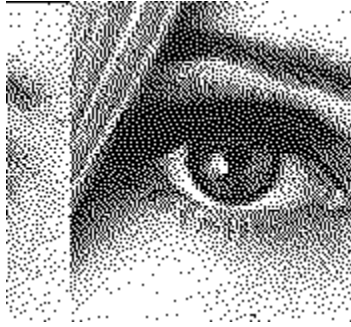# Graphic Workshop for Windows

FROM ALCHEMY MINDWORKS INC.

If you like this software, please send us $40.00, the normal user fee for Graphic Workshop. Complete ordering information can be found in the order form which accompanies Graphic Workshop.

If you encounter difficulties with this software, please read this document... especially the Frequently Asked Questions section... and get in touch with us if you don't find an answer herein.

Registered users of Graphic Workshop are entitled to phone support, notification of upgrades and good karma. When you register it, we'll send you a copy of the latest version. Please tell us the version number of your copy of Graphic Workshop when you register. Our address can be found in the Registration section of this document.

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NOTE: You can register Graphic Workshop with an **American Express, Mastercard** or **Visa** card by calling **1-800-263-1138** (toll free) from the United States and Canada or **1-905-936-9500** from other places.

Graphic Workshop can be registered over CompuServe by typing **GO SWREG**. The registration code for Graphic Workshop for Windows is 1403.

If you're outside North America, see the **Overseas Distributors** section of this document for the address of an Alchemy Mindworks distributor near you.

NOTE: We have a **bulletin board system**, a **CompuServe** account and an **Internet** address, should you want to get in touch with us by electronic mail. See the section on **Contacting Alchemy Mindworks** for more information. You can find the current version of Graphic Workshop and our other applications on the Internet at our **FTP site ftp.north.net** in the directory **/pub/alchemy**. Our **World Wide Web** server at **http://www.north.net/alchemy/alchemy.html** also has download facilities, and it will keep you up to date on the changes in our applications.

Please share this package with your friends and upload it to any bulletin boards you feel are worthy of it. However, when sharing Graphic Workshop, please distribute the whole, unmodified package. Thanks...

Graphic Workshop requires Windows 3.1 or better to install and run.
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Introduction

Graphic Workshop is a program for working with bitmapped graphic files. It will handle most of the popular file formats, as listed in the contents section of this document.

Graphic Workshop is a simple, menu driven environment which will let you perform the following operations on the aforementioned files.

    View them.
    Convert between any two formats (with a few restrictions).
    Print them.
    Dither the colour ones to black and white.
    Reverse them.
    Rotate and flip them.
    Scale them.
    Move and copy them.
    Reduce the number of colours in them and do colour dithering.

Sharpen, soften and otherwise wreak special effects on them.
Crop them down to smaller files
Adjust the brightness, contrast and colour balance of the colour ones.
Capture Windows screens or portions thereof.
Create image catalogs.

Using Graphic Workshop, you can have your image files in the formats that your software recognizes, all without keeping track of numerous funky utilities. In addition, using the halftoning and dithering facilities of Graphic Workshop, you can convert full colour digitized photographs for use as superb black and white clip art, suitable for inclusion in your documents.

Graphic Workshop will handle image files of any size your computer has enough memory to work with. It lacks even the merest vestiges of bugs... a likely story, but we hope so.

Graphic Workshop will drive your monitor and printer through the Windows hardware drivers. If you have screen and printer drivers for Windows, you have them for Graphic Workshop for Windows.

One of the important distinctions between shareware and commercial software is that we can release new versions of Graphic Workshop for Windows as often as necessary to keep up with changes in the file formats it works with, and with suggestions from its users. New versions of this software appear about every two months. We invite you to use our bulletin board or World Wide Web page to keep up with the latest features of Graphic Workshop, or to contact us for a copy of our Alchemical News newsletter.

Registered users of Graphic Workshop will receive periodic mailings about its new features.

Hardware and software
Graphic Workshop will run on any system which is capable of running Windows 3.1 or better. Four megabytes or more of memory is required, with eight or more recommended.

File formats
Graphic Workshop works primarily with bitmapped image files. This is as opposed to vector or line art files. Vector files include DXF, GEM, Harvard Graphics, and Lotus PIC files, among others. Graphic Workshop has limited support for vector graphics... see the section on Rasterizing Vector Graphics later in this document.

In most cases, the specifications for image files are pretty standardized, and Graphic Workshop will reliably import image files in its supported formats without difficulty. There are a few exceptions to this, as will be discussed in detail throughout this section.

Each of the formats listed here also includes the maximum number of bits of colour the format will support. You can work out the number of colours this represents as two to the power of the number of bits. Hence, an eight-bit file has 2^8 possible

colours, or 256. Twenty-four bit files have essentially an infinite number of possible colours... 16,777,216 colours, which is near enough to infinity for a computer.

MacPaint files - Maximum bits: 1
These can come in two flavours. The most common one is straight ported MacPaint files, that is, files having a "MacBinary" header. The other is "headerless" files, these being the ones used with PFS:First Publisher. Graphic Workshop reads both types, but if you convert a file from a different format to MacPaint format the file will be written in accordance with the setting of the MacBinary header field in the Setup box.

Files converted to the MacPaint format from other formats will be cropped or padded out as necessary to fit in the MacPaint format's 576 by 720 format. Only monochrome files can be converted to MacPaint files, since MacPaint in a monochrome-only format.

GEM/IMG files - Maximum bits: 24
There are actually quite a few variations on IMG files... they handle monochrome and grey level images. The primary application for IMG files is as the bitmapped image file format of Ventura Publisher. Graphic Workshop supports files with up to 256 levels of grey and 24-bit IMG files with up to sixteen-million colours. Note that 24-bit IMG files are only supported by Ventura 4.0 and better.

PCX files - Maximum bits: 24
These are the files used to hold images for Z-Soft's PC Paintbrush package. These can range from monochrome to 24-bit images. All the various formats are supported by Graphic Workshop. In writing PCX files, the horizontal and vertical resolution fields of the PCX header will be set to the **TIFFresolution** value discussed in the section of this document dealing with TIFF files. This value is ignored by most PCX readers... if you don't know what it is, you can probably ignore it too.

GIF files - Maximum bits: 8
These can range from monochrome to 256-colour images in any size you can find 'em. Graphic Workshop supports both the 87a and 89a versions of the GIF standard. It will read the first image of GIF files having multiple images.

The Details function of the Get Info box will display the entire structure of a GIF file. Many newer GIF files contain text information, such as comment blocks, along with their images.

Note that you can include comment blocks in GIF files which are created by Graphic Workshop for Windows. These can take three forms... you can be prompted for comments whenever a GIF file is created, you can have the contents of a comment read from a text file each time you're prompted or you can have a comment block created from the contents of a text file automatically every time Graphic Workshop writes an image to the GIF format.

You must enable the Write File Comments and Create GIF 89a Files options in the Graphic Workshop Setup box to create comments.

To have Graphic Workshop prompt you for a GIF comment, open the Setup box and enable the Prompt for GIF Comments option.

To have Graphic Workshop prompt you for the path to a text file to use for a GIF comment, use the same procedure as you would to have it prompt you for a comment. Enter an @ character followed by the path to your text file in the GIF comment box.

To have Graphic Workshop use your text file for its GIF comment blocks automatically, use the Windows Notepad application to open the \WINDOWS\ GWS.INI file and locate the line that begins

GifCommentPath =

Add a complete path to your text file after the equal sign and save the file. Graphic Workshop should not be running when you do this.

Note that GIF comments stored as text files must be pure ASCII files, such as those created by Windows Notepad, rather than proprietary word processing documents. You should keep the comments fairly short.

Graphic Workshop assumes that GIF files contain a single image per file by default. You can instruct it to search for and display multiple images where they occur. Enable the **Multiple Image GIF Files** item in the Setup dialog to allow for multiple image files. Note that this may significantly increase the access time for some GIF files.

GIF files can be created using either internalced or non-intelaced storage. An internlaced GIF file has its lines stored in a non-linear order. This will in no way affect how your GIF files will look. However, if you have an application for GIF files which causes them to be transmitted over a modem or other communications line and displayed as they're received, having them stored as interlaced files might be desireable, as it will permit whoever's receiving them to see a more meaningful partial image before the file in question has been completely transmitted.

Having said this, note that in some environments, such as Windows, displaying an interlaced GIF in real time while it's being sent over a modem can take a lot longer than displaying the same image from a non-interlaced GIF.

To have Graphic Workshop write interlaced GIF files, select the **Write GIF Interlaced** option in the Setup dialog.

TIFF files - Maximum bits: 24
The TIFF options in Graphic Workshop can get a bit involved. The TIFF format offers lots of options to make it applicable to a wide variety of applications... which entails a certain amount of confusion, as well. Registered users of Graphic Workshop are welcome to contact us for help in unraveling the TIFF options if needs be.

Graphic Workshop supports monochrome, colour and grey scale TIFF files. Grey scale TIFF files can be created by converting any colour format into TIFF with Graphic Workshop set up to produce grey scale TIFF files using the appropriate options of the Setup box. These import into desktop publishing packages such as Ventura for sharp looking PostScript halftones.

Colour TIFF files are useful in Corel Draw, among other places. Corel Draw 2.0 will import colour TIFF files for inclusion in CDR graphics. This is preferable to importing colour PCX files, as the size of a TIFF file in Corel Draw is preserved.

Some applications have trouble reading grey scale TIFF files which have been compressed. Others read 'em fine. For this reason, Graphic Workshop defaults to creating compressed grey scale TIFF files but you can tell it not to compress them if you're not sure that whatever you'll be importing them into will read them. See the section which discusses the Setup box.

Note that due to the wide variations among the programs which produce TIFF files, Graphic Workshop would be lying rather badly if it claimed to be able to read all TIFF files.

When you're creating grey scale TIFF files which will be used as desktop publishing art or in other situations wherein they'll be printed to a PostScript printer, you should create them with greyscale expansion enabled. If they will be displayed on a monitor or edited in a paint program, you may want to create them with greyscale expansion disabled.

The amount of grey scale expansion should be adjusted to best suit your output device and your desktop publishing software. You can do this by using the Notepad application to open \WINDOWS\GWS.INI and modifying the **TiffBrightness** and **TiffContrast** items in this file. Do not change anything else. These set the base brightness level and the amount by which the contrast of an image converted to TIFF grey scale will be expanded. You can use the original TIFF contrast expansion map by setting these values to 65535.

When you're creating colour TIFF files... especially if they're to be used as art in a desktop publishing package... you might want to adjust the image gamma to compensate for a particular output device. You can do this by opening GWS.INI in your \WINDOWS directory with the Notepad application and changing the value of the **TiffGamma** item. This value should be set to 100 times the gamma value you want. As such, a gamma of 1.0 would be **TiffGamma = 100**. Gamma values in the range of 0.2 through 2.0... or
TiffGamma = 20 through **TiffGamma = 200...** are sensible gamma values for most output devices. The low end of the range will produce lighter images images.

The default value is a gamma of 1.0, or **TiffGamma = 100.** At this setting, **TiffGamma** will have no effect on your TIFF files. Note that the setting of **TiffGamma** only applies to colour TIFF files. It will not affect monochrome or grey scale images.

If you aren't sure what gamma is, you probably have no need to meddle with this setting.

The Graphic Workshop Setup dialog includes a field for **TIFF Write Options**, which allows you to define the type of compression to be used in creating TIFF files. Each line in this field has three items, specifiying the compression type for monochrome files, palette colour files with up to eight bits of colour and true colour 24-bit files respectively. The options are:

```
None      -      No compression
PBits     -      Simple PackBits compression
LZW       -      High efficiency LZW compression
Group 4   -      Group 4 FAX compression
```

TIFF files with no compression are fast to read and write, and are all but certain to be accepted by any application that reads TIFF files. However, they can result in huge disk files. TIFF files with LZW compression take somewhat longer to read and write, but they usually result in smaller files. There are many applications which read TIFF files but which do not support LZW compression. PackBits compression is somewhere in the middle. Group 4 FAX compression can deal with some line drawings more effectively than LZW compression can, but it creates files that almost no TIFF readers will handle. Don't use Group 4 unless you're certain your target application will read them.

You can change the default style of the TIFF details by opening GWS.WRI in your \ WINDOWS directory and setting the **TiffAlternateDetails** item to one. This alternate style is useful if you want to better understand the structure of a TIFF file.

TIFF files created by Graphic Workshop carry **XResolution** and **YResolution** tags. These tags are interpreted by some applications as indicating the absolute size of the image in a TIFF file. Corel Draw, for example, uses these tags as an indication of how large it should initially import TIFF bitmaps. By default this value is 300, that is, 300 dots per inch. You can change this by opening GWS.INI in your \WINDOWS directory with the Notepad application and changing the **TiffResolution** item to a different value. This will not affect the images stored in a TIFF file created by Graphic Workshop, but only how some applications that import TIFF files will interpret them. Resolution values which are even multiples of 75 are usually a safe choice. Note that as of this writing Corel Draw seems to behave oddly if it's confronted with TIFF files having resolution values over 300.

WPG files - Maximum bits: 8 (or maybe 4)
These are the native import graphic files for WordPerfect. These files can contain both bitmaps and line art, or vector graphics. Graphic Workshop can only deal with the bitmapped parts of them. If you view, print or convert a WPG file containing both bitmapped and vector elements, the vector elements will be discarded.

WPG files which refuse to read with Graphic Workshop are usually those which contain only vector elements and no bitmaps. If you use the Get Info function on a WPG file which does not read, the comments field of the file information box will say "Vector file" if this is the case or you will see a message that says No Bitmap.

Graphic Workshop will deal with WPG files having one, four or eight bits of colour information, that is, monochrome files, sixteen-colour files and 256-colour files.

The WPG specification allows for 256-colour files. As of this writing, some versions of WordPerfect itself would not read them. If you wish to use 256-colour images in a WordPerfect document, you might want to either reduce them to sixteen colours or dither them to monochrome, depending upon what you'll be outputting them to.

MSP files - Maximum bits: 1

These are the image files used by the paint program which came with Microsoft Windows version 2. Don't confuse these with PCX files... some versions of Windows 2 came with a Windows implementation of PC Paintbrush from ZSoft as well. The two programs... and the two file formats... are not compatible. MSP files are monochrome only.

IFF/LBM files - Maximum bits: 24/8
These started out on the Amiga. The IFF file standard is extremely flexible, and allows all sorts of things besides images to be stored in IFF files. IFF files are found on the PC having been ported from Amiga systems. They are also created on the PC by several applications such as Electronic Arts' Deluxe Paint package and Digital Vision's Computer Eyes video scanner board. In the first case they are given the extension LBM. In the second they are given the extension CE. The basic file structure is the same, however.

Deluxe Paint is a bit of a problem in the way it deals with IFF files, actually. This affects 256 colour files. Its native format is a subclass of IFF called PBM, and compresses its images as bytes. It's somewhat unique to Deluxe Paint, and Electronic Arts won't tell anyone quite how it works. You can actually work it out to a large degree, but every so often a file created in this format in the way it seems like it should be done refuses to load into Deluxe Paint.

The standard form for IFF image files is called ILBM, compressing all images as planes. This is much slower, but it means that files thus compressed will be readable by pretty well all IFF readers... even if you port 'em back to the Amiga. This is how Graphic Workshop creates IFF files. Unfortunately, there's a problem with old versions of Deluxe Paint which will occasionally cause them to stop reading one of these files part way through the image. This happens to IFF files from sources other than Graphic Workshop, so it's probably a bug in these versions of Deluxe Paint. It appears to have been rectified in more recent releases.

If you encounter an image which, when converted into an IFF file will not read into Deluxe Paint, use the Setup box to configure Graphic Workshop to produce an uncompressed IFF file. Uncompressed files read into Deluxe Paint with no difficulty.

Note that Graphic Workshop only reads "pure" IFF files, and will not handle the countless variations on the format which have appeared on the Amiga. Specifically, it does not read hold and modify, or HAM, files.

BMP/DIB files - Maximum bits: 24
BMP files are used as "wallpaper" under Windows 3. They can be created using the Paintbrush application supplied with Windows, among other things. The BMP and DIB formats are identical... DIB files are used in some programming and multimedia applications.

BMP and DIB files use no image compression, as the intention appears to be to make them fast to load. Plan on your files being very large.

There is a very important aspect of colour BMP files which you should bear in mind when you use this format. Windows uses a fixed palette which Windows Paint cannot go about changing, as doing so would make the screen and border colours change too. This means that transferring an image to the BMP format may result in

some colour shifts when BMP files are imported into Windows applications.

RLE files - Maximum bits: 8
The RLE format is actually a variation on the BMP format discussed previously. It has two primary uses under Windows. It can be used to create compressed wallpaper files and it can be used to replace the opening Windows logo screen with one of your own choosing.

The RLE format uses compression, unlike BMP files, and as such wallpaper created as RLE files will occupy less space on your disk. At least, it should. If you store very complex scanned or dithered images in the RLE format, they may confuse the run length encoding procedure and actually result in larger files than they would have created as BMP files.

To use an RLE file as wallpaper, place the file you wish to use in your \WINDOWS subdirectory. Use the Windows control panel to select your wallpaper file as you normally would... the only difference is that you will have to type in the name of the RLE file you wish to use, as the file selector in the control panel only looks for BMP files.

Technically, RLE files used as wallpaper should take a little longer to load. In practice, this is rarely noticeable.

Using an RLE file to change the startup Windows logo is a bit tricky, but it's arguably worth the effort if you're tired of looking at the Microsoft ad. You will need a sixteen-colour RLE image of the dimensions 640 by 480... 640 by 350 if you use an EGA card. The RLE file should be no larger than 40 or 50 kilobytes, and smaller if possible. For this example, we'll allow that the file is called NEWLOGO.RLE, located in the \WINDOWS subdirectory.

Go to the \WINDOWS\SYSTEM subdirectory and issue the following command at the DOS prompt.

    COPY /B WIN.CNF+VGALOGO.LGO +C:\WINDOWS\NEWLOGO.RLE C:\WINDOWS\WIN2.COM

This will create a new program called WIN2.COM. If you start Windows by typing WIN2, rather than WIN, you will see your logo rather than Microsoft's. This will not affect your normal WIN.COM program.

There are several things to be aware of in this procedure. The most important is that the resulting WIN2.COM cannot be bigger than 65535 bytes, which is why you must keep your RLE file down to a modest size. If it exceeds these limits, WIN2.COM will refuse to run.

Secondly, if your RLE file is of dimensions other than those of your screen, it will appear incorrectly placed.

Thirdly, if you will be using an EGA card, replace the VGALOGO.LGO file, above, with EGALOGO.LGO.

Note that when a file is converted to the sixteen-colour RLE format by Graphic Workshop for Windows, it is permanently remapped to the Windows default palette.

This may result in a noticeable colour shift for some images.

Graphic Workshop for Windows will read most RLE files from other sources. One known exception is the VGALOGO.RLE file provided with Windows 3.1.

PIC files - Maximum bits: 24
These should not be confused with Lotus 1-2-3 PIC drawing files.

PIC files are created by GLPaint/GLPro and are used by Grasp, among other things.

PIC files are structured exceedingly weirdly, especially in their sixteen-colour manifestations. For this reason, it's necessary for Graphic Workshop to create a temporary scratch file while it's packing or unpacking a sixteen-colour PIC file. You will note that upon beginning to read or write one, the bar graph will appear to pause for a few seconds before it starts to move.

