Image Alchemy

Version 1.10

Addendum

Handmade Software, Inc.

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Contents

Chapter 0

Chapter 1 Installing Image Alchemy

Chapter 2 Image Alchemy PS

Chapter 3 Conversion Options

Image File Formats

Chapter 4 Other Options

0

Introduction to this Addendum

Why an Addendum?

This addendum covers changes made to Image Alchemy and Image Alchemy PS since the manual was printed. These changes consist of new file formats, improvements in existing file formats, and additions and changes to other options.

New file formats:

- Adobe Photoshop
- ALPS (output only)
- Epson Stylus
- FLC (input only)
- Imaging Technology
- Intergraph
- Iris CT
- JEDMICS CCITT4
- OS/2 Icon
- Pixel Power Collage
- PNG
- Raster Graphics (output only)
- RLC
- Sharp GPB
- Spaceward Graphics
- Scitex CT
- US Patent Image

Changes to existing file formats:

- Adobe Acrobat PDF - added reading (Image Alchemy PS Only)
- EPS - added output compression
- Erdas - Img files can now be read
- GIF - Added transparency and multi-page support
- JPEG - Added multiple pass support
- PCL - Added support for specifying paper size and tray
- PhotoCD - Now supported on all platforms

New options:

- Do not strip extension before adding new extension
- Multi-page Output
- Only scale if too large
- Preserve palette while scaling
- Set Horizontal/Vertical DPI
- Slide show (MS-DOS Only)
- Transparency
- Use input file format for output
- Use input filename for output
- Use 3 letter extensions

Changes in Alchemy PS options:

- Colour Mode
- Pages

Changes to existing options:

- Multi-page Input
- Override Input Type

1

Installing Image Alchemy

Overview

The installation instructions found in the manual are still current. The MS-DOS versions of Image Alchemy and Image Alchemy PS are now distributed with compressed executable files. The install.exe program automatically decompresses them during installation.

If you are updating or upgrading your copy of Image Alchemy the install program will replace the old version of Image Alchemy with this version. It will not remove any other files.

Version 1.10 of Image Alchemy/386 and Image Alchemy PS for PC's now have an executable named alchlong.exe. Alchlong.exe is a 32 bit Windows 95/NT console application; it can still be run from the command line. Alchlong.exe will use both processors on a dual cpu NT machine. It also supports long filenames.

2

Image Alchemy PS

Reading PDF Files

In addition to the other file formats it can convert, Image Alchemy PS now has the ability to read Adobe Acrobat PDF files. The options that you can use when reading PDF files are the same as the options for reading PostScript and EPS files.

Refer to Chapter 3 in the Image Alchemy PS manual for information on these options.

Threading

Image Alchemy PS is now threaded (except for the non-alch386 version of Image Alchemy PS for MS-DOS). Threading combines the PostScript module and the main Alchemy conversion module into one program. This allows the PostScript data to be RIPed and immediately passed to the rest of Alchemy, as opposed to RIPing the entire image and then converting it. The new method has several advantages:

- Faster, especially for multi-page PostScript files.
- Makes use of multiple CPUs (UNIX and NT versions).
- Uses less disk space.
- When sending files directly to a plotter output will begin sooner with alch386.exe under DOS or alchlong.exe on Windows 95/NT. The UNIX versions of Image Alchemy also start generating data soon after starting a conversion. However, the spoolers used by UNIX systems typically wait until data is completely received before sending.

Any references to `alchps` in the old manual should be disregarded, as that program is no longer needed except by the 16 bit MS-DOS executable (alchemy.exe).

Colour Mode -Zm

Specify whether to render the image in black and white, grayscale, or colour.

Syntax

-Zm *mode*

Parameter

mode:

0:Black and White - 1 bit
1:GrayScale - 8 bit
2:RGB Colour - 24 bit
3:CMYK - 4 bit
4:CMYK - 32 bit

The default is Black and White.

Comments

Alchemy defaults to rendering the image in 1 bit black and white.

If you specify grayscale or RGB colour, Alchemy will automatically fall back to grayscale or black and white if the image doesn't use any colour or grayscale, respectively. However, the memory, disk space requirements, and processing time all increase dramatically when telling Alchemy to render in Mode 1 or Mode 2, so don't specify those modes if it is not necessary.

You may want to specify grayscale output even when converting a PostScript file which will be printed on a black and white device. This way Alchemy can do a better job raster scaling the image and you have control over the dithering type used. If you specify black and white mode the only dither available is the halftone dither.

Using CMYK - 4 bit mode can significantly speed up conversion times, since the amount of data written is less than in the RGB Colour or CMYK - 32 bit modes. However the only dither algorithm available with this mode is a digital halftone.

Using CMYK - 32 bit mode can be useful if you have colour separations in the PostScript file (for example, CMYK EPS files). The CMYK - 32 bit option will preserve these separations so the colour representations will be more accurate and has an advantage over the CMYK - 4 bit mode in allowing any of the dithering types to be used.

Examples

Convert the file poster.ps to a colour RTL file for plotting on a NovaJet plotter:

```
alchemy poster.ps -Zm2 --r10
```

Do the same thing, but go directly to 4-bit CMYK:

```
alchemy poster.ps -Zm3 --r10
```

Do the same thing, but generate a 32-bit CMYK file and then convert it to RTL using dither type 3:

```
alchemy poster.ps -Zm4 -d3 --r10
```

Pages -Zp

Specify which pages to render.

Syntax

-Zp

-Zp *page*

-Zp *startPage endPage*

Parameter

page:
Specify page number
The default is page 1.

startPage:
Specify beginning page number.
endPage:
Specify ending page number.

Comments

If the -Zp option is used without a following parameter all pages in the input file(s) will be converted.

If you specify a single parameter after the -Zp option, only that page will be converted. If you specify two parameters all pages between those two numbers will be converted (inclusive, e.g. -Zp 2 3 will convert pages 2 and 3).

When converting multiple pages, either multiple files will be written (each containing a single page) or a single multi-page file will be written, depending on the use of the ---U option. See the ---U option for more information and the examples section below for an example.

Examples

Convert page 2 of the file test.ps to a GIF file called test.gif:

```
alchemy test.ps -g -Zp 2
```

Convert pages 2 through 9 of the file test.ps to multiple GIF files:

```
alchemy test.ps -g -Zp 2 9
```

Convert pages 2 through 9 of the file test.ps to a single multi-page GIF file, called pages.gif:

```
alchemy test.ps -g1 -Zp 2 9 ---U pages.gif
```

Convert all the pages in the file test.ps to a single multi-page GIF file, called pages.gif:

```
alchemy test.ps -g1 -Zp ---U pages.gif
```

Generating a PostScript file using Microsoft Windows 95

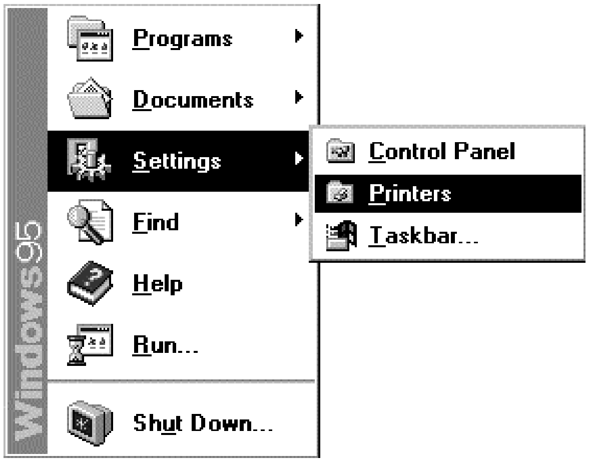
Generating a PostScript file which can be read by Image Alchemy PS when running Microsoft Windows 95 requires setting up a PostScript output device that Windows can print to.

