GraphicConverter V1.6.2

A converter for the Macintosh®

Documentation

©1992-93, Thorsten Lemke

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1.   Introduction

1.1. Options

GraphicConverter converts the most famous ATARI, Amiga and IBM formats to Macintosh formats and back.

Additional you can edit pictures and generate lists with picture informations.

1.2. Requirements

GraphicConverter needs a Mac II (or LC), System 7 and 2 MB free memory.

1.3. Registration

GraphicConverter is Shareware. You can test the program. If you like it, you should registrate yourself.

The registration costs:

Germany	$20
Europe	$25
Rest of the world	$30

Send the money or Eurocheque to the following address:

> Thorsten Lemke
> Insterburger Str. 6
> W-3150 Peine
> Germany

The registration contains two updates.

A german version is also available.

1.4. Restrictions

GraphicConverter should only be copied in the complete version with the program, documentation and 'read-me' file.

1.5. Errors

If you find some errors in the program, please send me a list.

1.6. For me

If you have informations about other graphic formats, please send me a copy and a disk with some files in that format.

1.7. Thanks

I thank the following persons for their help: Wolfgang for the dither algorithms and Jochen for testing.

2. Preface

2.1. Words and Terms

You have to be common with the basic use of your Macintosh. I use the usuall terms in the following documention.

2.2. Installation

The installation is very simple. You only have to copy the GraphicConverter on your harddisk. No other files are needed. (GraphicConverter generates automatic a preferences file in your preferences folder of the system folder.)

3. Menus

3.1. Apple-Menu

The **Apple** Menu gives you information about the GraphicConverter. Also it contains the desk accessories and the files in the apple folder.

Apple Menu
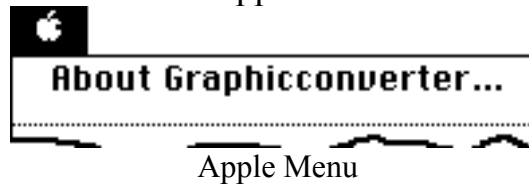
3.1.1. About GraphicConverter…

This function gives you information about the version and the shareware agreement.

3.2. File Menu

The **File** Menu contains all functions for the in- and output of pictures.

```
 File
 New          ⌘N
 Open         ⌘O
 Close        ⌘W
.............................
 Save         ⌘S
 Save as
.............................
 Slide Show
.............................
 Convert more...
.............................
 Page Setup
 Print        ⌘P
.............................
 Preferences
.............................
 Quit         ⌘Q
```

File Menu

3.2.1. New

You get a dialog to set the following things:

① Width - the width of the picture
② Height - the height of the picture
③ Depth - the bits per pixels (1, 2, 4, 8, 16 or 32)

GraphicConverter sets the color table to the system color table of the choosen depth and opens an new empty picture with your size.

3.2.2. Open

You use this function to open a picture or a layout. Additional you can select a filter with the popup menu (detect automatic, PICT etc.). If you check the „Preview" box, GraphicConverter gives you additional informations for an selected file.

3.2.3. Save

With this function you can save the content of the active window with its name. If you didn´t have definded a name you get a box like in „Save as".

3.2.4. Save as

You save the content of the active window with a new name and format.
You choose the format with the popup-menu. If you select TIFF or IFF then you get a additional popup-menu. You select with this menu the type of the compression. You should prefer „uncompressed" for TIFF and „RLE" for

IFF. If you choose "Save only selection", GraphicConverter saves only the selection.

3.2.5. Slide Show

You choose one file of a folder. GraphicConverter then displays all pictures in that folder.

☞   You stop the slide show with ⌘-..

3.2.6. Convert more…

You get a dialog to convert or copy more files. You use it like the standard file dialog. At the left you see the source and at the right the destination.

☞   If you convert GEM-Metafiles into PICT´s, the PICT contains the original vector informations.

3.2.7. Page Setup

You choose the format and quality for prints.