By default, the temporary file will be written to the current directory. However, you can direct it to somewhere else by including the following line in your environment, for example:

    SET TEMP=H:\

This will cause the temporary file to be written to the root directory of drive H:. You can, of course, specify any path you like. If drive H: is a RAM drive, this will speed up the packing and unpacking of sixteen-colour PIC files considerably.

At present, Graphic Workshop for Windows writes 24-bit images to the PIC format as type one high colour files, that is, with fifteen bits of colour information.

TGA files - Maximum bits: 24
The Truevision Targa format is used by several high end paint programs and things like ray tracing packages. It can handle images with up to sixteen million unique colours. You might want to read the discussion of images with 24-bit colour elsewhere in this document.

EXE files (self displaying pictures) - Maximum bits: 8
You can convert images having between two and 256 colours to files with the extension EXE. Such files are self displaying pictures. For example, if you have a file called PICTURE.GIF and you use Graphic Workshop to translate it to PICTURE.EXE, typing PICTURE from the command line will cause the picture to display on your screen.

The EXE pictures created by Graphic Workshop for Windows can be either DOS or Windows applications. You can define which type of picture to create with the **Windows EXE Pictures** switch in the Setup dialog.

The DOS EXE pictures are compatible with the EXE pictures created by Graphic Workshop for DOS.

Pictures written into the EXE format can subsequently be read back into any other format. However, note that Graphic Workshop can only read EXE files which it has created. Use the Get Info function to check out EXE files if you aren't sure whether

they're pictures or programs.

Graphic Workshop will not read self displaying pictures written by other applications.

Windows EXE Multimedia Pictures and the Multimedia Browser
If you have Graphic Workshop create EXE pictures with the **Windows EXE Pictures** option of the Setup dialog enabled, the resulting EXE files will be stand-alone Windows applications. Click on the icon for one and your picture will appear in a Window. Double click on the system menu to send it away.

Using the **Picture Configuration** tool provided with the registered version of Graphic Workshop for Windows, you can enable a number of advanced features of the Windows EXE pictures created by Graphic Workshop. These include:

- Have your pictures play wave files, MIDI music or Video for Windows AVI files.
- Maximize your pictures on startup.
- Set the background matt colour of your pictures.
- Set a time delay, after which a picture will terminate automatically.
- Disable the title bars of your pictures.
- Have your pictures terminate if a mouse is clicked.
- Change the About box text of your pictures.
- Chain EXE pictures together to form a slide slow.

Complete instructions for using the advanced features of the Windows EXE pictures can be found in PCONFIG.WRI, included with registered versions of Graphic Workshop.

Note that if you click on one of the Graphic Workshop application files, such as GWS.EXE, you'll see the unicorn bitmap that appears in its About box. While these are not strictly speaking EXE pictures... they're applications... they do contain bitmaps in their resource files.

Registered versions of Graphic Workshop also include Multimedia Browser, an application which will allow you to quickly audition wave, MIDI and Video for Windows AVI files. To use it, simply double click on the file name you wish to hear or view, or select a file and click on Play. Click on the Stop button to terminate playing. You can navigate around on your hard drive just as you would under Graphic Workshop.

Note that you must have the appropriate MCI wave, MIDI and AVI drivers installed in your system to use Multimedia Browser. A sound card mult have been installed in your system. Use the Windows Control Panel Drivers applet to install these drivers.

If the MCI wave driver is not installed, Multimedia Browser and Graphic Workshop's EXE pictures will use direct sound commands. This means that wave files will play through the Windows speaker driver if nothing better is present. Again, the speaker driver must have been loaded through the control panel.

DOS EXE Pictures
In order for a DOS EXE picture to display, the system which you attempt to run it

on must have a card which supports enough colours to show the picture under Graphic Workshop. Specifically, you will need a VGA card to display an EXE picture with 256 colours, at least an EGA card to display one with 16 colours and so on.

EXE picture files support CGA, EGA, VGA, super VGA and Hercules cards in autodetect mode.

Pictures displayed by converting them to EXE files and running them can't be panned around, even if they're larger than your screen. Hitting any key will return you to DOS.

An EXE picture created by Graphic Workshop will attempt to autodetect the display card type in the machine it's run on. Some cards are sufficiently weird that this isn't always possible. To get around this, you can run EXE pictures with display card command line overrides. These are the command line switches an EXE picture will accept:

/CGA Assume there's a CGA card in the system.
/EGA Assume there's an EGA card in the system.
/VGA Assume there's a VGA card in the system.
/HER Assume there's a Hercules card in the system.
/VER Display the version number of the EXE file.
/PAR Assume there's a Paradise card in the system.
/ATI Assume there's an ATI card in the system.
/TNG Assume there's a Tseng 4000 card in the system.
/TRI Assume there's a Trident 8900 card in the system.
/OAK Assume there's an Oak card in the system.
/VSA Assume there's a VESA card in the system
/DIS Disable the return to text mode.
/Wnn Wait nn (00 through 99) seconds.
/KEY Allow keyboard hits to abort waiting
/FAD Fade in and out (VGA cards only)

The command line switches assume that you're using DOS 3.0 or better. You must have a space between each switch if you're using more than one of them.

In its standard VGA or autodetection modes, an EXE picture will only display 256 colours at 320 by 200 pixels. If you use one of the super VGA override switches from the list above, your picture will display in 640 by 480 pixels at 256 colours. This assumes that you select the appropriate switch, that your card has at least 512 kilobytes of memory in board and that your monitor will sync at this resolution.

Note that when you hit a key to end the display of a picture, the ASCII code of the key will be returned as a DOS error level, which can be trapped in a batch file. If your picture terminates because of the /Wnn switch instead, the error level will be zero.

You can create EXE picture files either compressed or uncompressed. This can be selected through the Graphic Workshop Setup box. Uncompressed files display quickly but take up a lot of disk space. Compressed files usually occupy less

space but display a bit slower. Note that especially in complex scanned or dithered images, you might find that compression actually results in a larger file than leaving an image uncompressed.

You must have at least 512 kilobytes of memory on your super VGA card to use the super VGA modes.

If you run an EXE picture with a question mark as its command line argument, it will display a list of its command line switches.

You can use the /DIS, /Wnn, /KEY and /FAD switches to create slide shows and interactive displays. Use a batch file to set up the pictures you want to work with. The /DIS switch will make the transition between images clean... just make sure you omit it from the last image you display.

Here's a typical batch file:

```
ECHO OFF
PICTURE1 /FAD /DIS /W10
PICTURE2 /FAD /DIS /W10
PICTURE3 /FAD /W10
```

Note that if you use the /W00 switch, your image will return immediately to DOS or to whatever application spawned it. This is useful, for example, should you want to use an EXE picture to display an image and then have the program that called it further modify the screen contents.

The /FAD switch times its fades based on the vertical refresh rate of your monitor, something which doesn't change from system to system. As such, its fades should take about the same amount of time no matter what machine you run your EXE pictures on. Likewise, the time delays set by the /Wnn switch are based on the system clock, and are processor independent.

TXT files (text files) - Maximum bits: 24
Graphic Workshop will create a two colour image from any ASCII text file. It can contain both alphabetic characters and high order IBM block graphic characters. Tabs are expanded and all other control characters except for carriage returns are ignored. Source text files for this function can have up to 2048 lines of text. A line can be up to 4096 characters wide. If you use files which are longer than this, the extra text will be ignored. A text file of these dimensions will create a 130 megabyte bitmap.

Note that a suitable text file must be in pure ASCII, not a proprietary word processor format. It must have the extension TXT.

By default, if you convert a bitmapped image file to the TXT format, an ASCII graphic of the image will be created. This is a text file in which the brightness levels of the original image will be represented by characters. If you print an ASCII graphic and hold it a few feet from your face, it will resemble the original bitmap it came from... sort of.

You can fine tune the TXT write function by opening the GWS.INI file in your \

WINDOWS subdirectory using the NotePad application and finding the following items.

The **TextDoubleCharacters** item defines how many characters will be written for each pixel of the source image. This will be one character per pixel if **TextDoubleCharacters** is zero and two characters per pixel if it's one. The latter will usually produce a more realistic aspect ratio if you print ASCII graphics.

The **TextContrast** and **TextBrightness** elements define how much to expand the contrast and brightness of a source image being converted to an ASCII graphic. This will vary somewhat with the printer you use to print TXT graphics.

The line of GWS.INI which defines **TextCharacterLevels** looks like this by default:

    TextCharacterLevels = ÿ.:-+|=%o#&XOB@

These are the actual characters used to form ASCII graphics. The ÿ character is created by holding down the Alt key on your keyboard and hitting 255 on the numeric keypad. It represents a space character. The characters should be arranged from the lightest to the darkest. The string must contain exactly sixteen characters. You can modify the string if you'd like to change the characters used to create ASCII graphics, although finding a workable character sit takes some doing. If you delete this line from GWS.INI, Graphic Workshop will restore the default character set.

Note that if you convert a 640 by 480 pixel graphic to TXT, you'll wind up with a text file that's 640 columns across by eight pages deep. You might want to work with fairly small source images. Also, keep in mind that you will experience some loss of image quality when you convert a bitmapped graphic to an ASCII graphic.

When you print ASCII graphics, you must use a monospaced font, such as Courier. Very small point sizes will usually look better, especially if you'll be working with fairly wide graphics.

Older versions of Graphic Workshop wrote file information similar to the information in the Graphic Workshop Get Info box if a file was "converted" to TXT. If you would prefer this function, rather than writing ASCII graphics, set the **TextWriteInfo** item to one.

Note that as long as you're attempting to read files, you can treat text files just like other monochrome graphic files from within Graphic Workshop. As such, you can view them, convert from TXT and so on.

Older versions of Graphic Workshop constrained TXT files to 640 by 400 pixels. If you would prefer that TXT files behave this way, open the \WINDOWS\GWS.INI file with the NotePad application and find the line:

    TextFileLimit = 0

Set this value to 1

Halo CUT files - Maximum bits: 8
The CUT format is exceedingly awkward, and Graphic Workshop makes a few

assumptions about how CUT files will be used in order to make it workable. To begin with, CUT files don't know how many colours they have in them. They rely on a second file, called a PAL file, to define their colours.

Graphic Workshop looks for a PAL file to decide whether a CUT file has two bits or eight bits of colour. If it doesn't find a PAL file with the same name as your CUT file, it assumes that the CUT file in question only has two bits of colour. Otherwise, it assumes that there are 256 colours in the file.

Files written to the CUT format from Graphic Workshop will appear as two-colour files if they started out that way or as 256-colour files if they had more than two colours initially.

PFS:First Publisher ART - Maximum bits: 1
The ART format is used to import graphics into PFS:First Publisher documents. It only supports monochrome pictures. Graphic Workshop will only read and write uncompressed ART files. If you encounter an ART file that will not read, use the Get Info function of Graphic Workshop to see if it's a compressed file.

JPEG (Joint Picture Experts Group) JPG - Maximum bits: 24
The JPEG format is actually a combination of several elements, and it's important that you understand what it does before you use it. The JPEG algorithm reduces the amount of space a compressed image will occupy on disk by selectively removing details from the image. Pictures with fewer details compress more effectively. The amount of detail removal is defined by the JPEG quality item of the Setup dialog box.

At the default value of 75, relatively little picture degradation will take place, but a significant amount of compression will be obtained. At lower values you'll experience still better compression, but with a marked loss of image quality.

Note that several other programs, such as Lead Tools and Image Alchemy have defined their own formats with the extension JPG. They are not compatible with the JPEG functions in Graphic Workshop. If you encounter an error reading a JPG file, you probably have a file from one of these sources.

Once an image has been converted to JPEG, its lost details are lost for good. Note also that repeatedly reading and writing the same image in the JPG format will successively degrade it.

If you convert an image from another format, such as GIF, to JPG and then from JPG back to GIF, the final GIF file will usually be smaller than the original.

At present all images converted into the JPG format will have 256 colours.

Note: All colour JPEG files are 24-bit images, having sixteen-million colours. Because many systems can only display 256 colours directly, JPEG files can be read as 256-colour images. This actually means that they'll be dithered when they're read. To have your JPEG files read as 24-bit images, enable the Read JPEG as RGB item in the Graphic Workshop Setup dialog. Disable this item to have them read as 256-colour images. The number of colours displayed in the Get Info box will reflect the setting of this switch.

The best way to convert from JPEG to a 256-colour format, such as GIF, is to enable the Read JPEG as RGB switch and then use the Colour Reduction option of Effects, rather than doing a straight conversion.

Graphic Workshop's JPEG functions include portions of the image compression code owned and copyrighted by Pegasus Imaging Corporation, Tampa, FL (813) 875-7575.

Kodak Photo-CD PCD files - Maximum bits: 24
Kodak Photo-CDs allow you to have conventional photographs converted to Kodak's proprietary CD-ROM format. The resulting files can be viewed, converted and treated like other PC file formats. In effect, having your photographs made into Photo-CDs will avail you of very high grade scanning, even if you don't own a scanner.

Not all CD-ROM drives can access Photo-CDs... you might want to contact Kodak for a list of those that can. We use Sony CDU-31A drives in house.

Photo-CD image files usually reside in a directory named \PHOTO_CD\IMAGES on a Photo-CD. They're named by the following convention:

    IMGxxxx.PCD

where xxxx is a four digit number, beginning with one for the first image.

Each PCD file contains a number of scans of the same image at different resolutions. The very low resolution images are used for thumbnail previews. Medium-level images are useful to view and work with Photo-CD scans in a PC environment. Very high resolution images can pose a problem for PC applications running under Windows at the moment, as will be discussed.

You can tell Graphic Workshop to read Photo-CD images at a specfic resolution through the Setup box. If you choose one of the 256-colour options you'll see attractive images even if your display card only supports 256 colours. If you choose one of the RGB options you may see coarse dithered images when you view a Photo-CD image, but you'll be able to convert PCD files to high quality true colour images for use with colour separation and desktop publishing software, photographic retouching packages, such as PhotoStyler. Choose one of the grey scale options if you will be outputting your Photo-CD images to a monochrome device, such as a laser printer. Note that if you choose a resolution which is not available on your Photo-CD, the next available resolution will be substituted.

If you use Graphic Workshop to convert from PCD files to another format, you must enable the Prompt for Destination option in the Setup box. If you don't do this, Graphic Workshop will attempt to write its converted files to your CD-ROM drive, which would be a bit tricky, CD-ROMs being read-only.

By default, Graphic Workshop will check your current drive whenever you change drives to see if it's a Photo-CD, and will automatically log you into the \PHOTO_CD\ IMAGES directory, where the PCD files are. You can disable this feature by turning off the Check for Photo-CD option in the Setup box if you like.

The higher resolution images in a PCD file may require more memory than your system can provide under Windows. Under Windows 3.1, no more than sixteen megabytes of memory can be allocated, no matter how much is in your system. Typically you'll have about twelve megabytes at most free to store images in. If you want to use high resolution true colour Photo-CD images you must have Graphic Workshop configured for virtual memory. This requires that you have sufficient disk space to buffer your image. See the sections of this document entitled *A Word About Memory* and *Setup*.

The thumbnails for PCD files are not handled like thumbnails for other file formats. Specifically, there are no THN files used... the images are actually the lowest-resolution scans in the PCD files in question. This means that you cannot use the Details and Search functions with PCD thumbnails. The thumbnails will not appear if you have the Check for Photo-CD option in the Setup box switched off.

Sun raster RAS files - Maximum bits: 24
Sun raster files are native to the Sun unix environment. They can be uncompressed or run length compressed. There are also a number of obscure compression standards which Graphic Workshop does not support at present. These rarely turn up... the Get Info function will tell you if you've encountered one.

Sun raster files appear with a variety of file extensions. Graphic Workshop uses the extension RAS. You might have to rename your files to use this extension if they're named something else. Extensions for Sun raster files on a unix system can include **.ras**, **.rast**, **.im1**, **.im8**, **.im24** and **.im32**.

Note that some 24-bit Sun raster files were created with their red and blue colour values erroneously interchanged.

HRZ Slow Scan Television - Maximum bits: 24
Images in the HRZ format always have 24 bits of colour and the fixed dimensions 256 by 240 pixels. Images with differing dimensions will be padded or cropped to fit in this space when they're translated to HRZ. Images with fewer colours will be promoted to 24 bits. This is a fairly specialized format... if you aren't using slow scan television, you probably don't need it. You might well ask what slow scan television is... damned if we know. Conventional television seems slow enough.

Graphic Workshop only reads uncompressed HRZ files.

WMF files - Maximum bits: 8
The WMF format contains vector graphics. Graphic Workshop will rasterize WMF files into bitmaps. You can set the colour depth and approximate image dimensions of the rasterized bitmaps this feature will create using the Vector Read Options control of the Setup dialog.

Graphic Workshop will not write to the WMF format.

When you read a WMF file with Graphic Workshop, the result will be a bitmap. Unless your source WMF file was black and white, the image will probably be dithered. While you can use all the functions of Graphic Workshop with WMF files, scaling, dithering and colour-reducing them may result in noticeable aberations in your destination images.

Graphic Workshop will read both conventional and placeable metafiles. If you're curious, you can tell which is which through the Get Info function. The Comments field will define the number of objects in the file for a conventional metafile and will say "Placeable metafile" otherwise.

Note that because the aspect ratio of conventional and placeable metafiles are calculated differently, the same drawing stored in both forms will have slightly differing dimensions.

CLP files - Maximum bits: 8
Graphic Workshop will read CLP files generated by the Windows clipboard viewer if they contain metafile objects. If they don't, you'll see a message to this effect. Note that while you can handle bitmaps this way... copying them to the clipboard, saving them as CLP files and then using Graphic Workshop to read them as CLP files... the results may be none too attractive. See the section on WMF files for a discussion of the vector read options available for CLP files.

FLI and FLC files - Maximum bits: 8
The FLI and FLC formats are a DOS-based animation protocol developed by AutoDesk. All FLI files are constrained to have the dimensions 320 by 200 with eight bits of colour, and most FLC files do as well. At present the FLI and FLC formats do not support sound.

The FLI and FLC formats use simple run length compression. Note that complex frames which don't compress well can result in really huge FLI or FLC files. The raw data for a 100-frame FLI file would require over six megabytes of storage.

ICO Files - Maximum bits: 4
ICO files are used to contain Windows icons. They're very small bitmaps. If you convert a larger bitmap to ICO, only the upper left corner of the source image will appear in your icon. Investigate the Graphic Workshop Scale and Crop modes if you're creating icons. You might also have recourse to the Effects Colour Reduction function if your source images have more than sixteen colours.

ICO files consist of a bitmap and a tranparency mask. When you view an ICO file with Graphic Workshop, the transparent colours will be replaced with a solid colour... by default it will be grey. You can change this colour by opeing \WINDOWS\GWS.INI with the Windows Notepad application and changing the value of the **IconTransparentColour** item.

Graphic Workshop will read icons of any size and colour depth recognized by Microsoft Windows. It will only write 32 by 32 pixel, sixteen-colour icons.

AVI files - Maximum bits: 24
AVI files contain Video for Windows animation. The can have any dimensions, although they tend to be fairly small. Graphic Workshop will allow you to read individual frames from an AVI file, display the whole file as an animation sequence, convert AVI files to other animated formated and convert other animated formats to AVI.

You must have Video for Windows 1.1 or better installed to use the AVI functions of

Graphic Workshop. If you register Graphic Workshop for Windows, you'll receive the Video for Windows runtime. This offer is subject to change without notice.