Microsoft Windows 95 includes several different PostScript device drivers, including drivers for the Apple LaserWriter, HP LaserJet PostScript, NEC Colormate PS, etc. However most of these do not include colour support, therefore we recommend selecting the QMS ColorScript 100 as the printer driver.

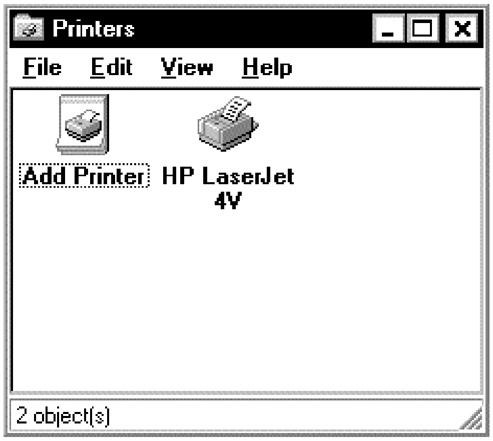
You accomplish this with the following procedure:

Setting up Microsoft Windows 95

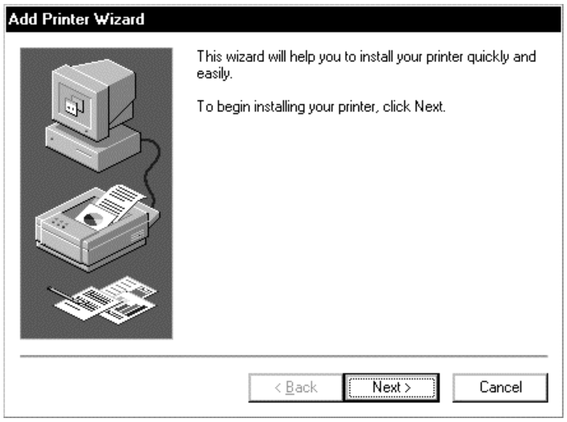
Select **Printers** from the **Start** menu under **Settings**:



This brings up the Printers window. Double click on the **Add Printer** icon:



This brings up the Add Printer Wizard:

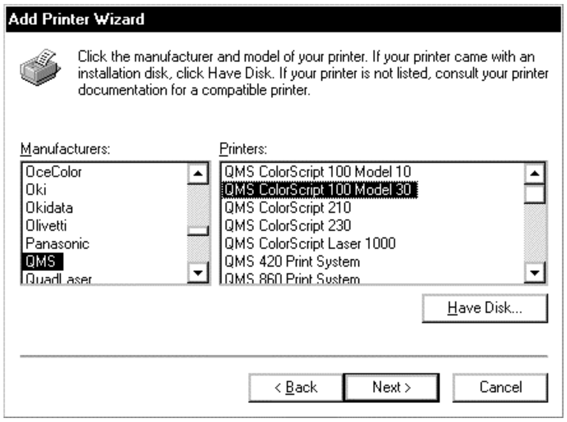


Add Printer Wizard

This wizard will help you to install your printer quickly and easily.

To begin installing your printer, click Next.

Click **Next >** to continue with the procedure.

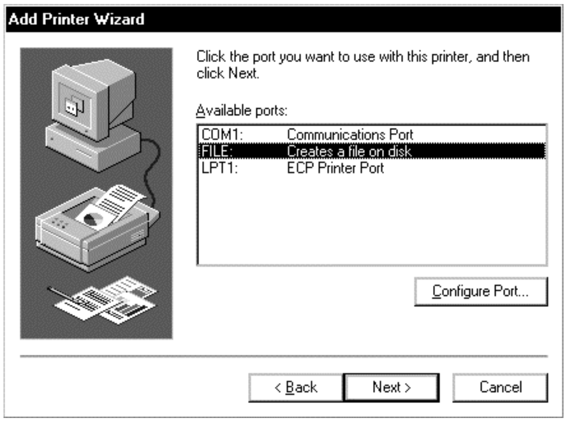


Add Printer Wizard

Click the manufacturer and model of your printer. If your printer came with an installation disk, click Have Disk. If your printer is not listed, consult your printer documentation for a compatible printer.

Choose **QMS** from the **Manufacturers:** window, then select **QMS ColorScript 100 Model 30** from the **Printers:** list.

Now click on the **Next>** button to bring up the connect dialog box:



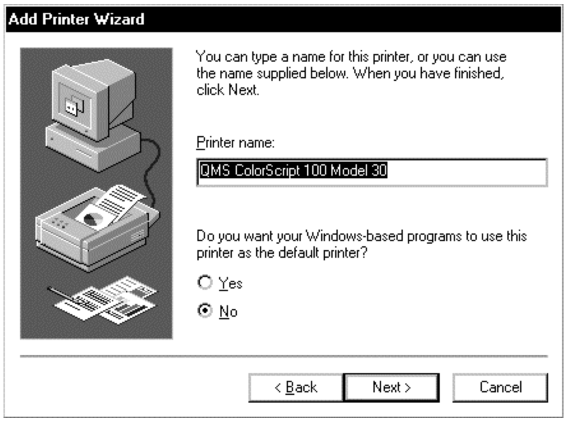
Click the port you want to use with this printer, and then click Next.

Available ports:

COM1:	Communications Port
FILE:	Creates a file on disk
LPT1:	ECP Printer Port

Select the **FILE:** item from the **Available Ports:** list. This indicates to Windows 95 that the device doesn't actually exist and that output sent to that driver should be directed to a file. Click on the **Next>** button to accept this choice.

If you want to make this the default printer you can select **Yes** to the "Do you want … to use this printer as the default printer?" question. This isn't recommended, since it will make it more difficult to use your normal printer with Windows. You may want to change the name of the printer (perhaps to "Generate PostScript file") to better reflect what this printer choice is used for.



Add Printer Wizard

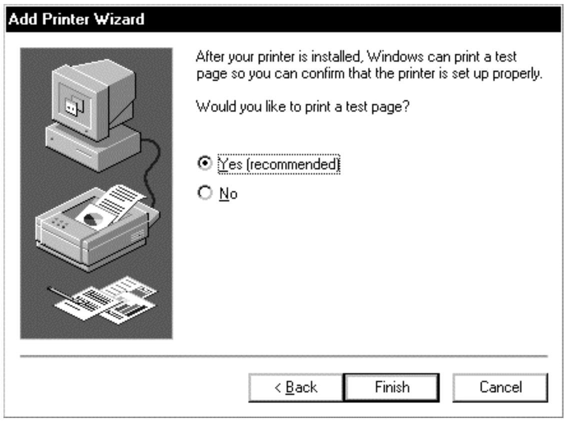
You can type a name for this printer, or you can use the name supplied below. When you have finished, click Next.

Printer name: QMS ColorScript 100 Model 30

Do you want your Windows-based programs to use this printer as the default printer?

○ Yes
● No

Click **Next >** to finish the installation procedure:



Add Printer Wizard

After your printer is installed, Windows can print a test page so you can confirm that the printer is set up properly.

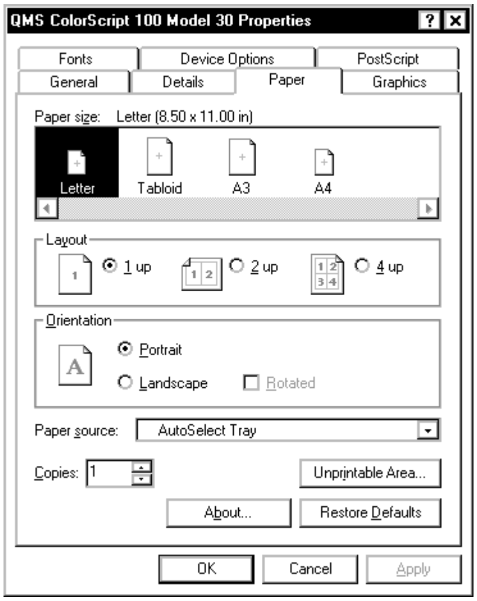
Would you like to print a test page?