3.2.8. Print

GraphicConverter prints the content of the active window.

3.2.9. Preferences

You get a dialog to set the preferences for the following sections: display, open, save and slide show. You get for the sections the following points:

Display

Anti-Aliasing - you allow the MAC to dither pictures if they have not the original size. You get so a better view, but Anti-Aliasing slows the displaying.
Display Toolbox automatic - you get automatic a toolbox if you open or new a picture
Display Information automatic - you get automatic a information window if you open or new a picture

Open

Automatic resize - if you select one of the following three points the graphicconverter resizes the picture:

Format	Source Pixels	Dest. Pixels
VGA (256 Colors)	320x200	320x240
EGA (16 Colors)	640x350	640x480
Atari (4 Colors)	640x200	640x400

GEM-Metafile size - you set maximum size of GEM-Metafiles
Convert Font - you set the relations between GEM- and MAC-fonts
Change Filetype - graphicconverter automatic sets the filetype of a picture to his own when you load a file

Save

Custom icon - GraphicConverter builds automatic a file icon that shows a little portrait of your picture

Slide Show

Display name - displays the name of the current picture at the left top corner

Grow up little pictures - resizes little pictures to the full screen size
Minimal showtime - sets the minimal time the picture appears
Display errors - displays errors in a slide show
Endless - display automatic after the last picture the first
Print Catalog
Margins - you set the margins of the page
Start page - you set the page offset

3.2.10. Quit
You exit the GraphicConverter.
GraphicConverter saves the changes of the preferences automatically.

3.3. Edit Menu

You find in this menu functions to edit pictures and exchange them with other applications.

```
┌─────────────────────────────────┐
│ Edit                            │
├─────────────────────────────────┤
│  Undo                      ⌘Z    │
│  ···························      │
│  Cut                       ⌘H    │
│  Copy                      ⌘C    │
│  Paste                     ⌘U    │
│  Clear                          │
│  Copy as...                     │
│  ···························      │
│  Select all                ⌘A    │
│  Select exist                   │
│  ···························      │
│  Segment                        │
│  ···························      │
│  Show Clipboard                 │
│  ···························      │
│  New Picture with Clipboard     │
└─────────────────────────────────┘
```
Edit Menu

3.3.1. Undo

You undo the last drawing in the active window. If undo is possible you see the function to undo in the menu.

3.3.2. Cut

You copy the content of the selection in the active window to the clipboard and delete the content of the selection.

3.3.3. Copy

You copy the content of the selection in the active window to the clipboard.

3.3.4. Paste

If a PICT is in the clipboard, then the program insert it in the active window.

3.3.5. Clear

GraphicConverter deletes the content of the selection in the active window.

3.3.6. Copy as

You get a dialog to specify the copy options for the selection. You set the size, scale or resolution in the dialog.

☞ This function is usefull to copy the selection with the correct size and the original resolution (you lose no points).

3.3.7. Select all

You select the complete content of the active window.

3.3.8. Select exist

You select only the content of a picture and not the unique coloured borders.

3.3.9. Segment

You destroy the non selected parts of a picture and get the selection as the result.

☞ You save memory with this function.

3.3.10. Clipboard

You get a window with the content of the clipboard.

3.3.11. New Picture with Clipboard

You get a new picture with the content of the clipboard.

