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-  **Anti-aliasing**
-  **Aspect Ratio**
-  **Averaging**
-  **Bit**
-  **Bitmap**
-  **Black and White**
-  **Brightness**
-  **Channel**
-  **Chrominance**
-  **Client program**
-  **Clip**
-  **Clipboard**
-  **Cloning**
-  **CMYK**
-  **Color Model**
-  **Complementary Color**
-  **Compression**
-  **Contrast**
-  **Data Type**
-  **Dithering**
-  **Dots per Inch (DPI)**
-  **Embed**
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-  **File Format**
-  **Filters**
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-  **Grayscale**
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-  **Image**
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-  **Mask**
-  **MCI**
-  **MIDI**
-  **Object Pool**
-  **OLE**
-  **Pixel**
-  **Prime Colors**
-  **Resolution**
-  **RGB**
-  **Saturation**
-  **Server Program**
-  **Thumbnail**
-  **True Color**
-  **VGA**
-  **Warping**

Using Help

Select a topic from the contents page, or use the Search button below the menu bar to look for information. To get information from within the program, select a command or position your mouse on a feature and press the **F1** key.

The following buttons are used in this Help:



Menu button displays all the menus



Definition button provides background information



Topic button displays associated topics and procedures



Dialog box button provides information about a dialog box

Browse

- ▾ **File Name** defines the filename you wish to search for
 - ▾ **Files found** after scanning, shows all the files on the current path matching the entry in the filename text box
 - ▾ **Directories** shows the current path and any subdirectories under that path
 - ▾ **Drives** lists all the available drives
 - ▾ **Size** shows the disk space occupied by a file selected in the files found list box
 - ▾ **Date** shows when the file selected in the files found list box was last saved
 - ▾ **Sort Files By** defines the order in which the found files are displayed
 - ▾ **OK** returns you to the dialog box from which you accessed this dialog box
 - ▾ **Scan** starts searching for files matching the specified name on the selected path
 - ▾ **Delete** deletes the selected file
 - ▾ **Rename** opens the Rename dialog box in which you can change the filename
 - ▾ **Network** allows you to connect to a network (only available if you are running Windows for Workgroups)
-

Memory

- 1. shows your current TEMP directory defined in your AUTOEXEC.BAT file. If you do not have a TEMP variable defined, then the Windows predefined directory appears
 - 2. 3. 4. allow you to enter additional drives and directories which will provide extra working space (normally different drives unless your access rights to particular directories allow you different space allocations on the same drive)
-

File Formats

- ▾ **Active File Formats** lists all the file formats currently available
 - ▾ **Add** adds a selected file format from the Inactive File Formats list box into the Active File Formats list box
 - ▾ **Remove** removes a selected file format from the Active File Formats list box and place it in the Inactive File Formats list box
 - ▾ **Remove All** removes all the file formats from the Active File Formats list box and places them in the Inactive File Formats list box
 - ▾ **Inactive File Formats** lists all the file formats removed from the Active File Formats list box
-

Insert Thumbnails into Album



Save to Album allows you to save thumbnails to one of the albums in Albums workspace



Subject allows you to enter a subject for the thumbnail (up to 127 characters)









Description enables you to enter a description for the thumbnail that will be included in the album



New opens the New Album dialog box; use this dialog box to create new albums

New Album

-  **Title** allows you to define the title of the album (up to 23 characters)
-  **Size** defines the size of thumbnails the new album will contain
-  **Compression** lists the available compressions
-  **Display Thumbnails in Grayscale** displays thumbnails in the album as gray images on a 16-Color display
-  **Create Album File in Directory** allows you to define the directory in which the new album is created
-  **Description** allows you to enter a description for the new album (up to 511 characters)

Related topic

-  [Insert Thumbnails into Album dialog box](#)

Print

- ▾ **Printer** shows the currently selected printer (selected in the Printer Setup dialog box)
 - ▾ **Title** allows you to enter text that will appear above printed images (the default "&f" prints the image's filename)
 - ▾ **Copies** allows you to enter the number of copies to print
 - ▾ **Scale to Fit the Page** scales images to print as large as possible on the output page
 - ▾ **Center the Image Horizontally and Vertically** allow you to choose where the image prints on the output page
 - ▾ **Start From Top Left Corner** determines the exact positioning of an image on the output page
-

Eleven sizes are available from 32x32 to 192x192. The files of albums with larger thumbnails will be slightly larger on disk but give you better representation of images and graphics. Application-linked files' icons are always 32x32, so for these, the smallest size allows you to display more thumbnails at one time without reducing the visual impact of each.