● Yes (recommended)
○ No

You may be prompted to insert one or more of the Windows 95 distribution diskettes at this point.

The printer is now available for use. However, there are a couple of settings under the Properties sheet that you may want to change. To bring up the Properties sheet select the printer by single clicking on it and choosing Properties from the File menu.

Under the Paper tab you can select whether you want **Portrait** or **Landscape** to be the default choice for printing.


QMS ColorScript 100 Model 30 Properties

Paper size: Letter (8.50 x 11.00 in)

Layout: ● 1 up ○ 2 up ○ 4 up

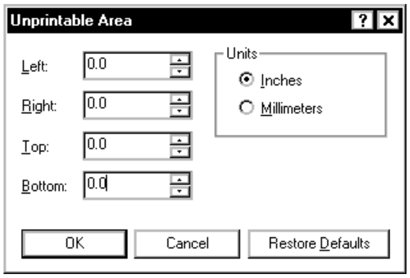
Orientation: ● Portrait ○ Landscape □ Rotated

Paper source: AutoSelect Tray

Copies: 1

The **Paper Size** selection is best left at 8.5 x 11 in, since that is the default size that Alchemy PS expects for PostScript files. The **Paper Source** selection is not used by Alchemy PS.

Click on the **Unprintable Area...** button to bring up the unprintable area dialog:


Unprintable Area

Left: 0.0

Right: 0.0

Top: 0.0

Bottom: 0.0

Units: ● Inches ○ Millimeters

These can all be set to zero, since Alchemy PS does not have any unimageable area near the edges. If you will routinely be sending files that you convert with Alchemy PS to a hard copy output device, such as a PCL printer, you can set the margins appropriately for that device. Windows will then warn you if you are printing too close to the edge.

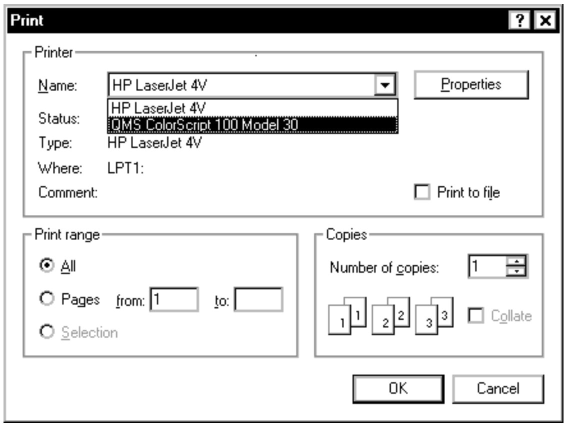
Now click on the various **OK** buttons to close the dialog boxes and accept the choices you have made.

This completes the setup. You are now ready to print a PostScript file.

Printing to a PostScript file

To print to a file select **Print...** from the **File** menu. This will bring up a dialog box similar to the one shown; different programs have different dialogs (this example is from the Paint program, distributed with Windows 95).

Select the printer **QMS ColorScript 100 Model 30** as the printer to print to and click **OK**. If you setup this device as the default printer you can skip this step. You can also change the **Orientation** choice at this point.



Print

Printer

Name: HP LaserJet 4V

HP LaserJet 4V
QMS ColorScript 100 Model 30

Status:

Type: HP LaserJet 4V

Where: LPT1:

Comment:

☐ Print to file

Print range

● All

○ Pages from: 1 to:

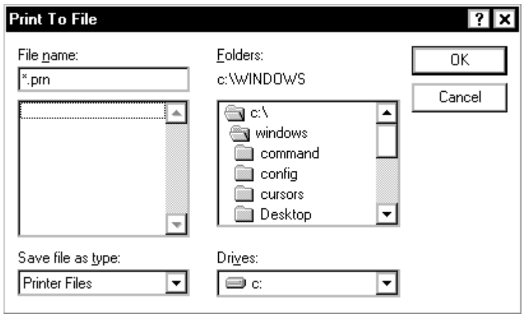
○ Selection

Copies

Number of copies: 1

☐ Collate

Selecting **OK** will bring up the following dialog:



Print To File

File name: *.prn

Folders: c:\WINDOWS

c:\
windows
command
config
cursors
Desktop

Save file as type: Printer Files

Drives: c:

Enter the file name of the PostScript file to be generated. This file will be created and may be converted with Alchemy PS.

3

Conversion Options

Introduction

This section lists the new and changed options that Image Alchemy v1.10 supports.

Name of format -option

Overview of file format.

Syntax

Description of syntax.

Parameters

Brief description of the parameters. Those parameters which require a detailed explanation are further documented under the comments section below.

Extensions

The extensions commonly used for this image format. When multiple extensions are listed Alchemy writes files using the first one, but will check for files using all extensions (in the order listed). Some formats use more than one file per image; in that case the extension for each portion of the image is listed. Four letter extensions are skipped on MS-DOS systems.

Creator

The company or individual who created this image format. Please contact them for more information on the format.

Used by

Programs or types of software that use this image format.

Variations

A list of the variations supported by Image Alchemy.

Limitations

Any known limitations that Image Alchemy has when reading or writing this image format.

Comments

Miscellaneous things of which you should be aware.

Related options

Other Alchemy options that affect the reading or writing of this image format. Note that -8, -24 (and, for some formats, -15, -16, and -32), -c, and -b options have an effect for most image formats and are not listed explicitly.

Examples

Sample conversions involving this image format.

Adobe Acrobat PDF --d

Adobe Acrobat PDF (Portable Document Format) files are used by Adobe Acrobat.

Syntax

- -d [*compressionType*]

Parameter

compressionType:

0:None
1:Run Length
2:LZW
3:CCITT Group 3 fax
4:CCITT Group 4 fax
5:JPEG Low Quality
6:JPEG Medium Quality
7:JPEG High Quality

0:ASCII Encoding
10:Binary Encoding

The default is no compression and ASCII Encoding. Options are combined by adding (see below for an example).

Extension

.pdf

Creator

Adobe Systems Incorporated

Used by

Adobe Acrobat

Variations

Reads and writes 1 bit black and white, 8 bit grayscale, 8 bit paletted, and 24 bit colour images.

Limitations

CCITT Group 3 fax and Group 4 fax files are always 1 bit, black and white. Selecting either compression type will cause Alchemy to automatically convert the input image to black and white.

Comments

For more information on reading Adobe Acrobat files see Chapter 3 in this Addendum and in the Image Alchemy PS User's Manual.

Alchemy can write multi-page PDF files when used with the
- - -U option. See below for an example.

Related options

`---U` Write multi-page file

Examples

Convert the JPEG file sample.jpg to a Run Length compressed PDF file:

```
alchemy sample.jpg --d 1
```

Convert the JPEG file sample.jpg to a high-quality JPEG compressed PDF file with binary encoding:

```
alchemy sample.jpg --d 17
```

Convert all the pages in the TIFF file, doc.tif, to a multi-page Group 4 compressed PDF file (see the - - -U section below for more information):

```
alchemy doc.tif --d 4 -U ---U
```

Adobe Photoshop ---p

Adobe Photoshop files are used by Adobe Photoshop.

Syntax

- - -p [*compressionType*]

Parameter

compressionType:
0:None
1:Compressed

400: CMYK
The default is None.