3.4. Picture Menu
The **Picture** menu allows you to change the complete content of a picture.

```
┌─────────────────────────┐
│ Picture                 │
├─────────────────────────┤
│ Hide Information    ⌘I  │
│ Hide Toolbox        ⌘K  │
│ ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄ │
│ Edit...                 │
│ Size                 ▶  │
│ Colors               ▶  │
│ Invert                  │
│ Rotate               ▶  │
│ Mirror               ▶  │
│ ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄ │
│ Full picture        ⌘G  │
│ ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄ │
│ Play                ⌘>  │
└─────────────────────────┘
```
Picture Menu

3.4.1. Information
A little information window appears in the right, lower edge of the screen, which shows some details about the picture in the active window.
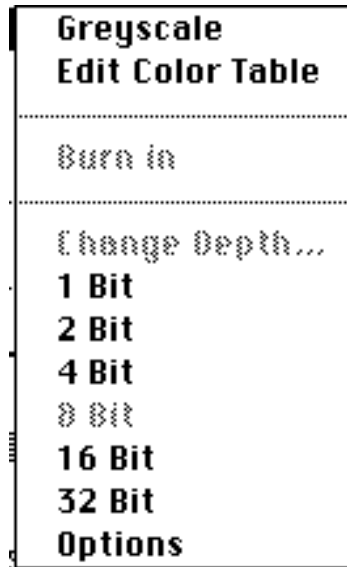
3.4.2. Toolbox
You get a new window with drawingtools. See also "Toolbox".

3.4.3. Size
You get a submenu to select the displaysize of the active window. If you select a procent number you resize the window with that number. Otherwise you get a dialog to set the procent or the size.

3.4.4. Colors
You get a submenu to change the colors of the active window.

Submenu for the colors

3.4.4.1. Greyscale
You change the colortable to a greyscale color table.

☞ You can only change the colors of pictures with a depth from 1 to 8 bit.

3.4.4.2. Edit Color Table
You get a dialog to edit the colors of the color table.
If you click behind the numbers, then you increment or decrement the number by 100.

☞ You can only change the colors of pictures with a depth from 1 to 8 bit.

3.4.4.3. Burn in
You copy the picture in the changed size in a new bitmap.

☞ Undo not possible!

3.4.4.4. Change Depth
You change the color depth of the picture. If you reduce the color depth I use the Median Cut algorithm to calculate the best palette and a color dither to get best results.

☞ Undo not possible!

3.4.4.5. Options
You get a dialog to set the options for change depth:
- you can use the system color table or the optimized color table
- if you use the optimized color table, you can reserve some colors

3.4.5. Invert
You invert the image of the picture in the active window. If you have a selection you invert the selection.

3.4.6. Rotate
You get a submenu to select the rotation (90˚, 180˚ or 270˚).

3.4.7. Mirror
You get a submenu to select the mirror (horizontal or vertical).
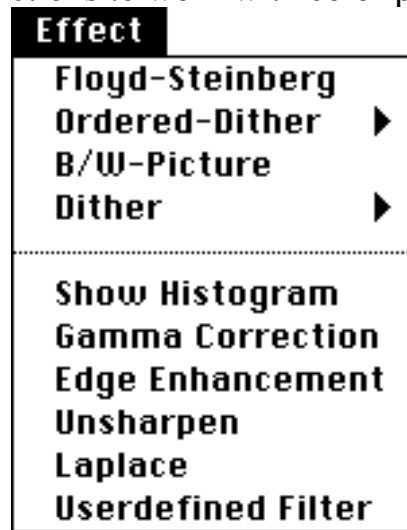
3.4.8. Full Screen
You display the picture in front of a black background.

3.4.9. Play
You play a film in front of a black background (if one is in the active window).

3.5. Effect Menu

The Effect Menu contains functions to work with color pictures.

Effect menu

3.5.1. Floyd-Steinberg

You convert the picture with Floyd-Steinberg-Algorithm in a black and white picture with the same size.

☞   You generate a new picture and don´t change the original.

3.5.2. Ordered-Dither

You get a submenu to select the squaresize (2x2, 4x4 oder 6x6). GraphicConverter dithers your picture with the selected size.

3.5.3. B/W-Picture

You convert the picture direct to a black and white picture.

☞   You generate a new picture and don´t change the original.

3.5.4. Dither

You get a submenu the select the size (2x2 to 8x8) of one point in the destination picture.

You use dither do print out a color-picture with a printer with a better resolution than the monitor.