You can choose No Compression, JPEG Compression or lossless compression. Files compressed with a lossless scheme are restored to their original state. JPEG compression discards some of the original data during the compression process.

This option is only available when you are using a 16-Color display and you have selected *Bypass VGA palette to enable use of 16 grays* in the VGA Palette dialog box.

Use this to limit the file search to a specific file, file name, or file extension. Enter "*" to list all files in the current path.

Filenames, with full paths, are listed in the order they are found. To change the order use the Sort Files By options.

The selected directory and all subdirectories below it are searched. Press the Esc key to abort scanning.

Files are originally displayed in the order they are found. You can sort by Name, Type, Size, and Date/Time. Sorted files can appear in ascending or descending order. Select an option and the files are sorted automatically.

If you have found and selected a file from the files found list box, its path and filename (or just path) appear in the Filename text box of the original dialog box.

File Formats

Ulead programs classify files in eight media types: Image, Graphics, Waveform, MIDI, Video, Animation, Application-linked and Others. From these groups, the ImagePals programs can only directly edit, read and write files in the Video, Animation, Waveform, Image and Graphics groups. It can directly catalog and manage files in the other groups and, when you wish to edit them, transfer them to compatible programs for you.



Application-linked files



MIDI files



Waveform files



Animation files



Video files



Graphics files


























Image files



Others

Image files










ImagePals supports a wide range of images files which in most cases can be read and then edited by other Ulead programs using FIO plug-in files in the ULEAD2 subdirectory. The following section describes each of these image formats and provides examples of when to use one over another. For more information, click on the appropriate file format.

-  **Windows Bitmap (BMP)**
-  **Windows Clipboard (CLP)**
-  **Windows Cursor (CUR)**
-  **Digital Color Separation (DCS)**
-  **Encapsulated PostScript (EPS)**
-  **Graphics Interchange Format (GIF)**
-  **Windows Icon (ICO)**
-  **Interchange For Files (IFF)**
-  **GEM Image (IMG)**
-  **JPEG file interchange format (JPG)**
-  **MacPaint (MAC)**
-  **Windows Paint (MSP)**
-  **Kodak Photo CD (PCD)**
-  **Quick Draw Picture (PCT)**
-  **PC Paintbrush (PCX)**
-  **Adobe PhotoShop (PSD)**
-  **Pixar (PXR)**
-  **Sun Raster (RAS)**
-  **Run-Length Encoded (RLE)**
-  **Scitex CT (SCT)**
-  **Targa (TGA)**
-  **Tagged Image file format (TIFF)**
-  **Windows Metafile (WMF)**

Note: When you save images to some of the above formats you are given options.

Graphics files

ImagePals supports a wide range of graphics files which in most cases can be read and then edited by other Ulead programs using FIO plug-in files in the ULEAD2 subdirectory. The following describes each of the graphics formats supported. For more information, click on the appropriate file format.

-  **Computer Graphics Metafile (CGM)**
 -  **Windows Clipboard (CLP)**
 -  **Micrografx Designer/Draw (DRW)**
 -  **AutoCAD Drawing Interchange (DXF)**
 -  **Hewlett Packard Graphics Language (HGL)**
 -  **Quick Draw Picture (PCT)**
 -  **Lotus Picture (PIC)**
 -  **Windows Metafile (WMF)**
 -  **WordPerfect Graphics (WPG)**
-

Waveform files

Waveform files contain audio information. With proper hardware and drivers, you can use your computer to play them. Album uses Windows Media Player to play .WAV files from albums.

Video files

Currently there are two video file formats in Windows that are unrivaled for popularity: AVI and MOV. The Morph Editor and Album programs allow you to play AVI videos using Windows Media Player. Video Editor and Video Capture can both play AVI files while Video Editor can also edit video files and convert Apple QuickTime movie files (MOV) to the AVI format.