Extension

.psd

Creator

Adobe Systems Incorporated

Used by

Adobe Photoshop

Variations

Writes 1 bit black and white, 8 bit grayscale, 8 bit paletted, and 24 bit colour images.

Comments

Alpha channel data can be read and written by using the -I option, see the appropriate section in the User's Manual for more information.

Related options

`-I` Include Alpha channel information

Examples

Convert the JPEG file sample.jpg to an uncompressed Photoshop file:

```
alchemy sample.jpg ---p
```

Convert the Targa file alpha.tga to a compressed Photoshop file, with alpha channel:

```
alchemy sample.jpg ---p1 -I
```

ALPS ---a

Alps files are used by Alps Micro Dry printers.

Syntax

---a

Extensions

.prn

Creator

Alps

Used by

Alps printers.

Variations

Writes 1 bit black and white, and 1 bit CMYK

Limitations

Write only.

Comments

Alps printers are capable of 300 and 600 dpi in colour or black and white. Alps printers also support 1200 x 600 dpi for black and white.

Examples

Convert the JPEG file sample.jpg to an Alps file five inches wide at 600 dpi.

```
      Alchemy sample.jpg ---a -Xb5i -+ -D600 600
```

Encapsulated PostScript (EPS) -e

EPS files are a subset of PostScript; they may be included by other PostScript files without requiring that the importing software be able to interpret the file.

Syntax

-e [*type*]

Parameter

type:

0:No preview
1:Device independent preview
2:TIFF preview

0:UNIX newlines
10:Mac newlines
20:MS-DOS newlines

0:Showpage
100:No showpage

400:CMYK

0:Uncompressed
1000:LZW
2000:CCITT Group 4 fax
3000:JPEG Low Quality
4000:JPEG Medium Quality
5000:JPEG High Quality

0:ASCII
10000:Binary

Options are combined by adding. The default is an uncompressed EPS file with a TIFF preview, UNIX newlines, and showpage (output type 2).

Extensions

.epsi
.eps
.epi

Creator

Adobe Systems, Inc.

Used by

PostScript printers

Variations

Black and White, Gray-scale, RGB, and CMYK.

Comments

For information about reading EPS files see Chapter 3.

If the output is black and white or gray-scale and is not compressed, it will work with any PostScript device. If it's colour, then the CMYK extensions or a level 2 device is required.

If you are writing an EPS file which you intend to send directly to a PostScript output device, such as a printer, you will want to write a file with no preview and include the showpage command.

EPS files are normally written using the UNIX newline convention. To write an EPS file with Macintosh newlines, add 10 to the preview type. To write an EPS file with MS-DOS newlines, add 20 to the preview type. See below for an example.

To omit the showpage command from the end of the EPS file add 100 to the preview type. Some software which imports EPS files does not correctly handle EPS files which contain the showpage command.

Related options

`-_`	Offset image
`--_`	Center image

Examples

Convert the file input.gif to an uncompressed colour EPS file called input.eps with no preview:

```
alchemy input.gif -e 0 -24
```

Do the same thing, but write out MS-DOS newlines:

```
alchemy input.gif -e 20 -24
```

Do the same thing, but use LZW compression:

```
alchemy input.gif -e 1020 -24
```

Convert the file input.gif to a gray-scale EPS file called gray.eps, with a device independent preview:

```
alchemy input.gif gray.eps -e 1 -b
```

Convert the file test.gif to a black and white EPS file called test.eps, with no preview and MS-DOS newlines:

```
alchemy test.gif -e 20 -b -c2
```

Epson Stylus --K

Epson Stylus files are used by Epson Stylus printers.

Syntax

- -K [*outputType*]

Parameter

outputType:

0:Microweave
10:Disable Microweave

0:Uni-directional
20:Bidirectional

The default is Microweave and Uni-directional. Options are combined by adding.

Extensions

.prn

Creator

Epson

Used by

Epson Stylus printers

Variations

1 bit, CMYK.

Limitations

Epson Stylus files made by Image Alchemy can only be 720, 360, or 180 DPI. If you specify any other DPI value the output file will automatically switch to one of those.

Comments

Since the Epson Stylus format is a 1-bit CMYK format you may want to use gamma correction when converting a colour image to this format. See the -G option in the Image Alchemy User's Manual for more information.

Related options

`-G`	Undercolour removal

Examples

Convert the file page1.tif to a 360 DPI Epson Stylus file, scaled to 5 inches wide:

```
alchemy page1.tif --K -D 360 360 -Xb5i -+
```

Do the same thing, but use a gamma correction value of 2.0:

```
alchemy page1.tif --K -D 360 360 -Xb5i -+ -Gi1.0 -Go2.0
```

Erdas IMG

Extensions

.img

Creator

Erdas

Used by

Erdas

Limitations

Because of a shortage of test files this feature has not been extensively tested; if you have Erdas IMG files which Image Alchemy cannot correctly read please contact us.

Comments

We will be adding Erdas IMG output, if you are interested in that feature please contact us.

Examples

Convert the Erdas IMG file sample.img to HP-RTL for an HP series plotter.

```
alchemy sample.img --r7
```

FLC

FLC files are a simple animated file format.

Extensions

.flc .fli

Creator

Autodesk

Used by

Various shareware readers.

Limitations

Read only.

Examples

Convert the FLC file, movie.flc, to a multi-page GIF file.

```
alchemy movie.flc -g1 -U ---U movie.gif
```

GIF -g

GIF files were developed by CompuServe as a machine-independent image file format. GIF files are the most popular way of storing 8 bit, scanned or digitized images. GIF files are frequently used for storing images on the WWW.

Syntax

-g [*type* [*delay* [*repeatCount*]]]

Parameter

type:

0:GIF87A
1:GIF89A

0:non-interleaved
10:interleaved

The default is GIF87A and non-interleaved. Options are combined by adding (see below for examples).

delay:

Specifies the delay between multiple pages in GIF files, in hundredths of seconds (a delay of 250 is 2.5 seconds). The default is 0 (display images with no delay between pages).

repeatCount:

Specifies the number of times the images are to be repeated. Indicating a repeat count of 0 causes the images to repeat continuously. The default is 0. This is a Netscape specific tag.

Extension

.gif

Creator

CompuServe, Incorporated

Used by

CompuServe
WWW
Everyone

Variations

Reads 1 through 8 bit GIF87A and GIF89A interleaved and non-interleaved files, single and multi-page.

Writes 1 through 8 bit GIF87A and GIF89A interleaved and non-interleaved files. Also writes images with transparency information and multi-page GIF images.

Limitations

Any text, overlays, pauses, palette changes, etc. are ignored when reading GIF images.

When writing a multi-page GIF file or one with transparency information, the GIF89A type must be used. Alchemy will automatically change to writing a GIF89A file in these cases.

Because GIF files only store the size of the palette to the nearest power of 2, the exact palette size is lost when converting to and from GIF files. For example, if you convert a 240 colour Sun Raster file to a GIF file and back to a Sun Raster file, the resulting Sun Raster file will have 256 colours.

Comments

GIF89A files are a newer variation of GIF files that were introduced in 1990. They allow the inclusion of transparency information, text, simple animation, and multiple pages in GIF files.

When writing a simple GIF file you will want to use the GIF87A variation, since the GIF89A extensions aren't necessary to store single images and some software still can't read GIF89A images. The advantages of GIF89A are: aspect ratio information is preserved, transparency information is stored, and multiple pages are allowed.

The GIF format includes a field for storing the colour to be used for the background when viewing files. Alchemy does not make use of this value. Alchemy sets the background colour to the darkest colour in the palette when viewing files and organizes the palette such that the first colour is the darkest colour when writing GIF files, if the palette is created by Alchemy (you can override this by using the -z option).