☞   If you print a 72dpi picture with 300dpi printer use a 4x4 matrix for dithern.

☞   You generate a new picture and don´t change the original.

3.5.5. Show Histogram

You get a dialog with the histogram of the picture.

3.5.6. Gamma Correction

You get a dialog to set the value for the gamma correction. You need this function for scanned pictures.

3.5.7. Edge Enhancement

You get a dialog to set the procent value for the edge enhancement.

☞ I convert the picture first to 32 bit.

3.5.8. Unsharp

You unsharp the complete picture.

☞ I convert the picture first to 32 bit.

3.5.9. Laplace

You let work a Laplace filter on your picture. This filter detects the edges.

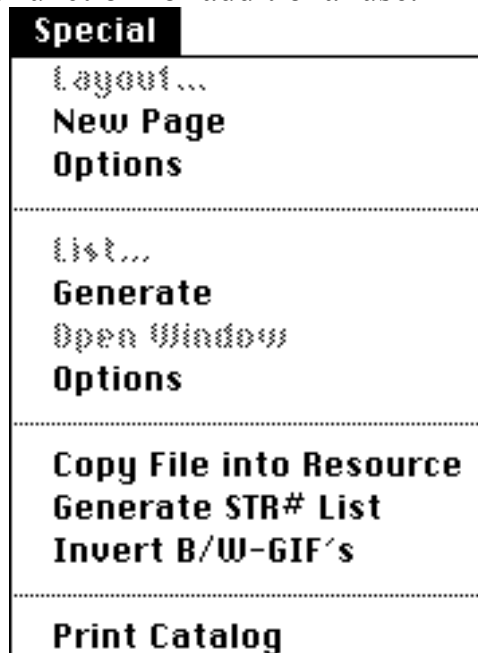☞ I convert the picture first to 32 bit.

3.5.10. Userdefined Filter

You get a dialog to define your own 3x3 filter matrix.

☞ I convert the picture first to 32 bit.

3.6. Special Menu
The **Special** menu contains function for additional use.

Special menu

3.6.1. Layout…
You generate and edit with the following two points a layout.

3.6.2. New page
You open a new page.

3.6.3. Options
You get a dialog to change the parameters of the layout:
- font, size und style
- name of a picture
- display the picture on the screen

3.6.4. List…
You generate and edit with the following three points a list

☞ You can open only one list.

3.6.5. Generate
You select in the standard getfile dialog a file of a folder. GraphicConverter opens then all files in the folder and looks on them. You get the result in a window. If a list-window is already open it is closes automatical.

3.6.6. Open Window
If you close a list-window, you reopen it with this function.

3.6.7. Option
You get a dialog to change the parameters of the list:
- font, size und style
- margins

3.6.8. Copy File into Resource
You copy with this function the datafork of a file into the resourcefork of another file:
1. You select the source file.
2. You select the destination file.
2. You select the new resource type.

3.6.9. Generate STR# List
You generate a list with the contents of one STR# resource.

☞ I added this function because it is in ResEdit not possible to print a complete STR# resource

3.6.10. Invert B/W-Gif´s
You invert all B/W-GIF´s of a folder.

☞ You need this function because B/W-GIF´s from an IBM are often inverted.

3.6.11. Print Catalog
You produce a catalog with all pictures of one folder. The catalog displays every picture with its name and size. Additional you get the full path at the top und the page number at the bottom of the page. You set the margins and page offset with the menu point „Preferences".

3.7. Window Menu

The **Window** Menu allows you to arrange and select windows.

Window menu

3.7.1. Arrange

You get a dialog to arrange the open windows. You have the following possibilities:

1.   2.

3.   4.

3.7.2. Window Names

You bring the window with the selected name to the top.

4.   Edit

I discripe in this capital the tools to edit a picture.