When Graphic Workshop creates an AVI file, as when it's translating from another animation format, it will set the AVI quality factor according to the value of the **AVIQualityFactor** item in \WINDOW\GWS.INI. This number can range from zero for unspeakably bad quality to 10000 for perfect quality. The default is 6500, which allows for some image degradation. If you increase the quality factor your AVI files will look better but they'll get much bigger. You can change this value by opening GWS.INI with the NotePad application.

CPT files -- Maximum bits: 24
The CPT format is used by Corel PhotoPAINT version five and better. The CPT format can preserve individual "objects" from Corel PhotoPAINT. Note that Graphic Workshop will only read the most recently created object from a CPT file having multiple objects. Prior to using Graphic Workshop to read a CPT file, have Corel PhotoPAINT merge all the objects into the source image.

While you can write images having less than twenty-four bits of colour to the CPT format, it's not advisable to do so. Due to the structure of palette CPT files, some colour degradation may occur. This is not a problem for twenty-four bit images written to the CPT format.

CDR files -- Maximum bits: 24
Graphic Workshop's use of CDR files is a bit peculiar. You'll save yourself a degree of drustration if you read this section before working with CDR files. Note that there are two distict modes under which Graphic Workshop can read CDR files.

Corel Draw's CDR files are vector graphics, but they contain small preview or thumbnail images which appear in the Corel Draw File Open dialog and in the Mosaic application. Graphic Workshop will read these preview images -- it will not read the actual line art graphics in CDR files. The preview images are very coarse, but they're useful for quickly ascertaining what's in a CDR file.

Alternately, Graphic Workshop can be instructed to search CDR files for bitmap objects. If one or more bitmaps are found, Graphic Workshop will read these as if they were conventional bitmap images. This is handy, for example, should you wish to extract a bitmap from a CDR file with no loss of resolution. If no bitmaps are present, Graphic Workshop will show you the CDR thumbnail preview for the file. If more than one bitmap is present, a dialog will appear to prompt you to choose one of the available images. Note that the preview images in the dialog may be cropped to fit the dialog window.

Turn the **Read CDR Bitmaps** switch in the Setup dialog on to have Graphic Workshop troll CDR files for bitmaps, or off to always have it display thumbnails.

If bitmaps are present in a CDR file, you can convert them to other formats, print them... in short, you can do anything you would do to a normal image file.

If Graphic Workshop only reads a thumbnail image from your CDR files, it will allow you to convert from CDR, but you'll be converting the preview images. This will not be attractive. **Should you contact us and ask us why converting from CDR**

thumbnail images results in a small, coarse graphic that's nowhere near as good as it looks in Corel Draw, our leather winged demon of the night will make a special trip over to visit you and rip out your lungs.

You can convert other formats to CDR with Graphic Workshop. The resulting file will be a version four CDR file with one bitmap object in the center of Corel Draw's workspace when you open the file in Corel Draw. CDR files created by Graphic Workshop are readable with Corel Draw 4.0 and beyond. They will not open in Corel Draw 3.0.

By default, images converted to CDR will appear as if they were sized to print at 150 dots per inch. You can change this by adjusting the value of the **CDRSize** item in \ WINDOWS\GWS.INI. See the section of this document that deals with Setup.

Note that the CDR format is proprietary to Corel Systems, which has thus far not disclosed its workings. Nor have they undertaken to keep it consistent over future releases of Corel Draw. Graphic Workshop can deal with CDR files from Corel Draw 4.0 and 5.0... it should handle future releases, but pigs should be able to fly, too. Registered users of Graphic Workshop encounter problems with the CDR import and export filters are welcome to get in touch with us for the current state of the circus.

UUE uuencoded Internet graphics
The UUE format isn't a graphic file format at all. Rather, it's a way of encoding binary files, such as graphics, so they can be sent over text-only electronic mail systems, such as Internet e-mail and Usenet newsgroups. The process of uuencoding a graphic turns it into text... albeit fairly mysterious-looking text... which can be mailed. The received uuencoded file would be uudecoded to return it to its former state.

If this means almost nothing to you, you're probably not involved with the Internet, and can safely ignore this section.

Graphic Workshop will read the images from uuencoded text. The file extension for your uuencoded text must be UUE. The text itself can contain multiple sections if you like... Graphic Workshop will attempt to figure out where the breaks are and assemble the original graphic into a correct file.

Graphic Workshop's UUE decoder can work in strict or relaxed mode. This has to do with how it works with UUE files having multiple sections.

In strict mode, the standard *begin <mode> <filename>* fields must precede the first uuencoded block in your source text file. Each subsequent section for multiple section uuencoded files must start with a BEGIN line of some sort and end with an END line. A uuencoded graphic that appears as multiple sections must have all the sections concatenated into a single UUE file. Note that Graphic Workshop does very little validity checking for uuencoded data... damaged source data, sections out of sequence or incorrectly formed uuencoded headers or trailers may cause Graphic Workshop's uudecoder to create an incorrect final binary file, and hence a mangled graphic.

In relaxed mode, Graphic Workshop wll decode any line which checks out as valid uuencoded data, ignoring all the BEGIN and END markers save for the first one. If it

doesn't find the END marker of the current file being decoded, it will prompt you for the next file in the current sequence.

The strict mode guarentees you a correct decode if your UUE files have the correct section markers, but not all uuencoded data has these. The relaxed mode can usually handle files without headers properly, but some pathological cases will crop up in which spurious data is decoded. The strict mode does not prompt for multiple sections of a UUE file.

The UUE decoder mode can be set using the Relaxed UUE Decoding item in the Graphic Workshop Setup dialog. If you encounter a UUE file that doesn't display properly, try toggling this switch. In most cases you'll want to leave it in relaxed mode.

Keep in mind when you're using the uudecoder in Graphic Workshop that whereas human beings can easily distinguish between the header and other flotsam which often appears before and after uuencoded graphics in e-mail, software is much less adept at this sort of thing. If you encounter uuencoded files that won't read, look at them with a text editor to see if there's something obviously peculiar about them. Should one of your images appear incomplete or obviously damaged, your UUE source file probably hasn't been created to the above specification... and perhaps the relaxed mode of the decoder can't quite figure out what's happening to it. In this case, you'll have to open it with a text editor and do a bit of hand massaginging between the section breaks. Specifically, just delete all the intermediate text and leave the uuencoded data as one long block.

If you use a news reader that will append multiple messages to the same file, you should be able to create suitable source UUE files for Graphic Workshop to read with no difficulty.

Note that when it decodes a UUE file, Graphic Workshop will ascertain the file type for the internal file name stored in the *begin* header of the first section, but it will form the body of the destination file name for translation or other processes from the body of the UUE file name.

You can treat UUE files like any other graphic file format so long as they contain graphics in a format that Graphic Workshop recognizes. For example, you can convert from UUE to a conventional bitmap format.

About multiple section UUE files: If you download uuencoded files from newsgroups, you'll probably encounter some postings with section numbers, witten as [1/3], [2/3], [3/3] and so on. This designation indicates that the original uuencoded graphic was too large to fit in a single Usenet posting, and has been split up among several consecutive postings. To view these files with Graphic Workshop, you can do one of several things:

1. Make sure you have the Relaxed UUE Decoding switch turned on. Double click on the first file in the sequence you downloaded. If this is not a complete uuencoded graphic -- that is, if it doesn't end with an END marker -- Graphic Workshop will prompt you to select the next file in the sequence. When the Next File dialog appears, double-click on the name of the next file. Click on OK if you think all the sections have been read or click on Cancel to abort reading the current file. You'll be

prompted once for each section of the file, until a file with an END marker is read. Note that it's your responsibility to select the correct UUE file sections and to select them in the correct order.

2. Alternately, use a text editor to inhale each section into a single larger text file. Be careful not to change any of the uuencoded data.

3. You can concatenate files at a DOS prompt using an obscure variation on the DOS COPY command. Here's how it works:

COPY SECTION1.UUE+SECTION2.UUE+SECCTION3.UUE PICTURE.UUE

In this example, SECTION1.UUE, SECTION2.UUE and SECCTION3.UUE are the partial uuencoded graphics downloaded from Usenet and PICTURE.UUE is the complete graphic, ready for Graphic Workshop to view. You can have as many sections as you like on a command line like this.

In most cases you'll want to use the first appraoch discussed here.

FITS Files - Maximum bits: 24
The FITS format is used to store images from telescopes and other astronomical sources. Graphic Workshop supports a subset of FITS. Specifically, it will only handle images with two axis correctly. FITS files can contain more than eight bits of grey scale information, but as no PC display hardware exists that can display it, images with higher resolution will be reduced to eight bits of grey for display and conversion.

It won't take you much work to find FITS files that Graphic Workshop will not display. FITS files are often used to contain images which aren't simple two-dimensional flat graphics.

If you do encounter a FITS file which Graphic Workshop will not display, or will not display correctly, but which you think contains a simple two-axis image, please send us a copy of it. We're still fine tuning the FITS reader.

If you write an image to a FITS file, it will be stored as an eight-bit grey scale picture.

Apple QuickTime MOV Files -- Maxium bits: 24
QuickTime movies are a tragic tale, and Graphic Workshop's involvement with them will prove very cursory. It will play MOV files, but it will not convert to or from MOV, a situation that's not likely to change in the foreseeable future.

Without getting into all the hoary details of our breif flirtation with Apple, adding complete QuickTime support proved to be probitively expensive. As we weren't prepared to raise the price of Graphic Workshop to deal with what is in reality a pretty obscure animation format, we decided to forgo this feature.

We have included hooks in Graphic Workshop which will allow it to play QuickTime movies if you have the QuickTime MCI drivers installed in your system. If you do not have these drivers installed, attempting to play a QuickTime movie will generate an error message.

Now, here's the really weird bit. As per our reading of Apple's license agreement, we are not allowed to distribute the MCI drivers with Graphic Workshop, even through the version 1.1 QuickTime software is freely available on most bulletin boards and on CompuServe. This includes our bulletin board and our Internet FTP site as of this writing. The file you want is called QTW11.ZIP. Download it, follow the instructions in its README.TXT file and you'll have a complete set of QuickTime drivers installed in your system. Graphic Workshop will subsequently be able to play MOV files.

QuickTime for Windows 2.0 is available on CompuServe at GO QTW-1. It costs $9.99 to download as of this writing. It's supposed to be better than the free 1.1 drivers, although we haven't tried it as yet. The free drivers appear to work fine, save that they leak a bit of memory.

We regret the inconvenience this situation may cause users of Graphic Workshop... the whole ordeal has left us pretty confused. We felt that some QuickTime support would be better than none at all, especially for Graphic Workshop users who require the software primarily for viewing files.

BGA Files - Maximum bits: 24
The BGA format is used by some OS/2 Warp applications. It can contain multiple images, and is actaully a variation on the OS/2 BMP format. If you attempt to read a BGA file which contains multiple images, a dialog will appear to allow you to select the image you're interested in.

Converting an image to the BGA format will result in a single-image BGA file.

PNG Files - Maximum bits: 24
The PNG, or Portable Network Graphics, format was created as a successor to GIF. It features lossless compression for images with up to twenty-four bits of colour, and most of the other features of GIF. In most cases it will provide at least slightly letter compression than GIF.

PNG files can be interlaced or non-interlaced. This won't affect how PNG images look in Graphic Workshop, but interlaced PNG files will cause Graphic Workshop to pause momentarily before its status bar begins to indicate that something's happening.

The PNG Compression control in the Graphic Workshop Setup dialog defines how hard Graphic Workshop will try to compress PNG files. It can range between one and nine. If it's set to one, PNG files written with Graphic Workshop will not be all that well compressed, but they'll write quickly. If it's set to nine, Graphic Workshop will usually manage to create smaller PNG files, but it will take a lot longer to do so. Intermediate settings will represent a tradeoff between these two extremes. Note that this setting will not affect the quality of an image stored in a PNG file -- it only deals with the compression effectiveness and the time it takes to write a PNG file.

By default, Graphic Workshop will add a TEXT chunk to any PNG files it writes specifiying the compression fact it has used. You can disable this feature by setting the PngAddCompFac item in GWS.INI to zero. See the section of this document dealing with Setup for more about this.

Password protection of PNG files: Read this next bit carefully if you want to use

the password protection feature of Graphic Workshop for Windows.

If the Password Protect PNG item in Setup is enabled, you will be prompted for an encryption password every time Graphic Workshop writes a PNG file. This password will be used as a "seed" to encrypt the image data in the PNG file to be written. In order to view or otherwise read an encrypted PNG file, you will need its password.

If you attempt to view an encrypted PNG file with Graphic Workshop for Windows, you will be prompted for the password. Graphic Workshop will not allow you to view the image unless you can enter the correct password for it. Note that these passwords are case sensitive.

If you attempt to view an encrypted PNG file with another image viewer, you will see a scrambled image.

Encrypted PNG files do not store their encryption keys -- if you forget the password for a picture, there is no easy way to retreive it. Please don't contact us about lost passwords -- we have no way of retreiving them either. Having said this, someone with enough time and a bit of software could probably crack the passwords for encrypted PNG files.

The encryption function is intended to provide a modest level of security for sensitive images. It's by no means unbreakable, and it would be unadvisable to use it in situations where absolute security is required. It makes a good parental lockout, especially if you're careful to remove all other PNG viewers from your hard drive.

Note that while actual PNG files can be scrambled, their thumbnails cannot. If you really want to be sure no one can see what's in your encrypted pictures, remove their thumbnails.

Also see the Setup section of this document for information about the Persistent Passwords item.

A short editorial and pontification: Within the limits of common sense, decency and whatever laws prevail where you live, we feel that grown-ups should be able to look at pretty well anything they like. We also feel that responsible grown-ups should be able to keep their kids from viewing images that might be inappropriate for ankle-biters. As such, we've implemented this feature. Alchemy Mindworks does not condon the use of its software for the distribution of illegal material. Be warned -- if the local law where you are catches you with encrypted PNG files that contain something nasty and they want information about cracking the encryption keys, we'll provide it.

For those who are interested in this sort of thing, the encrypted PNG images have their data exclusive-OR'ed with the characters of the decryption keys, with every even numbered byte inverted. The password checksum is a long integer which contains the sum of the character values, plus one if the result is zero.

MPG Files - Miximum bits: 24
Graphic Workshop will display MPEG animations. At present, that's all it will do with them. MPEG data streams are fairly complex and processor-intensive to decode -- you must have a 32-bit implementation of Windows available to use the MPEG

viewing facility of Graphic Workshop This means that you'll need Windows 95, Windows NT or WIN32 installed under Windows 3.1.

NOTE: If you attempt to view an MPEG file without 32-bit Windows, you will see the following message:

_____

Cannot access the file at this time.

Make sure the file is not in use by another program, and is a valid program file.

_____

Future releases of Workshop are scheduled to have more complete MPEG support, including conversion to and from MPEG, sound support and a wider variety of viewing options. We welcome your feedback about Graphic Workshop's MPEG functions.

DLL and VBX files - Maximum bits: 24
You'll probably find a lot of files about your hard drive with the extensions DLL and VBX. These are not actually graphics per se -- they're dynamic link libraries used by Windows and its applications. They often contain small graphic images, however. For example, many of bitmap buttons that appear in the dialogs of Graphic Workshop are contained in the file BWCC.DLL.

Graphic Workshop will let you go trolling for graphics in Windows' DLL files. Because it can only read DLL and VBX files, and not write them, you can't damage anything by doing this. Many DLL and VBX files will prove not to contain any graphics -- you'll see a "No bitmap in this file" error if you try to read them.

Note that Graphic Workshop can't read OS/2 DLLs, and there are some peculiar Windows DLLs it won't handle either. If you encounter an error message when you attempt to view a DLL or VBX, try a different file.

To extract graphics from a DLL or VBX file, convert from it to a more common format, like PNG or BMP. A selector window will appear to let you select the graphics to be converted.

Windows Wallpaper - Maximum bits: 24
If you select the *Wlppr* item from the Destination dialog, your selected file will be converted to the BMP format and written to your \WINDOWS directory. It will appear on your desktop as wallpaper. Converting multiple files to *Wlppr* will cause all the files to be written to your \WINDOWS directory, but only the last one will become your current wallpaper image. You can change the wallpaper image for your desktop through the Windows Control Panel.

Note that 24-bit wallpaper ties up a lot of memory, and won't look very good on systems with 16- or 256-colour screen drivers. Consider reducing 24-bit images to 256 colour with the Effects function before you use them as wallpaper.

XBM files - Maximum bits: 1
The XBM format is used to store small bitmaps -- it's actually a C-language definition

of a bitmap. XBM files are associated with UNIX systems, wherein they often store icons.

Twenty-four bit files
Most of the image file formats commonly found in use on a PC which support colour do so using a palette structure, as this is the way most PC full colour display cards work. An image stored in a palette structure file will have a maximum of 256 unique colours, drawn from a potential palette of 16 million.

For practical purposes this colour arrangement is sufficient to reproduce pretty convincing colour photographs. However, for a number of reasons, high end photographic manipulation software, colour separation software and so on works better with a non- palette image, one in which every pixel is represented as a distinct colour. In these images, every pixel consists of three bytes of colour information, one each for the red, green and blue components of the pixel's colour. Such pictures are referred to as RGB or twenty-four bit pictures.

Among the formats which currently support 24-bit images are PNG, Targa, PCX, JPG, BMP, IMG and TIFF.

In order to convert twenty-four bit images into palette driven formats, such as GIF, Graphic Workshop must "quantize" and then "dither" them. Quantizing a twenty-four bit image involves finding the 256 most unique colours in the image. Dithering involves replacing each RGB pixel in the image with a palette value which is more or less the same colour, allowing for the limitations of a 256 colour format. In addition, dithering adjusts the colours of surrounding pixels to make the image as a whole look as much like the original twenty-four bit image as possible.

In order to convert a twenty-four bit image into a palette based format... for example, to convert a twenty-four bit PCX file into a GIF file... you must use the colour reduction function of Effects. This will perform a full 256-colour dither, which will usually result in a 256-colour image which is almost as good as the original twenty-four bit image was.

The colour reduction function also contains options to allow you to reduce a twenty-four bit file to lesser numbers of colours. Choosing fewer than 256 colours will produce a smaller file in some cases, but it will also leave you with a less faithful representation of your original colour image.

Rasterizing Vector Graphics
In addition to the bitmapped graphics that Graphic Workshop deals with, there is a second body of graphic files called vector graphics. These include such file types as WMF.

Graphic Workshop is expanding to allow some vector graphic files, initially Windows Metafiles, to be rasterized. This means that the contents of a vector graphic file are drawn on a bitmap. The result is a bitmapped rendition of the original graphic. Note that this sort of bitmap will not have the scaling flexibility or object structure of a vector graphic.

The size and colour depth of rasterized vector graphics can be set with the Vector Image Options combo box in the Graphic Workshop Setup dialog. Note that rasterized vector images are constrained to fit within the frame size you specify, but they will rarely occupy the entire frame. One dimension will usually be smaller than the maximum frame size, as defined by the aspect ratio of the source vector graphic.

Graphic Workshop will convert from a supported vector format to a bitmap. At the moment, it will not convert from one vector graphic to another vector format, nor will it convert bitmaps to vectors.

As a rule, if you want to import vector graphics into an application that supports both vectors and bitmaps you'll get decidedly better results if you import them as vectors. The rasterizing capability of Graphic Workshop is useful if you want to use a vector graphic in a situation that only allows for bitmaps, such as for Windows wallpaper.