To write a GIF file with transparency information use the ---t option (see below). When writing a GIF file with transparency information Alchemy defaults to making the lightest colour the transparency colour; you can override this by using the - - -t option (see below for an example).

Multi-page GIF files are used by certain Web browsers (most notably Netscape Navigator 2.x). See the ---U command below for more information on writing multi-page files.

When writing a multi-page GIF file you may specify the delay, in hundredths of seconds, between images. If you do not specify a delay it defaults to 0 (which will display the images as quickly as possible). You may also specify a repeat count. This field is a Netscape specific tag that indicates how many times to display the sequence. The default is 0, indicating that the sequence is to repeat indefinitely

Alchemy will write a multi-page GIF file with a global palette if you use either the match to palette (-f) or false colour (-F) option, otherwise Alchemy will write local palettes. If you have a series of images which contain identical palettes you can force Alchemy to write a global palette by using the -F option and give the name of the first file (see below for an example). If you have a series of images which do not contain identical palettes but you still want to write a global palette you can use Alchemy to generate a multi-image palette file and then match each of the images to that palette using the -f option (see below for an example).

The LZW compression used in GIF files is patented by Unisys Corporation and used under license. If you write software to read or write GIF files you need to contact Unisys to arrange a license. See Appendix I in the Image Alchemy manual for contact information.

Related options

`---t`	Transparency
`---U`	Write multi-page file
`-z`	Palette Selection

Examples

Convert the image test.pcx to a GIF87A image:

```
alchemy test.pcx -g
```

Convert the file input.tga to a 16 colour GIF89A file:

```
alchemy input.tga -c16 -g1
```

Convert the image logo.pcx to a GIF89A image, using white as the transparent colour (white is the default transparent colour, so we do not need to specify 255 255 255 after the - - -t):

```
alchemy logo.pcx -g1 ---t
```

Do the same thing, with red as the transparent colour:

```
alchemy logo.pcx -g1 ---t 255 0 0
```

Write out a multi-image GIF file called output.gif, using the files image00.gif through image99.gif (this example will write out a local palette for each image):

```
alchemy image??.gif -g1 ---U output.gif
```

Do the same thing, but force Alchemy to write out a global palette (this assumes that all of the input gif images contain an identical palette):

```
alchemy image??.gif -g1 ---U output.gif -F image00.gif
```

If the images contained different palettes, but you still wanted a single, global palette, you could use two runs of Image Alchemy to do this. First you would use the Multi-Image Palette output option to generate a .pal file and then run alchemy again, matching each of the images to that palette:

```
alchemy image??.gif -L temp.pal -c256
alchemy image??.gif -g1 ---U output.gif -f temp.pal
```

Write out a multi-image GIF file called output.gif, using the files image00.gif through image99.gif (this example will write out a local palette for each image), specifying a delay of 1 second between images, the loop will repeat indefinitely:

```
alchemy image??.gif -g1 100 ---U output.gif
```

Do the same thing, but specify that the loop is to be displayed exactly once:

```
alchemy image??.gif -g1 100 1 ---U output.gif
```

Imaging Technology ---M

Syntax

---M

Extensions

.img

Creator

Imaging Technology

Used by

Imaging Technology software.

Variations

Imaging Technology files are always 8 bits per pixel, grayscale.

Comments

Image Alchemy searches for file with the extension ".img" and writes files with the extension ".img".

Examples

Convert the file sample.jpg to a Imaging Technology file.

```
alchemy sample.jpg ---M
```

Intergraph ---r

The Intergraph file format was developed by Intergraph Corp. and is used by them.

Syntax

- - -r [*compressionType*]

Parameter

compressionType:

    9:Run Length Compressed, black and white
    24:Group 4 compressed, black and white
    27:Run Length Compressed, RGB

The default is 24.

Extensions

.rgb

Creator

Intergraph Corp.

Used by

Intergraph Corp.

Variations

Reads and writes 1 bit black and white and 24 bit RGB images.

Limitations

If you need to read or write other type Intergraph files please contact us; we are happy to add support for any of the Intergraph formats.

Example

Convert page.tif to an Intergraph file

```
alchemy page.tif ---r
```

Iris CT ---Q

Iris CT is used by Iris printers.

Syntax	---Q
Extensions	.ct
Creator	Iris
Used by	Iris printers.
Variations	32 bit CMYK

Examples

Convert the file sample.jpg to Iris CT format.

```
      alchemy sample.jpg ---Q
```

JEDMICS CCITT4 ---E

Syntax ---E

Extensions .c4

Creator JEDMICS

Used by JEDMICS

Variations 1 bit per pixel black and white.

Comments JEDMICS files contain two images, a normal image and a reduced size preview image. Alchemy treats the normal image as page 1 and the preview image as page 2 for reading purposes (therefore you can use -U 2 to read the preview image).

Examples Convert the file sample.jpg into JEDMICS CCITT4 format.

```
alchemy sample.jpg ---E
```

JPEG/JFIF -j

JPEG is an image file format that uses a lossy compression technique to achieve high compression ratios. See Appendix C, JPEG Compression, for more information on the JPEG file format.

Syntax

-j[*coding*] [*quality* [*passes*]]

Parameters

coding:

Specify the type of entropy coding to perform.
none:default Huffman coding
h:optimum Huffman coding
The default is default Huffman coding.

quality:

1 through 100 (larger is higher quality)
The default quality is 32.

passes:

1:write one pass JPEG files
4:write four pass JPEG files
The default number of passes is 1.

Extension

.jpg

Creator

Joint Photographic Experts Group (JPEG)

Used by

WWW
Everyone else storing photographic images.

Variations

Gray-scale images are saved as single channel JPEG files; colour images are saved as three channel JPEG files.

Reads and writes baseline JPEG with CCIR-601 YCbCr colour space, interleaved components, Huffman coded.

Alchemy can read files with any component sub-sampling up to 4x4; it always writes 2h:1v 1h:1v 1h:1v.

Alchemy JPEG files comply with the industry standard 'JFIF' interchange format.

Limitations

JPEG files are always lossy, which means that the compressed image is not identical to the original image. At high quality factors (32 and above) this loss is generally so slight as to be barely noticeable. There is no quality factor which is guaranteed to be lossless.

Comments

By default, Image Alchemy uses a fixed set of Huffman tables to compress an image. If the -j is immediately followed by an 'h', Alchemy will generate a set of custom tables optimized for the image and quality factor. This usually produces 5-20% better compression (depending on the image content and quality factor) but requires an additional pass over the image data, so it takes longer to compress (there's no effect on the time it takes to decompress the image).

Quality may vary between 1 and 100; the default is 32. The higher the number the higher the quality of the image and the lower the compression ratio. Quality factors below 10 will produce images with significant loss of quality.

JPEG files are based on the Joint Photographic Experts Group (JPEG) CD 10918-1 draft standard.

Since JPEG compression was designed for use with continuous tone images (such as those produced by a scanner or digitizer), poor results can be expected when compressing line drawings.

Four pass files are useful when generating JPEG files which are going to be displayed on the WWW. A four pass file allows a rough preview of the image to be displayed quickly when using a browser which supports multi-pass JPEG files.

Related options

`-q` Apply Smoothing when decompressing a JPEG image.
Because JPEG compression works on 8x8 pixel blocks there may be discontinuities at the edges of these blocks producing block artifacts. Smoothing attempts to reduce these artifacts. Smoothing is really only necessary at very low quality settings (less than 10); even then the effects of smoothing are not particularly significant.