4.1.   **Toolbox**

You have the following tools in your toolbox:

Lasso — Select
Rubber — Paint
Finger — Fill
Line — Zoom
Filled Rectangle — Rectangle
Filled Rounded Rectangle — Roundes Rectangle
Filled Ellpie — Ellpie
Pen Size
Pattern
Foreground Colour — Background Colour
Pen Mode — Contrast Control
Lightness Control — Color Control
Reset

Toolbox
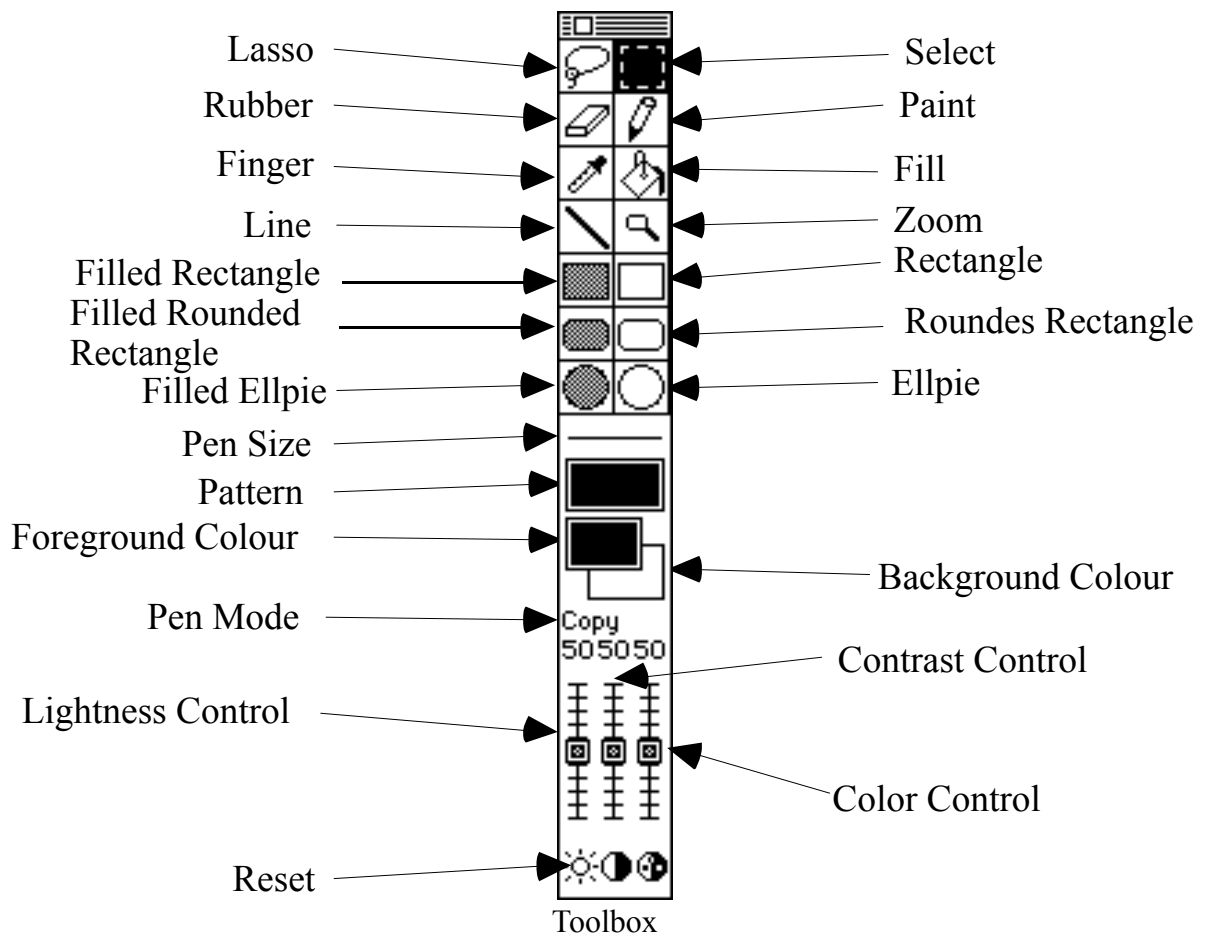
4.1.1. **Lasso**

You select and move a non rectangluar selection.