Clipboard
Graphic Workshop supports the Windows clipboard. Specifically, you can use it to put images on the clipboard so that other Windows applications can paste them into their documents and you can paste images currently on the clipboard into any image file format Graphic Workshop supports.

There are two ways to get things onto the clipboard from within Graphic Workshop. To get an image from a file to the clipboard, select the file in question and then select Copy from the Edit menu. The file will be read and its image put on the clipboard.

Alternately, you can choose the clipboard as the destination for any Graphic Workshop function by clicking on the Clpbrd button in the Destination dialog. Thus, for example, you could "convert" a GIF files to the clipboard. This would cause Graphic Workshop to read the GIF file and write its contents to the clipboard, rather than to another disk file. Using the clipboard as a destination can save you time... you could, for example, rotate an image and have it copied to the clipboard all in one step.

Note that if you use this function on a vector graphic, the object pasted to the clipboard will be a metafile, not a bitmap.

To fetch a bitmap from the clipboard and have it written to a file, select Paste from the edit menu. You will be prompted for a destination file. You can only Paste with Graphic Workshop if the object on the clipboard at the moment is actually a bitmap.

Animation and Multiple Image Formats
Some graphic file formats, such as AVI and FLI, are actually animation sequences... that is, each file contains multiple frames or images. Some conventional still graphic file formats can contain multiple images as well.

If you attempt to view or process a file with multiple images in it, the Select Image dialog will appear to prompt you for the image to unpack from your file. The

selected image will subsequently behave as if it had come from a conventional single-image format.

The Select Image dialog will allow you to view the entire animation for those formats which contain animated sequences. Click on View to do so.

Most animation formats, such as FLI, are displayed using Graphic Workshop's internal animation drivers. Written to be memory-efficient rather than particularly fast, Graphic Workshop's internal animation drivers will run on machines having very little memory but they will slow down noticeably if you attempt to view animation on systems with slower processors, or if you attempt to view animated images with a lot of detail in them. Them's the breaks... Windows is a less than ideal environment for animation.

AVI files are displayed using the MCI Video for Windows drivers. You must have Video for Windows 1.1 or better installed to use the AVI functions of Graphic Workshop.

Graphic Workshop may not correctly display animation sequences which contain palette changes part way through the sequence.

External Filters
In addition to the file formats it supports internally, Graphic Workshop will also use external import filters to allow it to import vector files in additional formats. At present it supports type two Aldus import filters. Two such filters, for CGM and HPGL PLT files, are included with Graphic Workshop. These and several other Aldus filters are available for download from publicly accessible sources, such as GO ALDUS on CompuServe. If you own an Aldus application which supports vector imports... such as PageMaker... you can abstract its filters and add them to Graphic Workshop.

Aldus vector import filters are typically named with the extenion FLT. The file name of the filter will usually be the name of the file format it supports followed by IMP, for "import". Hence the CGM import filter will be named CGMIMP.FLT.

Import filters should be placed in the same directory as Graphic Workshop's other files, by default \GWSWIN. If you wish to keep them in another directory, open the \WINDOWS\GWS.INI file with NotePad and add the path to the directory where your FLT files live after the **ExternalFilterPath** entry.

Note that only version 2.0 or better Aldus filters will work with Graphic Workshop's external import filter facility. If you install an FLT file and the corresponding file formats do not appear to be supported, it's probably an old type one FLT.

Thumbnails
The thumbnail mode of Graphic Workshop is an alternate way of selecting files to work with. In thumbnail mode you can see small previews of each file in your current directory, in addition to the file names. This makes it easier to see what files look like before you open them. It also means, however, that you'll be able to see fewer files at a time.

In order to use the thumbnail mode, you must explicitly create thumbnails for those files you wish to have previews for. Each thumbnail is stored in a file with the extension THN. As such, the thumbnail for PICTURE.GIF will be PICTURE.THN.

Note that the thumbnail for PICTURE.PCX will also be PICTURE.THN. Files in different formats will share the same thumbnail. This will save some disk space, but it may cause you some confusion in using the comments and key word features of the thumbnails, as discussed later in this section. As there is little reason to keep multiple copies of the same image in the same directory, this will not usually crop up.

Each thumbnail THN file requires about nine kilobytes of disk space.

If Graphic Workshop encounters a file for which there is no corresponding thumbnail, it will display a grey box with a green symbol in it.

The drive and directory entries in thumbnail mode are displayed with canned icons as well... a tree of folders for directories and hard and floppy drives for other devices. These behave just like their corresponding entries in the list box mode of Graphic Workshop.

Thumbnails are managed using the Thumbnails menu of Graphic Workshop.

Whether or not you use the thumbnail mode of Graphic Workshop is entirely your choice. If you turn it off in the Setup box, Graphic Workshop will subsequently come up in its list box mode, and will ignore all apprehensions of thumbnails.

You can have Graphic Workshop automatically create new thumbnails for files it writes to disk by enabling the Auto-create thumbnails option in the Setup box. It will not create new thumbnails when it converts files unless you specify a different destination directory, as these would be the same as the ones for the source files being converted from. It will also not create thumbnails for files saved from the View and Crop functions.

If you create a new thumbnail for an image which already has one, the comments and key words in the old thumbnail will be overwritten.

You cannot use the Details and Search features with thumbnails for Kodak Photo-CD PCD files.

Note: As of Graphic Workshop 1.1c the colour map for the THN files was changed to improve the thumbnail image quality. Thumbnail images from older versions of Graphic Workshop will still display correctly, but they'll take fractionally longer to load. Graphic Workshop will update them to the new format if you load and save them with the Details function of the Thumbnail menu.

You can toggle between thumbnail mode and list box mode using the Thumbnail button in the graphic button bar. This is equivalent to selecting Use Thumbnails from the Thumbnails menu, as discussed below. If you hold down the Shift key and click on the Thumbnail button when Graphic Workshop is in its thumbnail mode, all the currently selected files will have thumbnails added to them. This is equivalent to

selecting Add Thumbnails from the Thumbnails menu.

Here's what the thumbnail menu options do:

Add Thumbnails
If you select one or more files in Thumbnail mode and then select Add Thumbnails from the Thumbnails menu, thumbnail images will be created for each of the selected images. These will replace the default no picture symbols, the green symbols.

Delete Thumbnails
The Delete Thumbnails function of the Thumbnails menu will remove the thumbnail images, comments and key words for all the selected images. The thumbnail images will be removed from Graphic Workshop's window, to be replaced by green symbol icons, indicating that thumbnail images are not available.

Details
The Details function of the Thumbnails menu will allow you to add comments and key words to an image. This information will actually be stored in the THN thumbnail file associated with the image in question.

You can store anything you like in the Comments field of the Thumbnail Details box. The key words should contain information to search by. For example, in adding key words to pictures of animals, you might use key words such as BIRD, AMPHIBIAN, INSECT, ELEPHANT, POLITICIAN and so on.

Search
The Search function of the Thumbnails menu will allow you to search through all the images with thumbnail entries in your current directory by key words. Any entries which match the key words you specify will be selected. You can subsequently view, print, examine or change the details and otherwise perform the usual Graphic Workshop batch functions on them.

If you enter more than one key word into the Thumbnails Search box, you can select how the search should treat them using the And and Or buttons. With And selected, only those entries having all the key words you've entered will be matched. With Or selected, any entry having at least one of the key words you've entered will be matched.

If you disable the Clear tags before search option, any currently selected entries will be left selected by the search.

You can search for partial matches of keywords if you enable the Partial Matches option in the Search dialog. Thus, for example, you could find all the wombats by searching for WOM or BAT. This option can be used in conjunction with the And and Or functions.

Use Thumbnails
The Use Thumbnails item of the Thumbnails menu and the Use Thumbnails nutton will toggle between the normal text mode and the graphic thumbnail mode of Graphic Workshop. Both modes offer the same functionality, except that

the text mode does not allow for the thumbnail-specific features of the package to be accessed.

Note that by default Graphic Workshop for Windows writes its thumbnails to the current directory. See the ThumbnailPath option later in this document to store them in a common subdirectory.

Thumbnail images can be dithered or not, as you prefer. See the section of this document which deals with **Setup** for more information about selecting a thumbnail dither function.

Thumbnail cache: Graphic Workshop will optionally cache its thumbnails. This means that it can store a number of thumbnails in memory the first time they're read, and if it's asked to read them a second time it can fetch them from memory rather than from disk. Fetching thumbnails from memory is much faster. Caching thumbnails will slightly improve the performance of Graphic Workshop's thumbnail mode on a hard drive, but it will have a very noticeable effect on reading thumbnails from slower devices, such as CD-ROMs, floppy disks and removable hard drives.

By default Graphic Workshop will cache up to 50 thumbnails. You can change this value by opening the \WINDOWS\GWS.INI file with the Notepad application and locating this line:

    ThumbnailCache = 50

This specifies the number of thumbnails to cache. If you're running on a system with lots of memory, increasing the **ThumbnailCache** value will speed up Graphic Workshop's performance in thumbnail mode. Ideally, this value should be at least as large as the number of thumbnails in the largest directory of images you're likely to encounter.

By default, Graphic Workshop will only cache thumbnails from CD-ROM drives, as this is where caching really makes a noticeable difference. When it's logged into another sort of drive... a hard drive, for example... it will not cache thumbnails, nor will it allocate a cache buffer. You can changed this so that all drives are cached. Opening the \WINDOWS\GWS.INI file with the Notepad application and locating this line:

    CacheCDROM = 1

Change this value to zero to cache all drives.

The thumbnail cache is a permamently allocated block of memory which will be present whenever Graphic Workshop is running in its thumbnail mode and logged into a drive which it's allowed to cache, as defined by the **CacheCDROM** setting. On machines with very little memory... four megabyte computers, for example... this may slow down other operations. In these cases you should disable the thumbnail cache by setting the **ThumbnailCache** value to zero.

Custom "No Thumbnail" Image: You can use your own image for the "no thumbnail" graphic, replacing the default green symbol. Here's how to do this:

1. Use Windows Paintbrush to create a 96 by 96 pixel BMP image with the graphic you want to use. Registered users of Graphic Workshop will find a file called NOTHUMB.BMP in Graphic Workshop's directory to be used for this purpose... start with this file and draw the graphic you'd like to use.

2. Run Graphic Workshop and select the BMP file you created with Windows Paintbrush. Select Add Thumbnail from the Thumbnail menu to create a thumbnail for it. Exit Graphic Workshop.

3. Run Windows Notepad and open \WINDOWS\GWS.INI. Locate the **NoThumbnailImage** item. Fill it in with the complete path to the THN file created for your BMP file. For example, it might read:

    NoThumbnailImage = c:\gwswin\mythumb.thn

4. Save the changed GWS.INI. Graphic Workshop will thereafter use your "no thumbnail" image, rather than its own.

Screen Capture
The screen capture function is provided with registered versions of Graphic Workshop only. We ask that registered users do not distribute it.

In adding screen capture to Graphic Workshop for Windows, we decided that it would be more useful to implement it as a small, stand alone program than as an adjunct to GWS.EXE. The CAMERA.EXE file requires about thirty kilobytes of memory, as opposed to several hundred for GWS.EXE.

The GWS Camera application is a simple, easy to use, blindingly fast screen capture for Windows. When you run it, it will hook into Windows and watch for a predefined key combination. Upon finding it, GWS Camera will capture that portion of the screen that you've set it up for to a PCX file. Note that you must have installed Graphic Workshop on your system for Camera to work. Specifically, the BWCC.DLL file must be available.

GWS Camera can capture the whole screen, the active window on the screen or the client area of that window.

Complete details of GWS Camera can be found in CAMERA.WRI.

Associating Graphics with Graphic Workshop
You can create Program Manager icons which, when clicked on, will boot Graphic Workshop for Windows and display a specific picture. The procedure for doing so is a bit inelegant, but fairly easy to master.

To begin with, you must use the Notepad application to add one or more lines to the WIN.INI file in your \WINDOWS directory. Locate the [Extensions] section. Add a line like this one for each graphic file format you wish to associate with Graphic Workshop. The extensions must be ones that Graphic Workshop can actually recognize.

gif=c:\gwswin\gws.exe ^.gif

Next, return to Program Manager. Select the New item from the File menu. Select New Item. Select Browse. Select All Files from the resulting File Open dialog box. Locate the graphic file you'd like to associate with Graphic Workshop. It must be of a type you have previously defined in the [Extensions] section of WIN.INI. Click on OK.

An icon should appear for your graphic.

By default, if you click on an associated image, Graphic Workshop for Windows will display the picture and then boot up normally. You can configure it to display the graphic and then return you immediately to the program manager... see the section on the Setup box. You should also disable the Prompt Before Quitting option in the Setup box.

Frequently Asked Questions and Problems
Why do I see a coarse dithered image if I'm viewing images under Graphic Workshop for Windows when I have a super VGA card in my system?
Graphic Workshop for Windows displays its images by handing them to the Windows screen driver. As Windows comes out of the box, it's set up with a sixteen-colour screen driver on VGA and super VGA systems. As such, even if your card can support 256 colours, Windows thinks you have a sixteen-colour card. In this case, Graphic Workshop can only display images with up to sixteen colours. It must remap or dither images with more than sixteen colours down to sixteen colours to display them. You can correct this problem by obtaining and installing the 256-colour Windows screen driver for your display card. As of this writing, Microsoft's universal 256-colour super VGA Windows screen driver is available for downloading from our bulletin board.

Why won't Graphic Workshop print to my Hewlett Packard colour inkjet printer?
This was a bug in earlier versions of Graphic Workshop which has been fixed as of release 1.1n. It should print correctly to all Deskjet printers.

Why are all the JPEG files I attempt to view dithered?
You either have a sixteen-colour Windows screen driver installed or you have the Read JERG files as RGB item in the setup box enabled. With this item enabled, JPEG files will read as 24-bit images. With it disabled they'll read as eight-bit images.

Why do I get black and white hard copy when I print colour pictures to my colour printer from Graphic Workshop?
You have the Expand Printed Halftones option in the Print dialog switched on This should be disabled for colour printing.

Why does the hard copy I print from Graphic Workshop to my PostScript printer look flat and washed out?
You have the Expand Printed Halftones option in the Print dialog switched off. This may have to be enabled for monochrome printing, depending on your printer.

Why can I perform functions in the list box mode that I can't perform in the thumbnail mode?

The thumbnail mode requires significantly more memory to maintain its window than the list box mode does. If you're short on available memory, this might be enough to keep some functions from operating.

If I save an image file of scanned text to a TXT file from Graphic Workshop, will the text file I create be the words from the scanned image?
No. This requires an optical character recognition package.

Why will some WPG files read under Graphic Workshop and some won't?
The WPG format can support both bitmapped and vector graphics. Graphic Workshop will deal with the bitmapped ones only. The Get Info function will tell you which files contain bitmaps and which one only have vector graphics in them.

Why does attempting to read some EXE files fail?
The extension EXE is normally used to indicate actual application files, that is, programs. Graphic Workshop uses it to indicate pictures which it has converted into programs as well... which it must do, such that DOS will recognize them as programs when you choose to run them. Unfortunately, one file name looks pretty much like another when Graphic Workshop is assembling its file list, and it can't tell which EXE files are programs and which are pictures.

Why won't Graphic Workshop read some TIFF files?
The TIFF standard is a huge, fairly confusing thing which allows applications which create TIFF files to do so in an almost limitless variety of ways. It's probably technically impossible to write software that will read all of them... at the very least, such an application would be huge. Graphic Workshop attempts to read a sensible range of TIFF files, and we improve on its TIFF handling frequently. However, there will probably always be unusual TIFF files it won't be able to handle. In creating TIFF files to be read by Graphic Workshop, we recommend that you begin by trying the simplest defaults, such as no compression.

Why can't I use the Details and Search functions of the Thumbnails menu with a Photo-CD.
When you create a thumbnail for a normal file, it's written to the current directory as a THN file. Photo-CD thumbnails are actually handled totally differently, and because a CD-ROM is read-only, it's impossible to write the updated details to the directory where your image is.

Why do I encounter an error message when I attempt to view or convert AVI files?
You probably don't have version 1.1 or better of Video for Windows installed in your system. Video for Windows must be available for Graphic Workshop's AVI functions to work.

A Word About Memory
Graphic Workshop for Windows expects Windows to supply it with the memory it requires. If insufficient memory exists to handle a file, it will say so. This is a bit awkward, in that Windows does not provide a realistic way to ascertain how much real memory is available. As such, the free memory value in the About box may be misleading if you have a permanent swap file, for example.

If you attempt to perform a function which requires more memory than Graphic

Workshop can allocate on your system, it will use a virtual memory spill file. This means that it will store your image on disk while it's being processed. Virtual memory is very much slower than real memory, and requires a lot of free disk space. It's a last resort when insufficient memory is available.

Not all the Graphic Workshop functions can use virtual memory. Specifically, if you attempt to rotate an image by 90° or 270° and virtual memory is required, Graphic Workshop will tell you that these functions cannot be performed.

When virtual memory is used you'll see the message "Creating spill file" in the status window before each image is read.

Because virtual memory is very slow, you might want to disable it entirely. See the section of this document that deals with Setup.

Reporting Problems
While we have tested Graphic Workshop thoroughly, it's possible that you may encounter a situation we hadn't anticipated, and perhaps a file which will not read. If this happens, we would be interested in knowing about it so we can deal with it in the next release of Graphic Workshop. Here's how to report a problem to us.

Copy your WIN.INI, SYSTEM.INI, GWS.INI, CONFIG.SYS and AUTOEXEC.BAT files onto a floppy. Copy the image files which resulted in the problem and provide a description of what you did and what happened. Tell us in as much detail as possible what sort of hardware you're using. Describe exactly what you did to cause the problem to happen.

If there's anything unusual about your system, try disabling it to see if the problem goes away. Unusual things include networks, alternate program managers and third party memory managerment software.

If we can't recreate it, we probably won't be able to fix it.

Before you contact us with a problem in Graphic Workshop, please make sure you've read this document thoroughly and that you understand how the software should work. Many problem reports which receive aren't problems with the software at all.

Using the Main Window
Graphic Workshop can boot up in either its list box or thumbnail mode. It will initially use the thumbnail mode... you can choose the mode it will subsequently use in the Setup box. The list box mode will show you each file as a name in a large multiple column list box. The thumbnail mode will show you each file as an icon or thumbnail image, with its name beneath it. Both modes work the same way.

You can switch between modes by selecting the Use thumbnails item of the Thumbnails menu and through the thumbnail button in the graphic button bar.

NOTE: The current version of Graphic Workshop defaults to using a graphic button bar, as it allows room for more buttons. If you prefer the

older text-based button bar, turn off the Graphic Button Bar option in the Setup dialog.

You can access the functions of Graphic Workshop either through the buttons at the top of its window or through its menus, as you prefer. The functions which pertain specifically to thumbnails are only available in the Thumbnails menu.

Graphic Workshop will always show you all the names of the image files it knows how to deal with in the current directory, along with all the visible subdirectory names, if any are present. If you are in a subdirectory, you will also see a subdirectory entry which is two periods.

As you work with Graphic Workshop a list of your most recently selected directories will appear at the end of the File menu. You can select one of these entries to return to a previously selected directory. Hold down the Shift key and select one of these entries to delete it from the File menu.

