COMPRESSIONLEVEL - JPEG compression level. Must be between 0 and 100, the default is 75.

PROGRESSIVE - When this switch is on, a progressive JPEG file will be saved.

OPTIMIZE - Produces optimized files, which are smaller but which take longer to generate.

## LOAD FORMATS SUPPORTED

8 bit and 24 bit JFIF files. Progressive files are supported.

## SAVE FORMATS SUPPORTED

8 bit and 24 bit JFIF files. Progressive files are supported.

## EXTENSIONS SUPPORTED

None.

## DESCRIPTION

JPEG is a

lossy

image format, which is intended for real-world images. It is a very popular format since it produces very small files with no visible degradation.

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However, I do not recommend that you use JPEG for computer-generated files, because the result may be quite bad.

Progressive JPEG files are a special case where the areas that have more detail are coded with greater resolution in the beginning, so that when, for example, the Web browser loads in the image, it can show parts of it before the image has completely been downloaded. It's a sort of interlacing scheme, only more complex.

Optimizing a JPEG file means that the iomodule tries to produce optimal encoding for the Huffman compression tables. It usually saves a few percent in the resulting file size, but can be costly in terms of memory and speed.

#### NOTES

This loader needs to have a JPEGTMP: assign set up before using. If the JPEG file proves to be too large (for example, progressive JPEGs) to be written or read in one go, a temporary file may be created.

#### BUGS

#### SEE ALSO

PNG

## 1.7 Portable Network Graphics

#### REXX TEMPLATE

LOAD:  
SAVE:

#### LOAD FORMATS SUPPORTED

8, 24 and 32 bit images. Interlacing is not supported at the moment.

#### SAVE FORMATS SUPPORTED

8 and 24 bit images.

#### EXTENSIONS SUPPORTED

None.

#### DESCRIPTION

PNG is the new standard, designed to replace  
GIF

by the folks on  
the 'Net. It offers a very good compression using the patent-free  
GZIP algorithm and it supports a variety of data formats. Also,  
the compression is NOT  
lossy  
, so no information is lost in this  
format.

I heartily recommend using this format unless you have real-world  
images and wish to use

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JPEG  
for them.

NOTES

BUGS

SEE ALSO

JPEG

## 1.8 Portable Bitmap Format

REXX TEMPLATE

LOAD:

SAVE:

LOAD FORMATS SUPPORTED

P2,P3,P5 and P6

SAVE FORMATS SUPPORTED

P5 and P6

DESCRIPTION

PPM is a format used by the NetPBM package. It features a simple, non-compressed format that can handle bitmaps, grayscale and truecolor images alike, both in ASCII and binary formats.

NOTES

BUGS

SEE ALSO

## 1.9 Psion PIC file format

REXX TEMPLATE

LOAD:

SAVE:

LOAD FORMATS SUPPORTED

Series 3 and Series 3a/c/mx 1 and 2 bpp formats.

SAVE FORMATS SUPPORTED

Series 3 and Series 3a/c/mx 1 and 2 bpp formats.

EXTENSIONS SUPPORTED

None.

DESCRIPTION

This loader supports the PIC file format used by the

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Psion Series 3 palmtops.

#### NOTES

There is a Psion3x.palette file available in the Palettes directory of the PPT distribution. The suggested procedure for making a Psion image is as follows:

1. Choose your image, and scale it to the size you want (Psion 3a/c/mx screen is 480x160 pixels).
2. Choose Render/Settings... and set the following values:

```
Colors      : 3
Dithering: <something else than off, Floyd-Steinberg is OK)
Force Palette -> PROGDIR:Palettes/psion3x.palette
```

If you want a pure black/white image, use 2 colors. Psion 3 (the original) series supports only 2 colors, black and white. Psion 3a added one grey level, for a total of three colors.

Render.

3. File/Save As... and save the rendered image.

#### BUGS

Does not yet support multi-image files.  
No MBM (Psion Series 5) support yet.

#### SEE ALSO

## 1.10 TrueVision Targa

#### REXX TEMPLATE

```
LOAD:
SAVE: COMPRESS/S
```

COMPRESS - if this option is specified, the Targa file is compressed using a simple run-length encoding.

#### LOAD FORMATS SUPPORTED

8, 15, 16, 24 and 32 bit, colormapped and non-colormapped formats. Interleaved images are supported when loading.

#### SAVE FORMATS SUPPORTED

8 and 24 bit non-colormapped.

#### EXTENSIONS SUPPORTED

None.