4.1.2. **Select**

You can select or move a frame.

☞   If you press the apple key, you select only the content of the frame.

4.1.3. **Rubber**

You erase with the background colour.

4.1.4. **Paint**

You draw with the current foreground colour and pensize.

4.1.5. **Finger**

You touch a pixel to make his color the foreground colour.

4.1.6. **Fill**

You fill a figure with the foreground colour and pattern.

4.1.7. Line
You draw a line.with the foreground colour and pen size.

☞   If you press the shiftkey, you can only draw vertical or horizontal lines.

4.1.8. Zoom
You zoom in the picture.

☞   If you press the altkey, you zoom out.

4.1.9. (Filled, Round) Rectangle
You draw a (filled, round) rectangle.with the foregroundcolour, pensize and pattern.

☞   If you press the shiftkey, you can only draw a square.

4.1.10.   (Filled) Ellpie
You draw a (filled) ellpie.with the foreground colour, pensize and pattern.

☞   If you press the shiftkey, you can only draw a circle.

4.1.11.   Pensize
You get a popup menu to select the pen size between one and ten points.

4.1.12.   Pattern
You get a popup menu to select the pattern for filling.

☞   You can tear of the menu.

4.1.13.   Foreground and Background Color
You get a popup menu to select the foreground or background color.

☞   You can tear of the menu.

☞   If you have a black and white picture the colors toggle between black and white.

4.1.14.   Pen Mode
Yout get a popup menu to select the transfer mode. You have the following modes:
Copy, Or, Xor, Bic, Not Copy, Not Or, Not Xor and Not Bic

4.1.15.   Controls
You set the lightness, contrast and color with the controls.

4.2. Changing the Selection
You change the size of a rectangluar selection with the little boxes on the frame.

5.   Layout

You can generate simple layouts. This means that you can place some pictures on a page with different sizes.

5.1. Insertion

You get a popup menu to choose one of the open pictures if you click in a layout window with pressing the apple key.

5.2. Moving

You move a picture if you click in one and move the mouse.

5.3. Change Size

If you select a picture, you change the size with the little squares.

6. List

The list window gives you an overview about pictures or "STR#" resources.

6.1. Change Page

if you click in the "+" or "-" button you change the page.

6.2. Borders

The black frame shows the printable size. The red border shows the selected frame.

7. Films

The GraphicConverter can play the following film formats:

① *PICS   - Animated PICT´s
② *.ANI- Animated NeoChrome
③ *.FLI - Autodesk Animator
④ *.GIF - Animated GIF´s

If you load a film the GraphicConverter displays in the left bottom corner of the window a play button.
If you click in this button GraphicConverter plays the film in the window. If you select „Play" from the „Picture" menu GraphicConverter plays the film in front of black background.

☞ You stop the slide show with ⌘-..

8.   Shortcuts

8.1. Everytime

Shortcut	Result
Alt key and click in the window title	You get a popup menu with all open windows. You bring the selected window to the front.

8.2. In Pictures

Shortcut	Result
Ctrl key in the content	You get a popup menu to select the picture view size.
Alt key in the content	You change the drawing funtion to finger.
Cursor keys	You change the size of a rectangluar selection.

8.3. In Layouts

Shortcut	Result
Apple key and click in the content	You get a popup menu with all open pictures to insert one.
Apple key and click in the content over a picture	Yout get a popup menu to select the picture size.

9.   Formats

I show in the table the picture formats my program can read and write.