Examples

Convert the file, photo.tga, to a JPEG file called photo.jpg, using a high quality setting:

```
alchemy photo.tga -j70
```

Convert the file, photo.tga, to a JPEG file called photo.jpg, using a low quality setting and generating optimum Huffman tables:

```
alchemy photo.tga -jh10
```

Convert the file, photo.tga, to a JPEG file called photo.jpg, using four pass mode and a low quality setting:

```
alchemy photo.tga -j10 4
```

Convert the JPEG file, lores.jpg, to a PCX file using smoothing:

```
alchemy lores.jpg -p -q
```

OS/2 Icon --O

OS/2 Icon files are used by IBM OS/2.

Syntax

- -O [*outputType*] (Uppercase letter o)

Parameter

outputType :
    0:OS/2 2.0 and Warp
    1:OS/2 1.2
The default is OS/2 2.0 and Warp.

Extension

.ico

Creator

IBM Corp.

Used by

OS/2

Variations

Reads and writes 1, 4, 8, and 24 bit RGB files.

Comments

OS/2 1.2 Icon files are older version files which are supported because some OS/2 software cannot read current OS/2 Icons.

OS/2 Icons can contain multiple parts and multiple resolutions. The default for Image Alchemy is to read the first part of the first resolution. You can specify which portion and which resolution to read by use of the -Z option, see below for an example.

One of the parts of an OS/2 icon is often the mask, used by OS/2 to change the appearance of the icon when it is selected. The mask is often a black rectangle, so if the image resulting from an OS/2 Icon conversion is a black rectangle you are probably reading the mask portion.

Examples

Convert the image icon.bmp to an OS/2 Icon file called program.ico:

```
alchemy icon.bmp program.ico --O
```

Convert the OS/2 Icon program.ico to a Windows BMP file, reading part 1 of the first icon:

```
alchemy program.ico -w
```

Do the same thing, but read part 2 of the first icon:

```
alchemy program.ico -w -Z 2
```

Do the same thing, but read part 1 of the second icon:

```
alchemy program.ico -w -Z 1 2
```

Do the same thing, but read part 2 of the second icon:

```
alchemy program.ico -w -Z 2 2
```

PhotoCD

PhotoCD reading is now supported on all platforms. Rather than use Kodak supplied library code we have written our own PhotoCD reading module. In addition to not being limited to MS-DOS, our module is approximately 2.5 times faster. However, it is no longer possible to rotate PhotoCD files as they are being read in.

Extensions

.pcd

Creator

Eastman Kodak Company

Used by

Eastman Kodak Compay

Variations

Reads single channel and three channel images.

Limitations

Read only.

Comments

PhotoCD files contain multi-resolution image data. You may specify which resolution image you want Alchemy to read by using the -Z option, followed by the resolution value. Available resolutions are:

2:	192 x	128
3:	384 x	256
4:	768 x	512
5:	1536 x	1024
6:	3072 x	2084

The default is 3 (384x256).

If you specify a -b as part of the command line Alchemy will read a grayscale version of the image.

Examples

Convert the first PhotoCD image to a TIFF file, using the default resolution of 384x256:

```
alchemy L:\photo_cd\images\img0001.pcd -t
```

Do the same thing, this time reading the 768x512 version of the image:

```
alchemy L:\photo_cd\images\img0001.pcd -t -Z 4
```

Pixel Power Collage ---c

Syntax	---c
Extensions	Depends on filename
Creator	Pixel Power
Used by	Collage
Examples	Convert the file sample.jpg to Pixel Power Collage format alchemy sample.jpg ---c

PNG (Portable Network Graphics) ---n

PNG files are used by the WWW.

Syntax

- - -n [*outputType*]

Parameter

outputType:

0:None
1:Sub-filtering
2:Up-filtering
3:Averaging
4:Paeth filtering
9:Adaptive filtering

0:Standard
10:Interlaced

The default is Paeth filtering, non-interlaced. Options are combined by adding.

Extension

.png

Creator

The PNG development group

Used by

WWW

Variations

Reads and writes 1 bit black and white, 2, 4, and 8 bit grayscale, 2, 4, and 8 bit paletted, 16 bit, and 24 bit, and 48 bit colour images.

With and without alpha channels.

Writes files with transparency information.

Limitations

Non-image chunks (such as copyright information) are discarded when reading.

Comments

When writing a PNG file with transparency there are several different modes that are used depending on whether the file is paletted, grayscale, or true colour. In the case of true-colour images specifying the transparent colour using the - - -t option (see below) causes that value to be treated as transparent. When writing a paletted or grayscale file the nearest match to the colour specified is made transparent.

Related options

`-I`	Include Alpha channel
`---t`	Transparency

Examples

Convert the JPEG file sample.jpg to a PNG file:

```
alchemy sample.jpg ---n
```

Convert the JPEG file sample.jpg to a PNG file, using red as the transparent colour:

```
alchemy sample.jpg ---n ---t 255 0 0
```

Raster Graphics ---g

The Raster Graphics format was created by Raster Graphics and is used by Raster Graphics printers.

Syntax

---g

Extensions

.rg

Creator

Raster Graphics

Used by

Raster Graphics printers.

Variations

Writes 1 bit black and white and 4 bit CMYK.

Comments

The result will be either 1 bit black and white if the source image is grayscale or -b is specified; otherwise it will be 4 bit CMYK.

Examples

Convert the file sample.jpg to Raster Graphics format.

```
alchemy sample.jpg ---g
```

RLC ---R

Syntax ---R

Extensions .rlc

Comments Because of a shortage of test files this feature has not been extensively tested; if you have RLC files which Image Alchemy cannot correctly read please contact us.

Variations 1 bit black and white.

Examples Convert the file sample.jpg into RLC format

```
      alchemy sample.jpg ---R
```

Scitex CT ---X

Syntax	---X
Extensions	.ct
Creator	Scitex
Used by	Scitex scanners
Variations	32 bit CMYK
Examples	Convert the file sample.jpg to Scitex CT format.

```
alchemy sample.jpg ---X
```

Sharp GPB ---G

Sharp GPB files were developed by Sharp.

Syntax

- - -G

Extensions

.img

Creator

Sharp

Used by

Sharp

Variations

Reads and writes 1 bit black and white, 8 bit grayscale, and 24 bit colour images.

Example

Convert the JPEG file image.jpg to a Sharp GPB file:

```
alchemy image.jpg ---G
```

Spaceward Graphics ---s

Spaceward Graphic files were developed and are used by Spaceward Graphics.

Syntax

- - -s [*compressionType*]

Parameter

compressionType:
    0:None
    1:Compressed
The default is None.

Extensions

.r	Red channel image data
.g	Green channel image data
.b	Blue channel image data
.a	Alpha channel image data [optional]

Creator

Spaceward Graphics

Used by

Spaceward Graphics

Variations

Reads and writes 1 bit black and white, 8 bit grayscale, 8 bit paletted, and 24 bit colour images.

Comments

Alpha channel data can be read and written by using the -I option; see the appropriate section in the User's Manual for more information.

Related options

`-I`	Include Alpha channel information

Example

Convert the Targa file apple.tga to a Spaceward file, include the alpha channel information:

```
alchemy apple.tga -I ---s
```

US Patent Image ---P

Used by the US Patent and Trademark Office to store and distribute patent data.

Syntax

- - -P [*compressionType*]

Parameter

compressionType:
0:Group 3 compressed
1:Group 4 compressed
The default is Group 4 compressed.

Extensions

.pat

Creator

US Patent and Trademark Office

Used by

US Patent and Trademark Office

Variations

1 bit black and white images.