Graphic Workshop will only process those files that you explicitly select. You can select files:

- One at a time, by clicking on their names
- In groups, by clicking on the first file in the group to be selected, holding down the Shift key and clicking on the last file in the group to be selected. All the intervening fills will be selected.
- By clicking on the Tag All button in the button bar, which will select all the files in the current directory.

Having selected some files, you can subsequently unselect them by:

- Clicking on the individual file names to be unselected.
- Clicking on the first file in the group to be unselected, holding down the Ctrl key and clicking on the last file in the group to be unselected. All the intervening fills will be unselected.
- By clicking on the Clear button in the button bar, which will unselect all the files in the current directory.

Double click on a file to view it -- this does the same thing as clicking once and then clicking on View. If you double click on a directory entry or a drive letter... shown in square brackets... you will move into that directory or drive. If you double click on the two period entry, you will move back up your directory tree by one step.

If there are too many files in your current directory to see all at once, Graphic Workshop will allow you to scroll through them using a scroll bar at the bottom of the file name selector box.

Clicking once on a file name will select it. You can select multiple files and then select a function to be applied to all of them using one of the function buttons at the top of the Graphic Workshop window.

Whenever Graphic Workshop is processing a file, a status box will appear in the middle of the main window. Click your mouse at any time while this box is visible to abort the current file and any as yet unprocessed files.

Here are the Graphic Workshop function buttons and what they do. There are

equivalent items in the main menu... use whichever you prefer.

Clear All
Untags any previously selected files.

If you hold down the Shift key and select Tag All, a dialog will appear to allow you to select the files to be untagged by DOS wild card file specifications. See Tag All.

Tag All
Selects all the currently available files, save for drive and directory names.

If you hold down the Shift key and select Tag All, a dialog will appear to allow you to select the files to be tagged by DOS wild card file specifications. For example:

`*.JPG`   --   would tag all the JPG files in the current directory.
`P*.JPG`   --   would tag all the JPG files that start with P.
`?-FROG.*` --   would tag all the files that have "-FROG" as the latter parts of their names.

Enable Clear Existing Selections to clear any previously tagged files before tagging the wild card specification.

Note that you can call this function multiple times to tag files corresponding to different wild cards.

Rename
Allows you to rename all the currently selected files.

Delete
Deletes all the currently selected files. A prompt will appear to make sure you really want to do this.

Help
Invokes the on-line help for Graphic Workshop. The Windows help application and GWS.HLP must be available.

About
This button will display an About box with the version number of your copy of Graphic Workshop, our address and some other dogma. It will also include a display of the available memory. Note that this memory value may include spill file space available to Windows but not of much use to Graphic Workshop, and as such be artificially high. This box also appears when you exit an unregistered copy of Graphic Workshop.

Click on the arrow button in the lower right corner for more information about Graphic Workshop.

Quit
This button exits Graphic Workshop. It may prompt you to see if you really want to quit, depending on how you've configured this feature in the Setup box.

If you hold down the Shift key and select Quit, your current Graphic Workshop

configuration will be written do disk but Graphic Workshop will not terminate. (Should you not have encountered it before, this works if you hold down the Shift key and exit Windows, too. Your current Desktop settings will be written to disk and Windows won't terminate.)

View
If you double click on a file name or select one and then click on the View button, Graphic Workshop will display the selected file. Select multiple files and click on View to show several files one after another. The View function will start by showing you a wait box, which has a bar graph in it to indicate the status of what you've asked Graphic Workshop to do. When the picture is fully unpacked, Graphic Workshop will open a display window and show you the picture.

If the picture is larger than your screen, the cursor keys will allow you to pan around it. Normally you will pan around in small increments. If you hold down either shift key when you hit a cursor key, you will move around in larger increments.

There are also scroll bars to move around with.

Hitting Esc or Enter will return you to the main screen. If you have selected multiple files to view at once, Enter will display the next file and Esc will abort any further files and return you to the main screen. Clicking with the right mouse button is equivalent to hitting Enter. If you hold down the shift key on your keyboard when you exit View mode, Graphic Workshop will show you the comments for the file you've just seen if any are present.

Depending upon the Setup box settings, Graphic Workshop will dither pictures with more colours than your display can manage. It may also warn you if you attempt to view a twenty-four bit image without dithering enabled, as this function can take a long time and cannot be aborted once the display begins to refresh. These options are discussed in dealing with the Setup box.

Graphic Workshop will use an eight-colour dither if you have a sixteen-colour display and a 256-colour dither if you have a 256-colour display. These dithers have been optimized for speed rather than for image quality, although the 256-colour dither can look pretty respectable.

In the sixteen and 256 colour display modes, you can make adjustments to the VGA colour palette while a picture is being displayed. This can be handled either by opening the Adjust box from the Picture menu or by using the colour adjustment keys, as follows. The 'r' and 'R' keys will increase and decrease the amount of red in a picture, the 'g' and 'G' keys will adjust the amount of green, the 'b' and 'B' keys will adjust the amount of blue. The 'i' and 'I' keys will adjust the overall intensity of the picture. The 'c' and 'C' keys will adjust the contrast. The '=' key will return the picture to its normal state. Note that these adjustments only affect the original picture that you're viewing... they do not alter the palette in the file on your disk unless you save the changes to a new file.

You can save an adjusted picture to a new file by selecting Save from the Picture menu. Note that if you are viewing a dithered version of an image, the file you save with the Save function will be dithered too.

You can get information about an image while you're in View mode by selecting Get Info from the Picture menu.

If you're viewing a small image, select Tile from the Picture menu to have it duplicated over the entire view window. This is handy for seeing what tiled BMP files will look like if you use them as wallpaper.

Professional graphic users might want to adjust Graphic Workshop's viewing mode to compensate for the gamma of a specific monitor.

You can do this by opening GWS.INI in your \WINDOWS directory with the Notepad application and changing the value of the **ViewGamma** item. This value should be set to 100 times the gamma value you want. As such, a gamma of 1.0 would be **ViewGamma = 100**. Gamma values in the range of 0.2 through 2.0... or **ViewGamma = 20** through **ViewGamma = 200...** are sensible gamma values for most display devices.

The default value is a gamma of 1.0, or **ViewGamma = 100.** At this setting, **ViewGamma** will have no effect on yourdisplay.

If you aren't sure what gamma is, you probably have no need to meddle with this setting.

Note: If you set the **ViewGamma** value to something other than 100, such that some gamma correction is imposed on your displayed images, images saved from the view mode will embody your gamma correction.

Print
Printing is a batch function. If you tag multiple files and then click on Print, each will be printed.

Graphic Workshop's printing facilities will be determined by the printing capabilities of your print driver. It will print in colour, print to unusual printers and so on if you have an appropriate printer driver installed in Windows.

You can set up your current printer by clicking on the Setup button of the Print box... you'd probably expect this. You can also select the size of your printed pictures using this box. The available percentage values represent the degree of expansion based on the resolution of your printer.

Consult the section on the Setup box to choose setup options which best suit your printer.

The Autosize option in the Print box will select one of the eight size options to best fill your page. Note that this will choose the best integral expansion factor -- it will not scale your images arbitrarily to fill your page, as this could introduce scaling aberations into them.

Printing under Windows can be a lot slower than it is under DOS.

Note: in order to print correctly to some black and white laser printers, colour and grey scale images must be "expanded", that is, their grey scales must be adjusted

to compensate for the non-linear grey scale of the output device. The amount of compensation varies among different laser printers. You can set it using the brightness and contrast controls in the Print dialog.

The Expand printed halftones option in the Graphic Workshop Print dialog must be enabled for these values to affect your printed images.

The Centre Printed Images item will centre your pictures on the pages they're printed to.

Convert
Graphic Workshop allows you to convert a file of any format into a file of any other format... with a few restrictions. The new file will have the same name as the original but a new extension. Converting PICTURE.MAC into an IMG file will create PICTURE.IMG. PICTURE.MAC will not be affected.

You can batch convert any mixture of file types using Graphic Workshop. Any files which are inappropriate for the conversion you've requested will simply be ignored. The ongoing status will appear in the status box.

You cannot convert pictures having more bits of colour than the destination format can handle. For example, you cannot convert a 24-bit Targa file directly to an 8-bit GIF file. You would have to use the Effects colour reduction facility to do this. Likewise, to convert a colour file to a monochrome one, you'd have to use the Dither function.

You can convert between two animated formats. You can also convert from an animated format to a still format... a dialog will pop up allowing you to select the frame to convert. You can't convert from a still format to an animated format.

Dither
Dithering is a sort of magical process by which colour images can be converted into pretty attractive black and white versions for reproduction on a monochrome screen or a black and white laser printer.

Note that source files for dithering must have more than two colours.

Dithering often works a lot better if you scale the original image up. Graphic Workshop lets you dither with images of anywhere from "size as" up to 500 percent expansion if you have enough memory.

Note that the Dither only dithers to monochrome. Colour dithering is handled by one of the functions of the Effects box.

Dithering is a fairly slow process, and the better the dithering algorithm, the slower it gets. Big files and really good dithering can take half an hour or more on a slower computer, although the results are usually worth it.

At its best, dithering can look better than halftoning, and a dithered file can be printed on both PostScript and LaserJet printers. Dithered files sent to a PostScript printer will print faster than halftoned files.

If you have Graphic Workshop dither a file, it will create a new file for you of the type selected and with "D_" before the name. Thus PICTURE.GIF could be dithered to D_PICTUR.IMG, for example. PICTURE.GIF would be left untouched.

The simplest... and fastest... form of dithering is a Bayer dither. This does not produce great results, but it's extremely quick.

The remaining three dithering algorithms use what is called "error diffusion". These produce really nice looking dithers, but they're quite slow. The fastest... and least attractive... is Floyd-Steinberg. The best... and by far the slowest... is Stucki. The Burkes dither is somewhere in the middle.

All three of these dithers come in two flavours, ... unidirectional and bidirectional. These options will produce slightly different results.

You should plan to experiment with the dithering options of Graphic Workshop a bit to see what it's capable of.

Dithering scans an image line by line, starting in the upper left corner and working down to the lower right corner. For this reason, you will find that if you rotate an image by ninety degrees, dither it and then rotate the dithered version by a further two hundred and seventy degrees, you'll get different results than you would have had you dithered the original image.

In dithering an image, the original brightness levels of the source graphic will be expanded a bit to improve the quality of the dither. The amount by which the grey levels are expanded is set by the Brightness and Contrast items in the Dither dialog.

In addition to true dithering, the Dither function also provides for thresholding. This will reduce a colour or grey scale image to black and white by setting a white threshold. The results will usually be an exceedingly contrasty image. The higher you set the threshold value, the darker your image will become. The threshold is point below which pixels in the source image will be considered to be black in the destination image.

Dithering is a batch function. You can tag a number of files and then set them up to dither unattended.

Dithering is not available between two animated formats.

Info
This box will show you some basic information about one or more selected files. Some file formats actually contain a lot more information than can be displayed in the normal Info box. TIFF files, for example, can contain the name of the artist responsible for them, the type of software used to create them and so on. You can get at this sort of optional information for formats which support it by clicking on the Details button of the Info box when it's available. The arrow keys will scroll you through the detail window. Details are available, for example, if you get information about GIF, TIFF or IFF/LBM files.

Note that the Info and details information for EPS files actually pertain to the TIFF preview.

You may need some external assistance in fully interpreting the details.

By default, the Get Info dialogs will display a palette which represents the colours in your graphic. For true colour images, this will be a rainbow of colours ranging between black and white. If you wish to disable this feature, set **DisplayInfoPalette** in \WINDOWS\GWS.INI to zero. See the section on Setup elsewhere in this document.

Crop
This function will scale your selected file or files to fit your display window if they're too large. You can select areas of the displayed image by dragging a rectangle around the bits you like with your mouse. Select Save from the Picture menu to save the selected fragment.

You can fine-tue the cropping rectangle with the arrow keys of your keyboard. Hold down the left shift key and use the arrow keys to move the left and top sides. Hold down the right shift key and use the arrow keys to move the right and bottom sides. Use the arrow keys by themselves to move the rectangle.

If your source image has more colours than your Windows driver can display directly, you'll see a coarse approximation of your picture in the cropping window. Any fragments cropped from it will be saved correctly, however.

The menu bar will display the location of your mouse cursor relative to the upper left corner of the image you're cropping if no area is selected and the dimensions of the selected area otherwise. These latter values will represent the dimensions of your cropped file when you save it. Note that these may not be quite the same as the screen co-ordinates of the mouse cursor if your picture has been scaled to fit in the cropping window.

Cropping is a batch function. Note that if you use Esc to abort one cropped file in a batch, the rest of the batch will be aborted.

Cropping is not available between two animated formats.

Reverse
This function will create a reversed version of any image file. The new file will have the same name as the original file, with "R_" appended to the front of it. Thus, reversing PICTURE.MAC will leave you with R_PICTUR.MAC. If you reverse a colour image, you'll get a colour negative. These look weird… we haven't found a use for them as yet.

Reversing is a batch function.

Transform
This function will pop up a menu offering you five image transformations. You can rotate an image in ninety degree increments and you can flip it horizontally or vertically. These functions work on images of any number of colours.

Note that the ninety and two hundred and seventy degree rotation functions will take a very long time if your images are large. Them's the breaks.

Transformed images will be stored in files with "T_" in front of the names. Thus PICTURE.GIF will become T_PICTUR.GIF after any of the five transformations have been wrought upon it. If you rotate it and then flip the rotated image, for example, it will become T_T_PICT.GIF, and so on, with intermediate files along the way.

Transforming is a batch function.

The 90° and 270° rotate functions cannot be used with virtual memory.

Reversing is not available between two animated formats.

Scale
This function will allow you to scale files from 25 to 500 percent, or to specific sizes. Select "By factor" to scale files by a percentage or "By size" to scale pictures to specific dimensions.

Your original files will not be altered when you scale them. New files with the prefix "S_" will be created. Thus, PICTURE.GIF will produce S_PICTUR.GIF after scaling.

Scaling a picture can produce some really ugly results, depending on what you scale. Bear in mind that scaling by integral values… down to seventy five or fifty percent, up to two hundred percent and so on… will produce less ugly results than scaling by arbitrary values.

The scaling values you enter will be rounded to the nearest lower integral value. Thus, 42.5 percent will really be 42 percent.

Scaling is fairly time consuming.

You should probably avoid scaling dithered monochrome pictures down. Nothing terribly bad will happen, but for reasons which will become obvious if you think about it, the results will almost always be really ugly.

Note that the scaling percentage you enter determines the size of the destination image relative to the source image, not the actual percentage of scaling. Thus, entering 25 will produce a destination image which is one quarter… 25 percent… of the original image. Entering 200 will create a destination image twice as big… 200 percent of… the original. Entering 100 will produce a destination image identical to the source image.

By default, scaling by factors will be the same in both dimensions. If you select the Anamorphic box, you will be able to enter independent horizontal and vertical values.

You can also scale pictures to a specific size. If you select the By Size option and then enter the dimensions in pixels into the Scaling box, Graphic Workshop will calculate the appropriate scaling factors to make you pictures come out to the size you've selected.

The fixed size buttons in the By Size group will allow you to quickly select commonly used image sizes. They merely set the Size controls to the indicated values.

The Maintain Aspect option will allow you to scale to a fixed size image without changing the aspect ratio of your graphics. It will cause your image to be scaled such that one dimension fills the indicated frame and the other dimension is scaled by the same factor. For example, if you were to scale a 320 by 200 picture to 800 by 600 with this option enabled, the resulting image would be 800 by 500 pixels. The longest dimension, 320, would be scaled to 800 pixels. The shortest dimension, 200, would scaled by the same factor as the longest dimension.

The minimum size for scaling by size 16 pixels.

Scaling is a batch function. Note that if you select multiple files... possibly of varying sizes... and scale them by size, they will all be scaled to the same fixed dimensions.

Scaling is not available between two animated formats.

Effects
This function has a submenu which will allow you to access a number of special tools for working with colour image files under Graphic Workshop.

All of these are batch functions. The destination files will have "X_" in front of their names. Note that these functions require substantial amounts of memory.

Colour reduction
This function allows you to create destination files with fewer colours than the source files they're derived from. You can use this function, for example, to reduce a 256-colour file down to a 16-colour one. It's particularly useful for reducing twenty-four bit files down to 256-colour files.

Whenever you reduce the number of colours in a file, some image information will get lost. The simplest form of colour reduction is "remapping". This simply means that the destination image will have the best colour palette it can, and that all the pixels in it will be replaced with colours from that palette. The results aren't usually very attractive.

Colour dithering, also available in this function, can produce decidedly better results. With colour dithering you can reduce 24-bit files down to eight bits with very little loss of detail or colour resolution.

Colour dithering can work to either a "quantized" or "fixed" palette. A quantized palette is one which is selected from the image itself. A fixed palette is one which is the same for all images. In theory a quantized palette is preferable, but in practice it can produce poor results in images with small areas of widely differing colour or brightness. The 256-colour orthogonal palette will often provide the best possible results. In addition, it's faster.

The sixteen-colour fixed Windows palette should be used to create images which are to be used in a sixteen-colour Windows environment, such as for Windows wallpaper. Note that a lot of image quality will be lost in dithering to sixteen colours. The Graphic Workshop colour dithering functions have been fine tuned to improve the image quality when dithering to the fixed Windows palette. Specifically, the Floyd-Steinberg option will result in more attractive results for

images with a lot of continuous tones… pictures of people, for example… while the Burkes and Stucki options will look better for images with larger areas of solid colour.

The 240 plus 16 colour palette consists of a 240 colour quantized palette followed by the sixteen-colour Windows fixed palette. If you select this option, your image will only be dithered or remapped to the first 240 colours.

Grey scale
This function creates a grey scale destination image from a colour source image.

Sharpen
This function will create a destination image with more finely resolved details than its source image.

Soften
This function will create a destination image with less finely resolved details than its source image. This function is particularly useful for minimizing the effects of scanning moire patterns caused when you attempt to scan a previously screened original.

Smudge
This function will create a destination image which looks like it's being viewed through water drops.

Spatial posterization
This function will create a destination image in which the image is made up of large square areas. This effect is similar to the one used by television news to obscure the faces of people whose identities are to be kept secret.

Promote to twenty-four bits
This function will create a twenty-four bit file with the same image information as a file with fewer colours.

Effects are not available between two animated formats.

Cataloging
The Graphic Workshop Catalog function will create pictures of your pictures. Tag a number of images and hit F10. One or more files will be generated containing thumbnails of the selected images. These can be very helpful in keeping track of a lot of picture files.

Files created by the catalog function will be named CAT00001, CAT00002, CAT00003 and so on. The catalog function will not overwrite existing files… if the file CAT00001 exists, for example, it will begin with CAT00002.

When you create a catalog you can select one of a number of sizes for the final catalog files, in eight or twenty-four bit colour, with the individual thumbnails set in either portrait or landscape frames. Choosing twenty-four bit colour will create nicer catalog images, but they'll be sort of huge.

If you create eight-bit catalogs you can choose to either remap or dither the

thumbnail images. As a rule, remapped images won't represent the colours of your source graphics all that well and dithered images will lose a bit of resolution. Bayer dithering is faster than Floyd-Steinberg dithering, but the latter looks better.

Catalog files can be created with with a three-dimensional appearance or with a flat white or black background.

If you catalog animation files, such as AVI or FLI/FLC, the image catalogged will be the first frame in the file.