Name	Read	Write	Discription
PICT	x	x	standard Macintosh format, include bitmaps or vectors
MacPaint	x	x	black and white picture, Resolution 576x720 pixels
TIFF	x	x	complex format from 1 to 24 bit per pixel GraphicConverter reads all classes (B, G, P, R) and the following compression algorithms: uncompressed, packbits, CCITT3 and lzw it writes uncompressed, lzw and packbits
PICS	x		Animated PICT´s
Startup Screen	x	x	contains a PICT in the resource fork of the file, the system displays it a the startup, if you put it in the systemfolder
GIF	x	x	from CompuServe Incorporated for pictures from 1 to 8 bit per pixel
PCX	x	x	from PC-Paintbrush for pictures with 1, 4 or 8 bit per pixel
SCR	x	x	from the Capture program for word for Windows and DOS, same as PCX
BMP	x		standard Windows format, not compressed
PIC	x		for pictures with 16 bits per pixel, not compressed
FLI	x		from Autodesk Animator, contains 8 bit film with the size 320x200 pixels
IFF	x	x	standard format of the Amiga
LBM	x	x	same as IFF for the IBM
PAC	x		from ATARI program STAD for black and white pictures with the size 640x400 pixels
Degas	x		from the ATARI program Degas for the following pictures: - 320x200 pixels, 16 colors (*.PI1, *.PC1) - 640x200 pixels, 4 colors (*.PI2, *.PC2) - 640-400 pixels, 2 colors (*.PI3, *.PC3)
NEO	x		from the ATARI program NeoChrome for 320x200 pixels, 16 colours pictures
PIC	x		ATARI screen shot, 640x400 pixels, 1 bit
SPC	x		from the ATARI program Spectrum 512 for 320x200 pixels, 512 colors pictures, automatically converted to 16 bit
ANI	x		film from NeoChrome, you need additional a NEO-file

GEM	x		GEM-Metafile, vector format of GEM-Draw
Imagic	x		from ATARI program Imagic, contents pictures in the three ATARI standard formats
IMG	x	x	GEM-Image, format of GEM-Paint (only black and white or 8 bit grayscale), you can only save black and white pictures
MSP	x		Microsoft Paint (Windows 2.0) only for b/w pictures
RIFF	x		Raster Image File Format
SHP	x		icon library of the programs Lighting Press and Printmaster
TGA	x		Truevision Targa Format contains pictures with 1 to 32 bits per pixel

10. Appendix

10.1. Improvements

Version 1.5.1
  - program reads CCITT3 and LZW compressed TIFF´s
  - diashow shows films (PICS, FLI etc.)
  - diashow can display the content of subfolders
  - new functions: Segment and Select exist
  - you can rotate, mirror and invert selections
  - GraphicConverter has new better icons for documents

Version 1.5.2
  - you can´t open windows with the same name
  - the information window opens direct under then picture window
  - I added some forgotten translations
  - in the open dialog is a new button "Open PICT with 32 bit", you need this for
    JPEG compressed PICT´s because the picture utility package analyze 1 bit

Version 1.5.3
  - I display now the popup menus in the toolbox so that they are visible everytime

Version 1.5.4
  - you can now save pictures in the GIF format
  - you can now save TIFF pictures LZW compressed

Version 1.5.5
  - you can now open HAM-IFF pictures
  - I find a error in the PCX load routine

Version 1.5.6
  - you can now open pictures that are compressed with the old LZW-scheme

Version 1.5.7
  - new functions: Histogram, Gamma Correction and Edge Enhancement
  - if you reduce the color depth I use now then Median Cut algorithm and a color
     Floyd Steinberg
  - you can now save pictures in the Image-Format

Version 1.5.8
  - I solved problems with PCX
  - I improved the preferences - you get one box for the preferences for display, open,
    save and diashow

Version 1.6
  - you can now convert more pictures at one time

Version 1.6.1
  - new format SHP

Version 1.6.2
  - new function print catalog
  - you can now open TIFF´s with n