Limitations

Must be black and white

Comments

Alchemy can write multi-page US Patent files when used with the - - -U option; see below for an example

Related options

`---U` Write multi-page file

Examples

Convert the TIFF file page1.tif to a US Patent file:

```
alchemy page1.tif ---P
```

Convert all the pages in the TIFF file pages.tif to a multi-page US Patent file:

```
alchemy pages.tif ---P -U ---U
```

4

Other Options

Introduction

This section describes options which are not file format output options.

Do not remove old extension ---.

Purpose

Allows appending a new extension instead of removing the existing extension.

Syntax

---.

Comments

Generates filenames such as test.tif.gif

Limitations

Only works on operating systems that support long filenames.

Examples

Convert all the files in the series filename.001, filename.002 into TIFF format while adding a tiff extension in order to create filenames such as filename.001.tif, filename.002.tif:

```
alchemy filename.* ---. -t
```

Do the same thing on Windows 95 or Windows NT

```
alchlong filename.* ---. -t
```

Multi-Page Input -U

Purpose

Allow the conversion of multiple pages with a single execution of Alchemy.

Syntax

-U

-U *page*

-U *firstPage lastPage*

Parameter

page:
Specify page number
The default is page 1.

startPage:
Specify beginning page number.
endPage:
Specify ending page number.

Comments

If the -U option is used without a following parameter all pages in the input file(s) will be converted.

If you specify a single parameter after the -U option, only that page will be converted. If you specify two parameters all pages between those two numbers will be converted (inclusive, e.g. -U 2 3 will convert pages 2 and 3).

The multi-page option allows you to process multiple pages of an image when reading an image file which contains multiple pages. Each page of the image can be written to a separate file or to a single multiple-page output file (if writing to a format which supports multiple pages and using the -- -U option). If writing separate files the output file names will be as specified, with the extension replaced with .001 for first page, .002 for the second, and so on.

Limitations

Image Alchemy reads multi-page: TIFF, DCX (PCX), PCL, US Patent, FLC and GIF. Image Alchemy PS has multi-page reading support for these file formats plus PostScript and PDF.

Examples

Convert all the pages in the PCL file doc.pcl to TIFF files:

```
alchemy doc.pcl -U -t
```

Convert all the pages of all the TIFF files to PCX files, placing the output files into the directory \images\output:

```
alchemy *.tif -U -p \images\output
```

Do the same thing, but write a single multi-page DCX variant PCX file, called doc.pcx:

```
alchemy *.tif -U -p1 ---U doc.pcx
```

Multi-Page Output ---U

Purpose

Allow the output of image files which contain multiple pages.

Syntax

- - -U [*filename*]

Parameter

filename:

Specifies the output filename when writing a single multi-page file.

Comments

The multi-page output option allows you to write multiple images or pages to a single image file.

Because it is possible to write a single multi-page file based on multiple single page files, a single multi-page file, or multiple multi-page files and it is also possible to write multiple multi-page files based on multiple multi-page input files there are four permutations to consider.

When writing a single multi-page output file and reading multiple files, the output filename must appear immediately after the ---U option.

Limitations

Only certain image file formats allow multiple images in a single file: Adobe PDF, PCX (the DCX variant), GIF, TIFF, US Patent, and HP PCL.

Examples

Convert all the pages in the TIFF file doc.tif to a multi-page PDF file (note that in this case the -U option is needed to cause Alchemy to read all the pages in the doc.tif file, without it only the first page would be read):

```
alchemy doc.tif -U ---U --d
```

Convert the TIFF files page1.tif, page2.tif, and page3.tif to a multi-page PDF file called output.pdf (the - - option is required to tell Alchemy that there are multiple files being read and the filename after the - - -U option is required to specify the output file name):

```
alchemy -- page1.tif page2.tif page3.tif ---U output.pdf --d
```

Convert the multi-page TIFF files doc1.tif, doc2.tif, and doc3.tif each to their own multi-page PDF files (this assumes that each TIFF file is a multi-page file). The -U option is required to tell Alchemy to treat the input files as multi-page documents. In this case there is no filename specified after the ---U, because a single multi-page output file is not being written:

```
alchemy -- doc1.tif doc2.tif doc3.tif -U ---U --d
```

Convert the multi-page TIFF files doc1.tif, doc2.tif, and doc3.tif into a single multi-page PDF file (this assumes that each TIFF file is a multi-page file). In this case there is a filename specified after the - - -U, because a single multi-page output file is being written:

```
alchemy -- doc1.tif doc2.tif doc3.tif -U ---U docs.pdf --d
```

Only Scale If Too Large --+

Purpose

Causes Alchemy to only scale images down.

Syntax

```
--+
```

Comments

This command can be useful if you have a variety of images and want to scale them all to be no larger than a certain size. If this command is not used all of the images that are smaller will be scaled up.

Example

Scale all the GIF files in the current directory to be no larger than 640 x 480, preserving aspect ratio and placing the output files in the directory called new:

```
alchemy -- *.gif new -Xb640 -Yb480 -+ --+ -g
```

Override Input Type -=

Purpose

Force Alchemy to treat the input file as the specified file type. This can be used if Alchemy cannot identify or misidentifies the format of an input image.

Syntax

- = *inputType*

Parameter

The *inputType* must be a valid number identifying a supported format. The *inputTypes* are as follows:

ADEX	24
Adobe PDF	65
Adobe Photoshop	74
Alias PIX / Vivid IMG	16
Alpha Microsystems BMP	42
Autodesk FLC	81
Autologic	28
AVHRR	43
Binary (BIF)	31
Calcomp	50
CALS	41
Core IDC	66
Cubicomp PictureMaker	44
Dr. Halo CUT	45
Epson Stylus	72
ER Mapper Raster	59
Erdas LAN/GIS/IMG	19
Fargo Primera	69
First Publisher Art	46
Freedom of Press	25
Gem VDI Image	22
GIF	1
GOES	40
Hitachi Raster	63
HP PCL	15
HP-48sx Graphic Object	60
HSI JPEG	30
HSI Palette	3
HSI Raw	5
IBM Picture Maker	48
IFF/ILBM	7
Imaging Technology	80
Img Software Set	61
Intergraph	77
Iris CT	54
JEDMICS CCITT4	79
Jovian VI	36
JPEG	2
Lumena CEL	62
Macintosh PICT	10
MacPaint	49
MTV	17
OS/2 BitMaP	55
OS/2 Icon	58
PCPaint/Pictor	29
PCX	9
PDS	37
PhotoCD	56
Pixel Power Collage	82
PNG	75
Portable BitMap (PBM)	13
PostScript	14
Puzzle	51
Q0	21
QDV	18
QRT Raw	20
RIX	38
RLC	83
Scitex CT	53
SGI Image	11
Sharp GPB	78
Spaceward Graphics	76
Spot Image	39
Stork	32
Sun Icon	52
Sun Raster	8
Targa	6
TIFF	4
US Patent Image	73
Utah RLE	23
Verity Image Format	70
VITec	64
Windows BitMaP	12
Word Perfect Graphic	27
X BitMap (XBM)	35
X PixMap (XPM)	47
XWD	33

Comments

Rarely will Alchemy misidentify a file; the file is usually damaged in some way when this happens. If the file is damaged, or if you specify an input type that does not correspond to the actual type of the image, the results will be unpredictable. If you have a file which Alchemy misidentifies but is otherwise undamaged please contact us.

Example

Convert the file unknown.xxx to an OS/2 Bitmap file called output.bmp, forcing unknown.xxx to be treated as a Sun Raster image:

```
alchemy unknown.xxx output.bmp -O -=8
```

Palette Weighting -zw

Purpose

To select between different types of palette weighting.

Syntax

- zm[*weightingType*]

Parameter

weightingType:
0:NTSC
1:Equal

The default is NTSC weighting

Comments

NTSC palette weighting places the highest importance on green and the lowest importance on blue when mapping images to a palette. Equal palette weighting places equal importance on red, green and blue when mapping images to a palette.