The Catalog button is available in the text button bar -- if you prefer the text button bar, select Catalog from the Image menu.

Moving and Copying Files
The Move and Copy Files function will copy files to another drive or directory, optionally deleting the source files when it's done. Specifically, Copy will copy files and leave the source files in place. Move will copy files and then delete the source files. In the latter case you'll be prompted to allow it to do so. The Move and Copy Files function includes optional verification of the copied files, using a 32-bit CRC check. This reduces the likelihood of incorrectly copied files to something less than the odds of winning a state-run lottery.

The Move and Copy Files button is available in the text button bar -- if you prefer the text button bar, select Move and Copy Files from the Image menu.

Slide Show
You can set up a sequence of images to display unattended under Graphic Workshop. Click on each graphic you'd like to include in your slide show and select Slide Show from the Image menu, or hold down the Shift key and click on the View button. A dialog will appear to allow you to configure the slide show options.

The duration value for the slides can range between one and 255 seconds. If the Loop option is enabled, the slide show will run continuously -- when it gets through all your selected images, it will return to the first image in the sequence and start over.

The Show Titles option will determine whether the name of each file in the slide show is displayed below the image.

When a slide show is running, hitting Enter will cause the next slide to be loaded immediately, ignoring the remaining display time. Clicking your right mouse button or hitting Esc will end the slide show.

Note that the slide show function will skip over animation files.

Formats
You can temporarily disable selected file formats in Graphic Workshop. When a format is disabled, no files of that type will appear in the Graphic Workshop file selector. Disabled formats can subsequently be re-enabled whenever you like. To enable or disable formats, select the Formats item from the File menu of Graphic Workshop. Click on the formats you wish to enable or disable. Enabled formats have an X beside them.

Setup

Graphic Workshop offers a wealth of options to allow you to best configure it to meet your requirements. All its configuration options are stored in the GWS.INI file in your \WINDOWS directory. The ones which you're most likely to find useful can be accessed through the Graphic Workshop Setup dialog. To alter the more obscure ones, open \WINDOWS\GWS.INI with the Windows Notepad application and modify the lines in question. Don't change anything you don't understand. Deleting \ WINDOWS\GWS.INI will return Graphic Workshop to its default state. Note that this will delete your registration number as well, requiring that it be re-entered.

In the following list, the entries in GWS.INI are shown in boldface. The default values are shown in square brackets. The options where they exist in the Graphic Workshop Setup dialog are shown in italics. For options which can be enabled or disabled, zero will disable them and one will enable them.

AllowDirectoryExtensions [1]
Allows directory names with extensions to appear in the file selector window.

AllowMultipleInstances [0]
If this item is enabled, running Graphic Workshop more than once will create multiple independent versions of it. If it's disabled, running a second instance of Workshop will call up the first instance. In most cases, it's a really bad idea to enable this item.

AutoCreateThumbnail = [0]   *Auto create thumbnails*
Causes Graphic Workshop to create a THN thumbnail file whenever it writes an image file to disk.

AVIQualityFactor [6500]
Defines the amount of detail the Video for Windows compressor can throw away in writing AVI files. This value can range from zero to 10,000. AT 10,000 Graphic Workshop will create perfect but very large AVI files.

ButtonBar [1]   Graphic *Button Bar*
If this item is enabled, the main window of Graphic Workshop will display a button bar with graphic buttons. If it's disabled, the buitton bar will use conventional text buttons.

CacheCDROM [1]
If this is set to to one, the thumbnail cache feature will only cache thumbnails on CDROM drives. If it's set to zero, all drives will be cached in thumbnail mode.

CatalogLandscapeDeep [96]
This is the depth of the catalog thumbnail image in landscape orientation.

CatalogLandscapeWide [128]
This is the width of the catalog thumbnail image in landscape orientation.

CatalogOptions
These are some flags as they pertain to the Catalog dialog. Don't mess with them.

CatalogPortraitDeep [128]
This is the depth of the catalog thumbnail image in portrait orientation.

CatalogPortraitWide [96]
This is the width of the catalog thumbnail image in portrait orientation.

CheckForPhotoCD [1]   *Check for Photo-CD*
Causes Graphic Workshop to look for the standard Kodak Photo-CD files and
directories when it logs in a new drive. This must be enabled for thumbnails to
work for Photo-CDs.

CDRSize [2]
This item controls the size of images written to CDR files. If it's set to one,
Graphic Workshop will write CDR files which contain bitmaps scaled to print at
300 dots per inch. Set this value to two to double the size, three to triple it and
so on. This value can range from zero through ten.

CentrePrintedImages[1]   *Centre Printed Images*
If this item is enabled, printed images will appear in the centre of the pages
they're printed to. If it's disabled, they'll appear in the upper left corner.

CentreThumbnails[1]
If this item is enabled, the images placed in thumbnails will be centred in the
image area. If it's set to zero, thumbnail images will be placed in the upper left
curner.

CentreViewImages [1]   *Centre View Images*
Displays images which smaller than the view window centred. If this option is
diabled, images will display in the upper left corner.

ColourButtons [1]   *Colour Buttons*
If this item is true, the button controls in Graphic Worshop will display in colour. If
it's false, they'll display in grey.

ControlFontName [Ariel]   *Font (combo box)*
This item defines the name of the font to be used to display text in Graphic
Workshop. Set this to Default for the old style chunky Windows font.

CopyOptions
This item stores the most recently used Move And Copy options. Don't mess with
it.

CreateExeCompressed [1]   *Compress EXE pictures*
Causes DOS EXE pictures to be compressed.

CreateGif89 [1]   *Create GIF 89a files*
Causes GIF files written by Graphic Workshop to be stored using the 89a
specification. If this is disabled, the 87a specification is used. Make sure this item
is enabled if you want to use GIF comment blocks.

CreateIffCompressed [1]   *Compress IFF/LBM files*

Causes IFF and LNM files written by Graphic Workshop to be compressed.

CreateIffPBM [0]   *LBM files with PBM packing*
Causes 256-colour IFF and LBM files written by Graphic Workshop to use Deluxe Paint PBM packing.

CreateMacbinaryHeader [1]   *Mac files with Macbinary header*
Causes MacPaint files written by Graphic Workshop to have a Macbinary file header.

CreateTarga16 [0]   *Create Targa 16 file*
Causes Targa files with more than 256 colours to be written using sixteen-bit colour, rather than 24.

CreateTifColour [1]   *Create colour TIFF files*
Causes TIFF files to be written as colour TIFFs, rather than as grey scale TIFFs.

CreateTifGreyExpand [0]   *Expand grey TIFF files*
Causes grey scale TIFF files to have the contrast of their images expanded.

CreateWindowsExe [1]   *Windows EXE pictures*
Causes Graphic Workshop to create Windows EXE pictures when images are written to the EXE format.

DefaultPrinterName
Stores the current default printer. Don't mess with this.

DisplayInfoPalette [1]
Causes a palette display to appear in the Get Info dialog. Set this item to zero to disable the palette.

DitherBrightness [0]
Stores the brightness expansion for dithering. This is set in the Dither dialog.

DitherContrast [20]
Stores the contrast expansion for dithering. This is set in the Dither dialog.

DitherExtraColours [1]
Causes Graphic Workshop to dither images in View mode if they have more colours than your Windows screen driver can handle.

DitherMode
These are some flags as they pertain to the Dither dialog. Don't mess with them.

DitherOnJpegRead [1]
Causes JPEG files to be dithered if they're read as 256-colour images.

DitherPrintedHalftones [0]   *Dither printed halftones*
Causes colour files to be dithered to black and white before they're printed. Use this if you have an old printer driver which doesn't generate halftones. This item appears in the Print dialog.

DitherThumbnails [2]
Tells Graphic Workshop how to generate thumbnails. Set this to zero for no dithering, to one for Bayer dithering and to two for error diffused dithering. No dithering will create sharper thumbnails but poorer colour matching.

DitherView [0]
Causes Graphic Workshop to dither everything you try to view. Leave this disabled.

ExpandPrintedHalftones [0]
Improves the contrast and image quality for pictures printed to black and white printers with some older printer drivers. This must be disabled to print in colour.

ExternalFilterPath
Set this to point to an alternate directory where your external Aldus filters will be stored.

FastVideo [1]
Enable this to allow fast updates in view mode. Disable it to allow for very little system memory and slower updates. Some display drivers don't work in slow mode.

FilenameUnderbars [1]   *File name underbars*
Causes Graphic Workshop to create new file names using underbars.

GifCommentPath
Replaces the default GIF file comment block with one of your own creation. This must be the complete path to a plain ASCII text file.

IconTransparentColour [7]
This is the colour Graphic Workshop uses for transparent areas of ICO files it reads. The default is grey.

InvertTextFiles [0]   *Invert Text Files*
If this item is enabled, text files converted to bitmaps will be inverted black for white.

JpegCompressionFactor [75]   *JPEG Quality*
This value determines how much detail Graphic Workshop can discard when it writes a JPEG file. Set it to 100 to create nearly lossless JPEG files.

LogoBitmapPath []
If you fill this field in to point to a suitable BMP file, it will be used as the graphic in the startup window of Graphic Workshop, rather than the default image. The BMP file must be a Windows BMP, rather than an OS/2 BMP. It must have the dimensions 240 by 200 pixels exactly, and it must have no more than 256 colours. If your logo doesn't appear, something's amiss with its BMP file. If it comes up mangled, use Graphic Workshop to convert it from BMP to BMP to correctly set all the header fields.

LongFileNames[1]   *Long File Names*

If this item is enabled and Graphic Workshop is running under Windows 95, long file names will be supported.

MainWindowX
MainWindowY
This is where Graphic Workshop stores its window coordinates between sessions. Don't change these values.

MaximizeOnStartup [0]
Causes Graphic Workshop to start up maximized. This is set based on whether Graphic Workshop was maximized at the end of your previous session.

MultipleImageGIF [0]   *Multiple Image GIF Files*
If this item is set to zero, Graphic Workshop assumes that all GIF files contain a single image. If it's set to one, it will troll for multiple images.

NoThumbnailImage []
If this item is filled with the path to a THN thumbnail file, the thumbnail in the file will be used as the default "no thumbnail" symbol in Graphic Workshop's thumbnail image selector. This will replace the canned symbol that usually appears. See the section on thumbnails elsewhere in this document.

PasswordProtect [0]   *Password Protect PNG*
If this item is enabled, any function that writes PNG files will prompt you for an encryption password. See the section of this document that deals with PNG files for more information about this feature.

PauseAfterFunction [0]
Causes Graphic Workshop to pause after doing something, even if no errors were encountered.

PersistentPasswords [1]
If this item is enabled, the Password dialog for encrypted image files will retain its password from one image to the next. If it's disabled, you will have to enter a new password for each image. Disable it for greater security.

PhotoCDResolution   *Photo-CD read option*
Defines which resolution and colour model will be used to read Photo-CD images.

PngAddCompFac[1]
If this item is enabled and the WriteFileComments item is also enabled, Graphic Workshop will add a TEXT chunk to any PNG files it creates specifying the PNG compression factor used in writing the file. Set this item to zero to disable the creation of this chunk.

PngCompression [6]   *PNG Compression*
This item defines how hard Graphic Workshop will try to compress PNG files. It can range between one and nine. If it's set to one, PNG files written with Graphic Workshop will not be all that well compressed, but they'll write quickly. If it's set to nine, Graphic Workshop will usually manage to create smaller PNG files, but it will take a lot longer to do so. Intermediate settings will represent a tradeoff between these two extremes. Note that this setting will not affect the quality of

an image stored in a PNG file -- it only deals with the compression effectiveness and the time it takes to write a PNG file.

PngDetailCrc [1]
If this item is enabled, the Details function of the Get Info dialog will display CRC values for PNG files. This can slow down the creation of the details list on older machines. Set this item to zero to disable the display of CRCs.

PrintBrightness [20]
Defines how much printed image brightness with be expanded if Expand printed halftones is enabled.

PrintContrast [20]
Defines how much printed image contrast with be expanded if Expand printed halftones is enabled.

PrintFileNames [1]
Causes Graphic Workshop to print the name of each file it prints. This switch can be found in the Print dialog.

PrintOptions [200]
This item stores the default resolution setting of the Print dialog. Don't mess with it.

PromptBeforeOverwrite [0]   *Prompt before overwrite*
Causes Graphic Workshop to prompt you before it overwrites an existing file.

PromptBeforeQuit [0]   *Prompt before quitting*
Causes Graphic Workshop to plead for its life when you try to quit, just like Windows does.

PromptForDestination [0]   *Prompt for destination*
Causes Graphic Workshop to prompt you for a new directory to write files to.

PromptforDestName [0]   *Prompt for file name*
Causes Graphic Worshop to ask you for a new file name every time it creates a file.

PromptForFilterPrefs [0]   *Prompt for filter options*
Causes Graphic Workshop to prompt you if you attempt to access a file which requires an external filter if the filter supports an options dialog. If this is not enabled, the filters default values will be used.

PromptForGifComments [0]   *Prompt for GIF comments*
Causes Graphic Workshop to ask you for text for a comment block whenever it writes a GIF file.

QuitAfterAssoc [1]   *Quit after association*
Causes Graphic Workshop to terminate after viewing if it was started with a command line argument.

RasterizeMetafilesToClip [0]

Don't mess with this.

ReadCDRBitmaps [1]   *Read CDR Bitmaps*
If this option is enabled, CDR files that contain bitmap images will be displayed as bitmaps rather than thumbnails. If more than one bitmap exists in a CDR file, a dialog will appear to allow you to select the one you're interested in. Thumbnails will be displayed if no bitmaps exists. If this option is disabled, thumbnails will always be displayed.

ReadJpegRgb [0]   *Read JPG as RGB*
Causes JPEG files to be read as 24-bit true colour images.

RelaxedUUE[1]   *Relaxed UUE Decoding*
If this option is enabled, the UUE decoder will decode any line which checks out as valid UUE data. If it's disabled, it will look for begin and end markers in multiple section UUE files. Having this option enabled will make Graphic Workshop less likely to produce incorrect images from multiple section UUE files.

RegistrationName
This is where your registration name is stored. Don't change this.

RegistrationNumber
This is where your registration number is stored. Don't change this either.

RememberLastDirectory [1]
If this item is set to one, Graphic Workshop will remember the directory you were in when you ended your previous session, restoring it when the software boots up again. Set it to zero to use a default directory defined in SetartupDirectory.

ScaleMaintainAspect[0]
This item preserves the Maintain Aspect setting of the Scale dialog.

ShowAnimationPreview [1]
Causes priview images to appear in the animation frame selection dialog. This is set by the Preview check box in the dialog.

ShowHiddenDirectories [1]   *Show hidden directories*
If this item is enabled, hidden directories will appear in the file selection window of Graphic Workshop. If it's disabled, they will be ignored.

ShowStartupWindow [1]   *Show startup logo*
Causes the startup logo to appear while Graphic Workshop wakes itself up.

SlideshowOptions [10]
This is where Graphic Workshop stores its slide show options. Don't mess with it.

StartThumbMode [1]   *Start in thumbnail mode*
Causes Graphic Workshop to start in thumbnail mode.

StartupDirectory [C:\GWSWIN\ ]
Defines the directory Graphic Workshop is to be looking at when it comes on line. If RememberLastDirectory is enabled, this will be updated with the last directory

you were logged into when Graphic Workshop terminated at the end of your previous session. If RememberLastDirectory is set to zero, you can fill in a directory path for the default directory you wish to use.

StatusBarSteps [16]
This determines how frequently the status bar will be updated when a file is being processed. Increasing this value will make the movement of the status bar coarser, but it will speed up the operation of Graphic Workshop considerably. Set it to zero to disable the status bar entirely.

TextBrightness [0]
Defines the amount of brighteness expansion for images translated into ASCII graphics.

TextCharacterLevels [ÿ.:-+|=%o#&XOB@]
Defines the characters used to represent grey levels in ASCII graphics. The ÿ character represents a space. Mess with these at your own peril.

TextContrast [20]
Defines the amount of contrast expansion for images translated into ASCII graphics.

TextDoubleCharacters [1]
Causes each pixel in an ASCII graphic to be written as two characters.

TextFileLimit [0]
Causes text files read by Graphic Workshop to be cropped into a 640 by 400 pixel bitmap.

TextWriteInfo [0]
Causes images written to the TXT format to be written as text files of information rather than as ASCII graphics.

ThumbnailCache [50]
Sets the number of thumbnails in the thumbnail cache. Set this value to zero to disable thumbnail caching.

ThumbnailPath
Defines where to store and look for thumbnail THN files, if they are not to be located in the same directories as their parent images. This is useful for images stored on CD-ROMs, as it allows you to create THN files for them on your hard drive.

TipFontSize[8]
This item sets the size of the font used for the tip windows.

TipWait [250]
This is the number of milliseconds your mouse cursor must pause over one of the buttons in the graphic button bar before a yellow tip window appears. Set it to zero to disable the display of tips.

TiffAlternateDetails [0]

Causes the information in the Details dialog for TIFF files to use inscrutable hexadecimal numbers.

TiffBrightness [0]
Defines how much image brightness will be expanded for grey scale TIFF files with expansion.

TiffContrast [25]
Defines how much image contrast will be expanded for grey scale TIFF files with expansion.

TiffGamma [100]
Defines how much gamma correction will be used for images written to TIFF files. The actual correction will be this value divided by 100. The value 100 is no gamma correction.

TiffOptions [2]   *TIFF write options*
This is the current TIFF write option.

TiffResolution [300]
This is the value used for TIFF and PCX resolution settings. It has no affect on image quality.

TransformMode
These are some flags as they pertain to the Transform dialog. Don't mess with them.

UntagAfterView [0]
Causes all the files in the Graphic Workshop file selector to be untagged after viewing.

UseTextCommentFiles [0]
If you set this item to one and enable WriteFileComments, Graphic Workshop will search for a text file with your comments in it when it creates a file in a format which supports file comments. For example, if it were to create a file called PICTURE.JPG, it would look for a file called PICTURE.TXT. If this file existed, it would use its contents for the comment block in PICTURE.JPG. If it didn't, it would generate file comments from whatever other source you have it configured for. If this item is set to zero, file comments will be created in the usual ways. The TXT file for file comments must exist in the source directory.

UseVirtualMemoryAlways [0]
Causes Graphic Workshop to buffer all files using virtual memory. There are very few resons for doing this.

VectorOptions [6]   *Vector read options*
This is the current resolution and colour depth setting for rasterizing vector files.

ViewCorruptedFiles [1]
If this item is set to one, Graphic Workshop will show you fartial images of damaged files. If it's set to zero, it will abort reading a damaged file and display an error message.

ViewFileComments [0]   *View file comments*
Causes a dialog to appear with file comments after viewing an image in any
format which supports comments, such as GIF and CDR.

ViewGamma [100]
Adjusts the gamma of images being viewed. The actual correction will be this
value divided by 100. The value 100 is no gamma correction.

ViewInZoomMode [0]   *Zoom when viewing*
Causes the view mode to come up with images zoomed, rather than in normal
mode. The Zoom toggle will toggle back to normal mode.

ViewModeBackground [0]
This item can be set to define the background colour of the view mode. The
following values will be recognized:

    0   --   Light grey
    1   --   Black
    2   --   Dark grey
    3   --   White

ViewModeBorders [1]   *View mode borders*
Causes a menu bar and scroll bars to appear in the view mode.

VirtualMemoryDrive [100]   *Virtual memory drive*
The lower case ASCII character of the drive to which viertual memory files should
be written.