#### DESCRIPTION

Targa is an old image format which is usually quite portable across machines. It is quite popular among PC-folks and is used by programs that do not wish to support very many image formats, as Targa is an extremely simple format.

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NOTES

BUGS

SEE ALSO

## 1.11 C-code

REXX TEMPLATE

LOAD: <NA>

SAVE:

LOAD FORMATS SUPPORTED

None.

SAVE FORMATS SUPPORTED

8 and 24 bit, with optional alpha channel.

EXTENSIONS SUPPORTED

ANNO.

DESCRIPTION

This simple saver module writes out the image in a simple format that can be compiled and included in a C-program.

The image file consists of several variables:

UWORD XX\_height : height of the image

UWORD XX\_width : width of the image

UWORD XX\_components : # of components in the image

UBYTE XX\_data[] : an array containing the image data.

If the image is a colormapped image, the following variables also exist:

UWORD XX\_colors : # of colors in the image

UBYTE XX\_alpha : 0, if there is no alpha channel information

UBYTE XX\_cmap[] : An array containing the color map. If XX\_alpha!=0, then each array element contains 4 values, in the ARGB order, otherwise just simple RGB values.

In the above descriptions, XX is replaced by the image name (with any punctuation marks removed).

NOTES

BUGS

SEE ALSO

## 1.12 Vlab YUVN

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## REXX TEMPLATE

LOAD:  
SAVE: <NA>

## LOAD FORMATS SUPPORTED

Vlab YUVN. Alpha channel extensions are not currently supported.

## SAVE FORMATS SUPPORTED

## EXTENSIONS SUPPORTED

ANNO, AUTH. (loading only)

## DESCRIPTION

The YUVN image format is a rare format used (as far as I know) only by the VLab digitizing software by MacroSystem GmbH.

Since the format is uncompressed, this is an inefficient method of storing information, and this is why I chose not to support saving YUV. However, if you need it, drop me some mail and I'll try to support saving YUVN images in the next release.

## NOTES

## BUGS

Since I don't have very many YUV pictures, so I wasn't able to test this loader module thoroughly. If you have a spare VLab scanner, try to test the module as much as you can. Even better, send me some YUV images that have been saved with a variety of options.

## SEE ALSO

## 1.13 SGI TIFF

## REXX TEMPLATE

LOAD: <NA>  
SAVE: <NA>

## LOAD FORMATS SUPPORTED

Striped or scanlined Greyscale, RGB, and RGBA images, with PackBits compression. No JPEG or CCITT yet.

LZW is not supported anymore.

## SAVE FORMATS SUPPORTED

N/A

## EXTENSIONS SUPPORTED

None.

## DESCRIPTION

The TIFF image format is arguably the most versatile around. Designed by Silicon Graphics, it is meant to hold almost any kind of imaginable image. This causes it to be a very difficult format to support, as the loader module has to know a lot. At the moment,

the bulk of the work is being done by the libtiff library by Sam Leffler of SGI (see the Info box of the iomod to see which library version is used).

The good thing about TIFF is that almost any professional program supports it, and it is often the only format that is accepted by professionals. This is probably due to the fact that the other two common formats, GIF and JPEG are not suited for lossless transportation of 24-bit images.

#### NOTES

The TIFF.iomod can no longer save LZW. You should be noted that in case you have somehow found this module (from an earlier release) I have not paid the LZW license, which means that should you use any TIFF files you have built using PPT, you (or your system operator) should pay the 5000USD license fee to Unisys ([www.unisys.com](http://www.unisys.com)). This license fee applies only to graphics published in the World Wide Web. For more information, see Unisys web page.

Alternatively, use a commercial program to touch up the images.

#### BUGS

Does not support half of the formats. Chokes if the image is larger than 32767x32767 pixels (really!). No extensions are supported. Requires a 68881 co-processor.

#### SEE ALSO

## 1.14 Lossy image compression

Lossy image compression means that in order to achieve greater compression level, some of the information in the original image is discarded. This degradation of the image is usually not visible to the eye, since the eye can be fooled into thinking no degradation has happened. However, if the image is compressed too much, then you're gonna see some so-called artifacts in the resulting image.

## 1.15 "

#### REXX TEMPLATE

LOAD:  
SAVE:

#### LOAD FORMATS SUPPORTED

#### SAVE FORMATS SUPPORTED

#### EXTENSIONS SUPPORTED

#### DESCRIPTION

#### NOTES

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BUGS

SEE ALSO

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