Examples

Convert sample.jpg into GIF format using equal palette weighting.

```
alchemy sample.jpg -zw1
```

Preserve Palette While Scaling ---f

Purpose

Keep the original palette when scaling paletted images.

Syntax

---f

Comments

When using type 'b' or better scaling on paletted images Alchemy has to convert the image to true colour as part of the scaling process and then convert the image back to paletted before saving. Ordinarily the best results are obtained if Alchemy is allowed to choose the final palette based on the scaled image content. However there may be times when you wish to preserve the original palette instead of generating a new one. This option does that.

Examples

Scale the gif file flowers.gif to 320 x 200, preserving the original palette and aspect ratio:

```
alchemy flowers.gif new.gif -g ---f -Xb320 -Yb200 -+
```

Scale all the files ending in .gif to 320 x 200, preserving the original palette and aspect ratio, placing the new files in the directory new:

```
alchemy *.gif new -g ---f -Xb320 -Yb200 -+
```

Set Horizontal DPI --X

Purpose

Change the horizontal DPI of an image to a value based on the specified final image size (e.g. if you have an image which is 100 pixels across and you specify 5 inches this command sets the horizontal DPI to 20).

Syntax

- -X *size*[*units*]

Parameters

size:

The size of the output image in the horizontal dimension.

units:

The units the size parameter is in:
i:inches
c:centimeters

units is optional; the default is inches. The units value must immediately follow the size parameter.

Comments

This command is similar to the -D command, except that the DPI value is set based on the size specified and the number of pixels in the image.

To set the Vertical DPI use the `--Y` command (described below).

If you want to preserve the aspect ratio in the image use the -+ command. Using both the - -Y and -+ commands will cause the dimensions given to be treated as a bounding box.

Related options

`--Y`	Set Vertical DPI
`-+`	Preserve aspect ratio

Examples

Set the horizontal DPI value so that the image test.tif is converted to an EPS file that will be 5 inches across when printed:

```
alchemy test.tif -e --X 5i
```

Do the same thing, but preserve the aspect ratio (so the vertical DPI will be set to the same value as the horizontal DPI):

```
alchemy test.tif -e --X 5i -+
```

Do the same thing, but set the vertical size to 6 inches, this will cause the 5 in x 6 in dimension to be treated as a bounding box:

```
alchemy test.tif -e --X 5i --Y 6i -+
```

Set Vertical DPI --Y

Purpose

Change the vertical DPI of an image to a value based on the specified final image size (e.g. if you have an image which is 125 pixels down and you specify 5 inches this command sets the vertical DPI to 25).

Syntax

- -Y *size*[*units*]

Parameters

size:

The size of the output image in the vertical dimension.

units:

The units the size parameter is in:

i:inches
c:centimeters

units is optional; the default is inches. The units value must immediately follow the size parameter.

Comments

This command is similar to the -D command, except that the DPI value is set based on the size specified and the number of pixels in the image.

To set the Horizontal DPI use the - -X command (described above).

If you want to preserve the aspect ratio in the image use the -+ command. Using both the - -Y and -+ commands will cause the dimensions given to be treated as a bounding box.

Related options

`--X`	Set horizontal DPI
`-+`	Preserve aspect ratio

Examples

Set the vertical DPI value so that the image test.tif is converted to an EPS file that will be 5 inches high when printed:

```
alchemy test.tif -e --Y 5i
```

Do the same thing, but preserve the aspect ratio (so the horizontal DPI will be set to the same value as the vertical DPI):

```
alchemy test.tif -e --Y 5i -+
```

Do the same thing, but set the horizontal size to 6 inches, this will cause the 6 in x 5 in dimension to be treated as a bounding box:

```
alchemy test.tif -e --X 6i --Y 5i -+
```

Slide Show (MS-DOS only) -~

Purpose

Automatically change from one image to the next when displaying images.

Syntax

- ~ [*delay*]

Parameters

delay:

Delay between images in seconds (for example, 0.5 is 1/2 second). Negative numbers indicate that the slideshow repeats. The default is 0, no delay between images.

Comments

The slide show mode command does not reset the SVGA card between images, this has been found to work on most SVGA cards. Use - - ~ to force a reset between images (robust slide show mode). Robust slide show mode causes some monitors to have to resync between images.

Examples

Display the images flower.gif, puppy.gif, and kitten.gif in a slideshow, repeating the loop and pausing 5 seconds between images:

```
alchemy -- flower.gif puppy.gif kitten.gif -v -~ -5.0
```

Do the same thing, but use robust slide show mode:

```
alchemy -- flower.gif puppy.gif kitten.gif -v --~ -5.0
```

Do the same thing, but with no screen clear:

```
alchemy -- flower.gif puppy.gif kitten.gif -v ---~ -5.0
```

Transparency ---t

Purpose

Specify which colour in the output image is considered to be transparent. Note that transparency is only supported by certain file formats.

Syntax

- - -t [*red green blue*]

Parameters

red green blue:

Specifies the colour to use for the transparent colour (0 0 0 is black, 255 255 255 is white). The default is 255 255 255 (white).

Comments

Only supported by GIF89A and PNG. See those file formats for more information. If the source file has a tranparent colour it is now preserved during conversion unless a new transparent value is defined.

Examples

Convert the image logo.tif to a GIF file, specifying white as the transparent colour:

```
alchemy logo.tif -g1 ---t
```

Convert the image logo.tif to a GIF file, specifying black as the transparent colour:

```
alchemy logo.tif -g1 ---t 0 0 0
```

Do the same thing, this time using red as the transparent colour:

```
alchemy logo.tif -g1 ---t 255 0 0
```

Check to see if logo.gif has a transparent colour.

```
alchemy logo.gif -x1
```

Use Input File Format for Output --=

Purpose

Causes Alchemy to write out a file in the same format as the file being read.

Syntax

- - = [*compressionOption*]

Parameter

compressionOption:

Sets the output compression or output type based on the format being written.

Comments

If the output file already has the extension that Alchemy uses for the file being read and the output file is not being written to a different directory this command will fail unless the - -o command is used.

Limitations

Only one parameter can be specified (i.e. if writing a multi-page GIF file the delay between images and the repeat count cannot be specified when using this option).

Examples

Convert all the files called image.* to files with the same format, flipping the files and placing the output in a directory called \flipped:

```
alchemy image.* --= --^ \flipped
```

Do the same thing, but replace the existing files with the new files instead:

```
alchemy image.* --= --^ --o
```

Do the same thing, using type 1 compression (what that actually means depends on the file format being written):

```
alchemy image.* --= 1 --^ --o
```

Use Input Filename for Output --o

Purpose

Causes Alchemy to write out a file with the same name as the file being read, replacing the input file.

Syntax

- -o (lowercase letter O)

Comments

If the input file is read only this command will fail.

Example

Convert the GIF file, test.gif, to a GIF file, scaling it to 640x480 and keeping the same name:

```
alchemy test.gif -g -Xb640 -Yb480 --o
```

Use 3 Letter Extensions --3

Purpose

Causes Alchemy to use 3 letter extensions (this is the default under MS-DOS).

Syntax

- -3

Comments

Ordinarily Alchemy will use the extension specified by the image file format (.GIF, for example), however some file formats, such as TIFF, specify that on systems which allow it the extension should be more than 3 letters (.TIFF, in the case of TIFF). This can be a problem if you are interchanging files with an MS-DOS system. This option causes Alchemy to always use no more than 3 letter extensions.

Example

Convert the file large.gif to a TIFF file with a 3 letter extension:

```
alchemy large.gif -t --3
```