WarnViewRGB [0]
Causes Graphic Workshop to warn you if you attempt to view a 24-bit image.
Leave this disabled.

WriteFileComments   *Write file comments*
If this item is enabled, Graphic Workshop will include a comment block when it
writes file formats that support comments, such as GIF and PNG. Note that file
comments will only be written to GIF files if the **CreateGIF89** switch is enabled.

WriteGIFInterlaced [0]   *Write GIF Internlaced*
If this item is set to one, Graphic Workshop will write interlaced GIF files.

WriteOS2Bitmaps [0]   *Write OS/2 BMP files*
Causes BMP files created by Graphic Workshop to be stored for OS/2, rather than
for Windows.

WriteTypeOneJpeg [1]
If this item is enabled, Graphic Workshop will write JPEG files with the older type
one header. This is advisable to maintain backwards compatibility.

In addition, GWS.INI contains one line for each file format Graphic Workshop
recognizes, excluding those handled by external filters. These are set by the
Formats dialog.

Changing Drives and Directories
You can log into a new drive or directory in one of two ways under Graphic Workshop. The simplest is to click on the [..] entry in the main file finder window to move up a directory, or one of the subdirectory name entries to mode down. Click on one of the drive letters to change drives.

There are cases wherein this might be inconvenient, such as if you have a lot of files in your current directory and the drive and directory entries are at the end of the list. Network users may find that the [..] entry is missing, making it impossible to navigate a directory tree this way. The alternate approach to change drives and directories is to select the Change Directory item from the File menu, which will pop up a conventional Windows dialog for selecting a new directory.

Note that if you enable the Prompt for destination item in the Setup box, you will be prompted for a drive to have files written to when you go to convert, dither, transform and so on.

If you hold down the Shift key and click on the Change Drives button or select Change Drives and Directories from the File menu, the current directory list will be refreshed. This is useful if you have changed the contents of your current directory with another application or from a DOS session.

If you hold down the Ctrl key and click on the Change Drives button or select Change Drives and Directories from the File menu, the directory will move up your current directory tree by one.

Contacting Alchemy Mindworks Inc.
We hope you'll contact us to register Graphic Workshop for Windows... see the section about registering your software elsewhere in this document.

You can contact us by mail by writing to us at:

> **Alchemy Mindworks Inc.**
> **P.O. Box 500**
> **Beeton, Ontario**
> **L0G 1A0**
> **Canada**

You can register Graphic Workshop for Windows with an American Express or Visa card by calling 1-800-263-1138 from the United States and Canada or 1-905-936-9500 from other places. Please note that this number is for ordering only... there is no one at it who can answer technical questions.

We will attempt to answer questions from unregistered users who write to us to the extent that their answers are needed for you to fully determine whether this software will suit your requirements.

We can also be reached through the Alchemy Mindworks bulletin board. It's available twenty-four hours a day at 1-905-936-9503. As of this writing, the protocol was 300, 1200 or 2400 baud, or 9600 baud v.32bis, eight data bits, no parity and

one stop bit.

The bulletin board always has the most recent versions of all our shareware on it, plus bug fixes, drivers and other relevant information. It only exists to support Alchemy Mindworks' shareware... it does not have a general file area.

If you encounter problems with a file, you're welcome to upload the errant file to our bulletin board. Actually, you can upload any picture files you like to the board... we enjoy getting pictures.

If you have a question about Graphic Workshop for Windows, feel free to leave it on the bulletin board. We try to answer all questions within twenty-four hours. Note that you must call back to retrieve your answer... please don't ask us to phone you or to leave the answer on another bulletin board.

Our **CompuServe** address is 70451,2734. Our **Internet** e-mail address as of this writing is alchemy@accesspt.north.net. We will at our discretion answer reasonable questions by e-mail. Please do not leave credit card information on the Internet.

You can find the current version of Graphic Workshop and our other applications on the **Internet** at our **FTP site ftp.north.net** in the directory **/pub/alchemy**.

You can download current versions of our applications, keep up to date with version changes and find other interesting bits at our World Wide Web server **http://www.north.net:/alchemy/alchemy.html.**

Registered users of Graphic Workshop for Windows will receive our voice number for immediate technical support. The voice number is only available for use from 10:00am to 5:00pm EST. If you call and get our answering machine... it does happen... please leave us a message or call back later. We cannot return calls for technical support.

We ask that in contacting us you appreciate that we are a small company with limited resources. If you have not registered this software we will not tell you to go to hell, but please don't ask us for half an hour of free technical support. We have not built the price of technical support into the cost of Graphic Workshop, as few users require it. We believe very strongly in not making everyone pay for something that only a small group needs. If our various governments felt the same way, our various economies wouldn't be in the midst of melting down.

Registration
If you like Graphic Workshop for Windows and find it useful, you are requested to support it by sending us $40.00. This will entitle you to telephone support, notification of updates, a free copy of the latest version of this software and other worthwhile things. It will also avail you of a registration number to shut off the closing beg notice. More to the point, though, it'll make you feel good. We've not infested Graphic Workshop with excessive beg notices, crippled it or had it verbally insult you after ten days. We trust you to support this software if you like it.

If you want to see additional features in Graphic Workshop, register it. If we had an Arcturian mega-dollar for everyone who has said they'd most certainly register their

copy if we'd add just one more thing to it, we could buy ourselves a universe and retire.

Oh yes, should you fail to support this program and continue to use it, a leather winged demon of the night will tear itself, shrieking blood and fury, from the endless caverns of the nether world, hurl itself into the darkness with a thirst for blood on its slavering fangs and search the very threads of time for the throbbing of your heartbeat. Just thought you'd want to know that.

Our address is:

> **Alchemy Mindworks Inc.**
> **P.O. Box 500**
> **Beeton, Ontario**
> **L0G 1A0**
> **Canada**

You can register Graphic Workshop with an American Express, Mastercard or Visa card by calling 1-800-263-1138 from the United States and Canada or 1-905-936-9500 from other places.

If you have previously registered Graphic Workshop you can update your copy to the current release for $20.00 plus $5.00 for shipping and handling.

If you have a FAX number, please include it in your registration. We're hoping to be able to handle notification of future updates of this software by FAX where we can. This is both considerably faster and a lot cheaper than mail.

You can FAX your order to us at 1-905-936-9502. You'll find an order form in this ZIP to make this easier.

When you register Graphic Workshop please specify the disk size you require.

Please note that we are not able to accept purchase orders. We cannot ship software COD.

> **Canadian users**
> The registration fee for Graphic Workshop for Windows is $40.00 (CDN) plus seven percent GST, plus $5.00 shipping, or $47.80. We sincerely regret collecting this tax on behalf of several levels of government which will only squander it. If you sincerely regret having to pay it, we urge you to express your regret by voting in the next federal and provincial elections.

> **American users**
> The registration fee for Graphic Workshop for Windows is $40.00 plus $5.00 shipping (US).

> Please note that when you send us your order... and then when we send you your update back... two distinct post offices get to deal with the ensuing mail. It can take a few weeks for things to get through this system... we ask that you be patient. We don't fully understand why it takes less time for a package to get to Australia than it does to send one to Cleveland... some things are best left as

mysteries.

Other users
The registration fee for Graphic Workshop for Windows is $40.00 plus $5.00 shipping (US). If you pay us by cheque, please make sure that it's a cheque drawn on an international bank, and that it will be negotiable in Canada. It must have the address of a North American bank to clear it printed on the cheque. If there's no bank clearance number along the bottom of the cheque, it will not clear. **We cannot accept Eurocheques.**

Payment from countries outside Canada must be in US dollars.

Paying by credit card
We can accept payment by **American Express, Mastercard** or **Visa** only. We need your card number and expiry date and the name which appears on your card. We cannot accept other credit cards.

Update Policy
Having registered Graphic Workshop for Windows, you're welcome to download the current shareware version whenever you like and install it. It will pick up your registration number and become a registered copy. If you find new features in a downloaded copy which are genuinely useful to your application of Graphic Workshop, we'd like to ask you for $20.00. If none of the new features are specifically applicable to what you're doing, or if you just downloaded a newer version to fix bugs, please treat it as a free maintenace release.

Note that when you install a new copy of Graphic Workshop over an existing one, the original Program Manager group will be deleted and a new one created. The shareware version of Graphic Workshop does not install icons for GWS Camera, QuickShow, Picture Configuration, Multimedia browser and the other non-shareware applications which are provided with the registered version of Graphic Workshop. It's a good idea to drag these icons to another group before you install a shareware version to update your registered version, and then drag them back when you're done.

As of this writing, registered users of Graphic Workshop will receive a post card three or four times a year outlining the new features of the software.

Overseas Distributors
Australia: Manaccom Pty Limited, 3/9 Camford Street, Milton, Queensland 4064, Australia, Telephone (61)-7-368-2366, FAX (61)-7-369-7589

Austria: PEARL AGENCY Österreich, Steyrerstraße 40, A-4540 Bad Hall, Austria, Telephone 07258-5333, FAX 07258-5315

Britain: The Public Domain & Shareware Library Ltd., Winscombe House, Beacon Road, Crowborough, Sussex, TN6 1UL, England, telephone 0892 663298, FAX 0892 667473, BBS 0892 661149.

*Czech Republic***:** JIMAZ s.r.o., Hermanova 37, 170 00 Praha 7, Czech Republic

Telephone: +42-2-379-498, FAX: +42-2-378-103.

Denmark: Prof Shareware, Benloese Skel 4 G, DK 4100, Ringsted, Denmark.

France: DP Tool Club, 99 rue Parmentier, B.P. 745, 59657 Villeneuvue d'Ascq, France, telephone (33)-2005.3566, FAX (33)-2005.3827

Germany: 1. Der PD-Profi, Schulstraáe 13, D-86666, Burgheim-Wengen, Telephone 8432-1296,
          FAX 8432-8674
          2. PEARL AGENCY Deutschland, Tel 07631 120 91-99, Fax 07631 120 08-9, BTX *PEARL#

Holland: CD & E Computerservices, Watercirkel 79, 1186 LP Amstelveen, Telephone 020-6438106, FAX 020-6438106

Japan: P&A Shareware, 302 Bellwins, 1367-23, Nakagami, Akishima, Tokyo, JAPAN 196, telephone (81) 425-46-9141, FAX (81) 425-46-9142

Technical Support
Technical support is available at 1-905-936-9501, 10:00am to 5:00pm EST most business days. If you encounter our answering machine... it does happen occasionally... please try back later. **One of the considerations in offering very low cost software is that we are unable to return calls for technical support.**

If you are an unregistered user of this software, we will at our discretion assist you to the extent required for you to ascertain whether this software is suitable for your application.

Callers who are rude, abusive or pig-headed with our technical support staff will wind up as demon-chow. See the section on Registration earlier in this document.

Please do not call our 800 number for technical support. The people who answer our sales line can put a credit card machine into warp drive, but they know less about software than most cats know about quantum mechanics.

We are also happy to provide you with technical support by e-mail, as discussed earlier in this document.

Books
Steven William Rimmer's new novel **The Order** is available at better book shops, or directly through Alchemy Mindworks. It's a tale of fertility magic, alchemy, secret societies, pagan lust and Victorian nasties... all holed up in a castle in the Scottish highlands about a hundred years ago. It costs $6.99... see the order form accompanying this software for more information.

Steven William Rimmer's still newer novel, **Wyccad**, as also available at better bookshops, or directly through Alchemy Mindworks. It costs $6.99... see the order form accompanying this software for more information.

If you use Alchemy Mindworks software, you might find the following books by Steven William Rimmer useful as well. You can browse a listing of these books and Steve's fiction at our World Wide Web server on the Internet. It's at **http://www.north.net/alchemy/alchemy.html**

Planet Internet, published by Windcrest/McGraw Hill, is a guide to the pubs, curious shops, back alleys and brothels of the Internet. It's a wealth of unusual and infrequently heard-of newsgroups, FTP sites and other resources on the net. It also includes some of the wildest graphics to be found on paper... parential guidance is advised. This is the book to have if you want to rip out onto the information superhighway and have a really good time.

Return to Planet Internet, published by Windcrest/McGraw Hill, offers another voyage into the dark side of the Internet. With over a hundred hand-picked sites, it will beam you into such things as Elvis sitings, female domination, online opera, polyamory and catholic bashing to name but a few. Return to Planet Internet features special emphasis on the World Wide Web. This is the Internet book to read if you've looked over the edge of creation at the eternal fires of chaos and didn't think much of the colour scheme.

Advanced Windows Multimedia Programming, published by Windcrest/McGraw Hill, offers an extensive resourse for migh end multimedia applications. It includes example source code for displaying and animating bitmaps, working with a joystick, playing and creating MIDI files, modifying WAV files, working with the AVI extensions in the 1.1 VFW development kit and a lot more.

Constructing Windows Dialogs, published by Windcrest/McGraw Hill, will provide you with the techniques, secrets and dirty tricks to make the user interface of your Windows applications state of the art. Included are discussions of the standard Windows constrols, the BWCC and CTL3D custom control libraries, multimedia, using graphics and creating your own custom control libraries.

Canned Code, published by Windcrest/McGraw Hill, is a collection of DOS and Windows programming tricks accumulated through years of real world application design. Included are bits of code to do high speed screen access, display a PCX file, access a dBASE DBF database, draw recursive graphics, play music, draw a maze, create fireworks, display a WordPerfect document, implement a text filter and many more useful and otherwise badly documented functions.

Windows Multimedia Programming, published by Windcrest/McGraw Hill, includes complete C language source code for Windows applications to play wave and MIDI files, display and animate bitmaps, read Kodak Photo-CD images through the Kodak PCD libraries, play compact disc audio tracks from a CD-ROM drive and display Video for Windows AVI files. The source code for the applications in the book, along with about a hundred megabytes worth of example graphics, sounds, scores and movies, plus six compact disc audio tracks of celtic music, are included on a CD- ROM.

Supercharged Bitmapped Graphics, published by Windcrest/McGraw Hill, discusses the GIF 89a, WordPerfect, BMP, IFF/LBM, TGA, MSP, 24-bit PCX and colour TIFF file formats, as well as such subjects as colour dithering and colour printing.

Super VGA Graphics, published by Windcrest/McGraw Hill, includes source code to read and write GIF and PCX files, and to do extensive graphics in the sixteen, 256 and 32,768 colour screen modes of popular super VGA cards. There is a chapter about printing graphics to a variety of printers... ranging from simple dot matrix printers though laser printers to colour ink jet printers. The book also includes a chapter about writing animated super-VGA arcade games.

Windows Bitmapped Graphics, published by Windcrest/McGraw Hill, deals with the most popular image file formats in a Windows environment. It also discusses printing, viewing and dithering images in

Windows applications.

A complete discussion of graphic file formats for use in word processing documents and desktop publishing chapters can be found in **The Graphic File Toolkit**, published by Addison-Wesley. This is an invaluable reference for anyone who wants to use graphic files but does not want to become a programmer in the process.

Corel Draw It, Published by Addison Wesley, is the essential guide to Corel Draw 4.0. Streamlined to take you from a standing start to complete mastery of Corel Draw in as short a time as possible, Corel Draw It offers a lucid explanation of lines and fills, colour, type and typography, bitmaps, importing and exporting, special effects and numerous other areas of Corel Draw.

If your local bookstore doesn't have these books, they can be mail or phone ordered from Christies of Cookstown, P.O. Box 392, Cookstown, Ontario L0L 1L0, Canada. Their phone number is 1-705-458-1562. It has a FAX machine on it after hours. As of this writing, they're open seven days a week.

Bundling Graphic Workshop for Windows

If you'd like to include Graphic Workshop for Windows with your product, please get in touch with us. We have several ways to help you do this so your users get the most out of our software and we won't have to set our leather winged demon of the night on 'em.

Shareware Distributors

We will, at our discretion, send out disks of our shareware applications to shareware distributors. Alternately, you can download the current versions of our applications from CompuServe in the GO PICS forum, from our FTP site at ftp.north.net in directory /pub/alchemy or from our bulletin board at 1-905-936-9503.

We encourage you to use our bulletin board, as it will allow you to keep your copies of our applications up to date.

If you obtain current copies of our shareware, you have our permission to distribute them under the following terms. No written permission from us is required if you abide by these terms.

> That nothing be added to, deleted from or changed in the archive files which contain our packages. This includes adding ZIP file comments to them.

> That our shareware is not included in or bundled with other hardware or software without our written permission.

> That no printed documentation regarding our shareware is included with the package without our written permission.

> That hard copy explaining that our packages are shareware is included with the disks.

> That no more than $10.00 (US) be charged for the distribution of whatever package our applications are part of. If you will be charging more than this, please get in touch with us for bundling rates.

You do have our permission to copy the ZIP files from our quad density disk to

multiple lower density disks for distribution.

Please note that if you would like to distribute Graphic Workshop for Windows in "rack" packaging, that is, in a store rather than directly from a shareware distributor, we request that you contact us for permission to do so. We will require a proof copy of the packaging you intend to use prior to giving our consent for rack packaging.

Other Alchemy Mindworks shareware
The following are the other shareware packages we have available as of this writing. Our newsletter, available for the asking, will list all the current ones.

Graphic Workshop for DOS -- release 7.0
This is the last word in image programs. It converts, prints, views, dithers, transforms, flips, rotates, scales, crops, colour adjusts, catalogs, quantizes and wreaks special effects on MacPaint, GEM/Ventura IMG, PCX, GIF, TIFF, WPG, MSP, IFF/LBM, BMP, RAS, JPEG, HRZ, RLE, Halo CUT, Targa, EXE, TXT and EPS files. It drives CGA, Hercules, EGA, VGA and pretty well all super VGA cards. It will drive PostScript and LaserJet Plus laser printers, colour PostScript printers, colour inkjets and most dot matrix printers. It features batch processing, extended and expanded memory support, an intuitive user interface and easy to follow menus. It allows you to convert colour image files into superb black and white clip art for desktop publishing, among other things. The registered version includes a powerful VGA and super-VGA screen capture utility.

GraphSaver for Windows
GraphSaver for Windows is a Windows screen saver. It will allow you to integrate your own graphics into the software. When GraphSaver for Windows blanks your screen, it will display the images you've selected. It will also allow you to select one of a library of animated special effects transitions for each image, and to add sound effects to your pictures. The images used by GraphSaver for Windows can be stored as GIF, BMP, JPEG, PNG and PCX files. GraphSaver for Windows is being offered as bookware... the cost of registration is to buy and read Steven William Rimmer's new novel Wyccad.

Pagan Daybook for Windows -- release 1.1
This is a small Windows application which will help you keep track of the pagan calendar. Never again be at a loss to know when the summer solstice occurs, or when to celebrate the festival of Fortunalia. It's considerably more interesting than a calendar that tells you when the bank holidays and long weekends fall. The Pagan Daybook is being offered as bookware... the cost of registration is to buy and read Steven William Rimmer's new novel *The Order*. See CLICKME.EXE.

Pagan Daybook for Macintosh
The Macintosh version of Pagan Daybook has the same features as the Windows version.

Pagan Daybook for DOS
This is a DOS text-mode implementation of the Pagan Daybook for Windows. It's also bookware, and if you register the Windows version you'll be registered for this one too.

GrafCat for Windows

GrafCat for Windows is an application to print paper catalogs of graphic files. It will print some or all of the images in a directory with anywhere from six to forty-eight images to a page in high resolution thumbnails. It will drive any printer that Windows has drivers for in two-colour dithered monochrome, 256-level grey scale and 24-bit true colour. GrafCat's output is a very convenient way to keep track of lots of images, handle proof pages for book manuscripts and deal with other situations wherein you want to print a lot of pictures. It works with most of the file types supported by Graphic Workshop for Windows, including PCX, GIF, JPEG, Photo-CD, WMF and TIFF. GrafCat for Windows is being offered as bookware... the cost of registration is to buy and read Steven William Rimmer's new novel *Wyccad*.

QuickShow Light for Windows

QuickShow for Windows is a powerful, easy to use Windows multimedia slide show. It will display graphics in any mixture of the following formats: MacPaint, IMG, PCX, GIF, JPEG, TIFF, WPG, MSP, IFF/LBM, BMP, RLE, Halo CUT, Targa, ART, HRZ and Photo CD. Special effects include WAV, MIDI and AVI files. QuickShow is fast, easy to use and can create slide shows which are as simple or as complex as you want them. QuickShow is being offered as bookware... the cost of registration is to buy and read Steven William Rimmer's new novel *The Order*. See CLICKME.EXE.

Graphic Workshop for Windows (release 1.1)

Offering the same functionality as Graphic Workshop for DOS, the Windows implementation of this package offers a traditional Windows interface, multitasking and lots of things to click on. It converts, prints, views, dithers, transforms, flips, rotates, scales, crops, colour adjusts, scans, quantizes, catalogs and wreaks special effects on MacPaint, GEM/Ventura IMG, PCX, GIF, TIFF, VBX, DLL, MOV, MPG, WPG, MSP, IFF/LBM, BMP, RLE, BGA, CDR preview and bitmap, CPT, JPEG, ART, RAS, HRZ, FLI, WMF, AVI, ICO, CGM, HPGL, CLP, CUT, Halo CUT, Targa, text and EXE picture files. Graphic Workshop for Windows will display and print on any card and printer respectively that can be driven by Windows. It features batch processing, an intuitive user interface and easy to follow menus. Includes several unicorns.

GIF Construction Set for Windows

GIF Construction Set for Windows is an application to create, edit and display complex GIF files. It lets you fully exploit the block structure of the CompuServe GIF specification. Among its uses are creating transparent GIF files; adding, editing and deleting comment blocks; adding non-destructive text to images as plain text blocks; creating multiple-image GIF files and simple animations; serving as a fully-compliant Windows GIF viewer application and providing a GIF viewer "helper" application for a World Wide Web browser or Mosaic client. GIF Construction Set for Windows is being offered as bookware... the cost of registration is to buy and read Steven William Rimmer's new novel *The Order*. See CLICKME.EXE.

Multimedia Workshop Light for Windows

Multimedia Workshop Light for Windows is an easy to use Windows WAV, MIDI and AVI file manager. It allows you to audition, queue, rename, delete and investigate multimedia files. Multimedia Workshop Light is being offered as bookware... the cost of registration is to buy and read Steven William Rimmer's new novel *The Order*. See CLICKME.EXE.

Image Gallery (release 1.1e)
Image Gallery is a visual database to help you keep track of a large number of image files quickly and effectively. It will create database files... galleries... of any combination of bitmapped image files, displaying them as small ``thumbnail'' images. It works with all the file formats supported by Graphic Workshop, with the exceptions of EPS, EXE and TXT. You can search a gallery visually or by key words. Each entry in a gallery supports key word and comment fields, as well as the dimensions, location and other specifics of each image. You can also print all or part of a gallery, producing hard copy catalogs of your images when you need them. Image Gallery will run with any VGA card. It uses a Microsoft compatible mouse and will drive any PostScript or LaserJet Plus compatible laser printer, and most dot matrix printers. Release 1.1 includes a full colour view function, exporting, colour thumbnails and multiple selection.

Desktop Paint 256 (Release two)
This is a complete rewrite of our popular super VGA paint package. Desktop Paint 256 is a powerful painting application. It will let you create and edit pictures stored in the MacPaint, GEM/Ventura IMG, PCX, GIF, TIFF, WPG, MSP, IFF/LBM, BMP, Halo CUT, and Targa formats. It features a rich selection of drawing and image manipulation tools, XMS and EMS support to work on large images and a user friendly interface. Looking very much like monochrome Desktop Paint in colour, it's a powerful application which will be equally useful for picture collectors, artists and desktop publishing users. It supports Paradise (and compatibles), Headland Video 7, Tseng Labs 4000 series cards, Trident cards which use 8900 series chips, Oak Technologies cards, ATI VGA Wonder cards and all cards with VESA capabilities. Note that you must have one of these super-VGA cards to use Desktop Paint 256... it does not run in the standard 320 by 200 pixel "standard" VGA mode. Desktop Paint 256 requires a Microsoft-compatible mouse.

Desktop Paint 16
Desktop Paint 16 is a VGA paint package for use with images having up to sixteen colours. As with the monochrome implementation of Desktop Paint, it will read and write image files in the MacPaint, GEM/IMG, PCX files, GIF, TIFF, WPG, MSP, IFF/LBM, BMP and PIC formats. It has EMS and XMS support to handle images of virtually any size, an intuitive user interface and a wide selection of image creation and manipulation tools. Desktop Paint 16 can utilize fonts from many other sources, including Ventura Publisher, Macintosh FONT and NFNT resources and Windows FNT files. It requires a VGA card and a Microsoft-compatible mouse.

Desktop Paint (Release three)
Desktop Paint is a powerful monochrome paint package fine tuned for use with desktop publishing applications. It will read and write image files in all the formats Graphic Workshop supports with the exceptions of EPS and RLE. It has EMS and XMS support to handle images of virtually any size, an intuitive user interface and a wide selection of image creation and manipulation tools. Desktop Paint can utilize fonts from many other sources, including Ventura Publisher, Macintosh FONT and NFNT resources and Windows FNT files. Desktop Paint requires a Microsoft- compatible mouse.

GrafCat for DOS (Release 3.1)
GrafCat prints a visual catalog of your image files, with fifteen or sixteen pictures

to a page, depending on the image orientation you choose. It supports all the file types that Graphic Workshop handles, and will drive any PostScript or LaserJet Plus compatible laser printer, including LaserJet II and LaserJet III series printers. This is a complete re-write of GrafCat... it now supports a file finder screen like the one in Graphic Workshop and numerous print options. It has an internal view mode like Graphic Workshop, and it can create thumbnail catalog graphics.

If you can't obtain them from the usual sources of shareware, they're available from us for $40.00 each preregisterd (with the exception of the bookware). They're also all available for downloading from our bulletin board at 1-905-936-9503. We can send you an evaluation disk set with all our applications on it for $10.00 to cover shipping and handling.

Recent Revision History

Version 1.1u - Optimized the image line handling code -- everything works a lot faster now. Allowed the status bar update interval to be set, further speeding things up. Added an Add Thumbnail option to the button bar -- hold down Shift can click on the Thumbnail button. Added a refresh directory option to the button bar -- hold down Shift and click on the Directory button. Added size buttons and a Maintain Aspect option to the Scale function. Added a tile option to the View mode. Added support for JPEG comments and details. Added an option to allow file comments to be automatically read from corresponding text files. Added an option to convert files to Windows wallpaper, slap 'em in the \WINDOWS directory and select them as the current wallpaper image. Added XBM support. Added wildcard tagging and clearing -- hit Shift Tag All and Shift Clear All respectively. Added an option to centre the images in catalog thumbnails. Modified the thumbnail creator to centre images. Added a feature to fetch file comments from corresponding TXT files. Improved the way the main window restores itself after a file operation. Added a "back up one directory" feature -- hold down the Ctrl key and click on the Folder button. Sped up the Delete function. Sped up PNG reading. Added an option to read and write password protected PNG files. Fixed a problem in the Paste from Clipboard function. Added a slide show function. Fixed a bug in the CDR preview function. Fixed a bug in the Threshold function of the Dither dialog. Fixed a bug in the BMP read and write functions. Fixed a bug in the PNG get Info function. Sped up and generally improved the thumbnail functions.

Version 1.1t - Maintenance release... the best way to find bugs is to release an ostensibly well-tested build. Fixed several bugs in the AVI and FLI/FLC functions. Fixed a problem with the Rename function. Added a function to move and copy thumbnails when files are moved and copied. Fixed a really obscure memory leak in the thumbnail mode. Added an option to refresh the current directory by holding down Shift and clicking on Change Directory.

Version 1.1s - Added long file name support for Windows 95. What's in a name? Well, two solid weeks of development, figuring out how Microsoft's bolt-on new file naming convention actually works. Fixed a bug in the thumbnail function that caused thumbnails not to be accessible in some functions if a Thumbnail Path entry was used. Fixed a problem with the file selection counter. Fixed a bug in the RLE write function. Added support for swiping bitmaps from DLLs, VBXs and other Windows linkable libraries. Added a dialog to the UUE reader to prompt for multiple section UUE files. Added a control the the PNG writer to allow the PNG compression

to be set over its entire range. Added an optional TEXT chunk to the PNG writer to record the compression factor used. Generally tidied up and improved the view mode. Fixed a bug in the JPEG write function for grey scale conversion. Added a format for FTS, an alternate extension for FITS files. Added colour counting to the Quantize function in Effects to improve the appearance of colour-reduced images that started out as 256-colour graphics. Well you might ask why anyone would want to do this. Improved the quantize function to eliminate the fifteen-bit quantize option in Effects. Fixed a bug in the RLE reader. Added a Move and Copy Files function. Improved the printing function and added an option to centre printed images.

Version 1.1r - Maintenance release… fixed a bug in the JPEG reader that affected grey scale JPEG files. Fixed a bug in the thumbnail creation function. Well, there had to be a few…

Version 1.1q - Added the Pegasus JPEG libraries, which vastly improved the JPEG read and write times. Added PNG support. Added nascent MPEG support, with more to come. Fixed a bug in the metafile rasterization function which caused occasional GPFs. Added a trap for multiple instances of Graphic Workshop. Fixed several cosmetic problems in the Setup dialog. Improved the colour dithering. Added a white background option to the Catalog function to create printable catalogs. Added extended selection to the main file selector. Improved the user interface of some of the dialogs with spin buttons… no doubt some will think them a giant step backwards, but we like 'em. Added a switch to allow hidden directories to be shown in the main file window. What's hiding in those directories? Added a directory history to the File menu. Fixed a bug in the FLI reader. Fixed a bug in the Transform function that affected sixteen-colour images. Added a Config button to the Print Setup dialog. Updated the main window of Graphic Workshop to get along with Windows 95 a bit more neatly… is Windows 95 actually an alien plot to destroy human civilization? Most likely. Added an optional graphic button bar to augment the text buttons in the main window. Added a trap to read Macintosh JPEG files. Removed the remapping step for viewing 24-bit graphics on a true-colour display.

Version 1.1p - Maintenance release… fixed a bug that caused the FITS code to crash on some files. Fixed a bug in the crop function that caused GPFs in some circumstances. Fixed a bug in the Effects remap code. Added a switch to select colour or grey button controls. Fixed a bug in the View Adjust Zoom function.

Version 1.1o - Improved the memory management. Enhanced the CDR support… Graphic Workshop will now optionally fetch bitmap images stored within complex CDR documents. It will also convert from other bitmap formats to CDR. See the section of this document that deals with CDR files. Added an option to the Fonts combo box in the Setup dialog to use the default system font. Added an option to write interlaced GIF files. Fixed a memory allocation bug which would cause Graphic Workshop to crash if the virtual memory was set to None and a large image was read. Improved the Effects functions and added a feature to automatically dither 24-bit files to 256 colours if the destination format doesn't support true colour. Added a palette display in the Get Info dialog. Tidied up many of the dialogs. Added a status bar to the main window of Graphic Workshop and killed the status bar in the Status dialog. Fixed a cosmetic problem in the multiple image selection dialog for users of Windows' large fonts. Added a pseudo-format for JPE files… these are JPEG files from unix systems. They happen when a World Wide Web browser receives a file with the

extension JPEG and wants Graphic Workshop to display it. They're handled the same as .JPG files. Added a trap in the Register dialog for bad numbers. Added an option for 15-bit quantization in the Effects dialog. Added a 240-colour palette option in Effects. Added an option to read multiple image GIF files. Fixed a bug in the Print function for very small images. Fixed a bug in the View Adjust function. Moved the Print File Names switch to the Print dialog. Added limited QuickTime movie support. Fixed a bug in the WMF format code that caused some WMF files to be read with wildly incorrect dimensions. Added an option to allow the startup graphic to be defined, for those adverse to frogs. Improved the BMP write function. Added BGA support. Added a time delay option to GWS Camera. Added features to the installer to trap bad registration numbers, display a warning if the current screen driver only does sixteen colours and to display a What's New file. Fixed a bug in the crop mode that caused the crop image not to be displayed in some circumstances. Added 16-bit BMP reading. Added a trap for FLI files with zero-delay frames.

Version 1.1n - Fixed a bug in the Get Info function that caused thumbnails not to be displayed when using ThumbnailPath. Added a switch to reverse TXT files being read. Added Corel PhotoPAINT CPT support. Added CDR preview support. Added an option to centre images in the view mode window. Added an option to disable the remember last directory feature between sessions. Added an option to view partial images from damaged files. Changed the default graphic for no thumbnails and added an option to set the default no thumbnail symbol to a custom graphic. Added an option to change the background colour in the View mode. Added thumbnail caching. Added a uudecoder to read graphics from Internet newsgroups directly... a singular convenience if you want to look at weather maps, erotica, fine art, erotica, animation cells, erotica or erotica. See the section on UUE files for more about how this feature works. Fixed the TIFF reader to handle CMYK TIFF files correctly. Fixed a bug that caused the crop mode to abort after saving one picture in a sequence of multiple source files. Added a feature allowing the font used to display text in Graphic Workshop to be selected. Fixed a bug in the Picture menu of the View mode which prevented the Zoom item from being initially checked if the Zoom When Viewing item was enabled. Fixed a few cosmetic bugs which appeared when earlier versions used Windows screen drivers with large fonts. Fixed the elusive Hewlett Packard Deskjet printing problem... or so it seems. Moved the Expand Printed Halftones switch to the Print dialog, where it would seem to belong. Added a feature to store the defaults in the Print dialog.

Version 1.1m - Updated the DOS EXE picture function to fix a few bugs. Fixed a problem with the TIFF code that caused some two-colour TIFF files to read incorrectly. Added an option to Setup to make Graphic Workshop's view mode come up defaulting with Zoom on. Modified the TXT format to convert graphics to ASCII art. Fixed a problem with grey scale Sun Raster files... the verdict's still out as to whether such things are actually intended to exist. Added a dialog to allow selected formats to be excluded from the file selector list. Added clipboard support. Added support for loadable Aldus vector import filters. Added a trap to deal with having logged into a CD-ROM during the previous session of GWS, and having no CD in it next time. Added an option to have Graphic Workshop show you GIF comments after viewing. Updated the Photo-CD software to read the Professional Photo-CD resolutions.

Version 1.1l - Updated the TIFF reader to allow for LZW TIFF files with funny horizontal difference predictor tags. Expanded the WMF reader to deal with WMF

files having the Aldus placeable header... it's not a standard if everybody can change it whenever they like. Added CLP support. Added a preview image to the multiple image selection dialog. Added ICO support. Added controls to the Dither and Print dialogs to adjust the brightness and contrast more conveniently. Fixed a problem in the effects functions that occasionally caused a protected mode fault if pictures of odd dimensions were processed. Added AVI support and conversion between animation formats... all two of them. Added a preview to the multiple image selection dialog. Added cataloging. Modified some of the function dialogs to preserve the current option settings between sessions.

Version 1.1k - Added FLI and FLC support. Graphic Workshop will now display animation sequences and extract individual frames to other formats. Added dithered thumbnails, which typically look better. Fixed two bugs pertaining to JPEG files... one having to do with grey scale images, and the other a problem which turned up in creating thumbnails from some JPEG images. Fine tuned the memory management a bit. Improved the BMP and DIB support. Improved the TXT file support... text files of any size can be converted into bitmaps. Added WMF rasterization. Modified the startup directory function... Graphic Workshop will return to the directory it was in the last time it ran. Added some additional lower resolution read options to the Photo-CD functions.

Version 1.1j - Maintenance release. Cleaned up a few cosmetic nasties and changed the default fast view toggle. Some users have reported that in the non-fast mode, Graphic Workshop doesn't display images correctly. We can't reproduce this in house.

Version 1.1i - Added high colour PIC file support. Modified the Get Info function to display a thumbnail image and the keywords and comments of an image thumbnail if one is present. Improved the view function to allow for systems with very little memory, or for memory pig screen drivers. Added an option to store the Graphic Workshop thumbnail THN files in a predefined directory. This will allow users of picture CD-ROMs to create thumbnails for them by storing them in a hard drive subdirectory. Modified the GIF reader code to deal with GIF files that lack correct EOI codes... questionable idea, this, but there seem to be a lot of them around. Added 24-bit IFF writing. Fixed a bug in the DOS EXE pictures created by Graphic Workshop for Windows that caused them to display incorrectly on some VESA cards. Added an option to search for partial word matches in the thumbnails search function.

Version 1.1h - Added the option to create Windows multimedia EXE pictures as well as DOS EXE pictures. Something to do with multimedia at last! Fixed a bug in the sixteen-colour PCX reader. Added an option to allow user-defined GIF comments for all GIF files created by Graphic Workshop. Added options to prompt before overwriting a file, prompt for a new destination file name and to eliminate the file name underbars in dithering, reversing, effects and so on. Added a feature to remember where we parked... Graphic Workshop's main window will restore its position from a previous session. Fixed a bug in the monochrome dither function. Modified the PCX reader to deal with illegal PCX files which are compressed across their line boundaries... a pox on them. Added DIB file support... not much of an undertaking, this, as they're just BMP files with a different extension. Fixed a bug in the Scale dialog. Modified the View function to allow it to do virtual viewing if there isn't enough memory for real viewing.

Version 1.1g - Fixed a bug in the View Save and Crop functions which caused a stack overflow on some systems. Added configuration save without quitting.

Version 1.1f - Added virtual memory to allow for files larger than sixteen megabytes. Added 24-bit IFF reading and recognition of the IFF file extension, in addition to LBM. Added LZW and group four TIFF reading. Added Sun raster file support. Added a compression factor display in the Get Info dialog. Added an adjustment for display gamma... unleashing the dogs of chaos, this. Moved the registration fields into a dialog box of their own... Setup is getting rather full, me'thinks. Added configuration items for TIFF writing and image resolution. Added alternate TIFF details to display the type, length and offset values of each tag in a TIFF file in the Details box. Upgraded the Photo-CD software to version 1.40...this has reduced the image read time and improved the RGB image rendering of highlight details. Added 256-colour dithering to the view function. If you attempt to view 24-bit image with a 256-colour display, you'll see a pretty respectable 256-colour dither, rather than the old sixteen-colour dither. Added an option to display files in the view mode without the usual menus and scroll bars.

Legal dogma
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If you register Graphic Workshop, we will assume that you are doing so having tested the shareware version and ascertained that it's suitable for your hardware and requirements. We cannot provide refunds for shareware registration if you subsequently change your mind. Should you encounter bugs in your registered copy of Graphic Workshop your remedy is to contact us and allow us to fix them.

Portions of the PNG code were written by Jean-loup Gailly and Mark Adler.

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That's it...