Animation files

The FLC, FLI, and FLX animation file formats were developed by Autodesk to create motion from still image and graphic files. Album uses Windows Media Player to play animation files.

Application-linked files

Application-linked files are files that Ulead programs do not directly support but are linked to a Windows program in the Windows "registration database". This database is maintained by Windows and records the link between files and their programs. Application-linked files can be opened in their linked program directly from Album or Windows File Manager by double-clicking on the file's thumbnail or filename.

Links to the registration database can be created three ways:

- ☐ by the program themselves. When installed, programs record their proprietary formats and any formats they "expect" to open. Windows Write, for example, records Write (.WRI) files as one type of file that will open in it.
 - ☐ the Associate command in the File menu of Album or File Manager. This command opens a dialog box in which you can see the program a format is linked to by typing the extension in the Files with extension text box. You can also change the association of files (see your File Manager's Help topic: *Associate Files with Applications*). This command is the method Microsoft recommends for editing the database.
 - ☐ the [Extensions] section in your WIN.INI file. You can manually edit this section and add new entries. The Associate command is a more interactive method of editing this data.
-

MIDI files

MIDI stands for Musical Instrument Digital Interface and is a standard for communication between musical synthesizers and computers for audio information. Album can play MIDI files through Windows Media Player.

Others

This is a special category for files that Album can recognize and extract some information from but cannot read completely by using MIO plug-in files in the ULEAD2 subdirectory. The .DVP file extension identifies files used by Video Editor for calling up Video Projects. The .MOF extension is used by Morph Editor for use in its projects. Other examples include Examples of these type files include .DOC files from Microsoft Word for Windows v.2.0, (from which album can read some of the header information, such as the authors name, and enter this into the thumbnail information fields), CDR from CorelDRAW! 3.0/4.0, and PPT from Microsoft PowerPoint v.3.0, (from which you can attain the header information from the preview information found within these programs).

Image Data Types

In the same way that you can have color and monochrome displays, you can have different types of images. All Ulead programs support five image data types (Album and Screen Capture support HiColor as well). The data type of an image determines the colors the image may contain and, in any description of image data types, you will see mention of "bits". The number of bits controls the exact number of colors available. You can work out this number by raising two to the power of the number of bits, e.g. an 8-bit data type gives a possible 256 colors.



Black & White



Grayscale



Indexed 16 and 256-Color



RGB True Color

Other data types



RGB HiColor



RGB 8-Color

Black & White is a one-bit data type. In a Black & White image, each pixel can be only white or black. Shades of gray can be simulated by arranging black and white pixels in such a way that they appear to be gray.

For example, a square of 4 pixels by 4 pixels (16 in all) can appear to be gray (a 50% tint of black) if eight black pixels and eight white pixels are properly arranged. Changing the mix of black and white pixels can darken or lighten the shade of gray the eye perceives.

Grayscale is a 256-Color (8-bit) data type. Each pixel in a Grayscale image can be black, white, or any one of 254 different shades of gray.

Choose this data type when you want to prepare images for a publication printed in a single color. If you want to introduce color into an image, convert it to RGB True Color.

Indexed-color images are images which have a "color table" incorporated into their description. This color table contains all the colors that can appear in the image. For Indexed 16-Color images, the color table has 16 colors (4-bit); for Indexed 256-Color images, the color table contains 256 colors (8-bit).

Most functions can be applied to indexed-color images, but to get full benefit from the more advanced editing features, convert indexed-color images to RGB True Color.

The initials RGB stand for Red, Green, and Blue. The data type bears this name because all available colors are created with different amounts of red, green and blue. In fact there are 256 shades of each available and mixing them together can result to any of 16.7 million possible colors. Hence the term True Color.

This data type has been introduced in conjunction with the influx of 15 and 16-bit display cards (32,768 and 65,536 colors). RGB HiColor display cards provide a lower-cost alternative to True Color cards for high quality color representation. You may want to use this data type if you are capturing images from a HiColor display. If 64,000 colors are enough for your needs, you can save images in this data type to save space on your hard drive. An RGB HiColor image occupies 33% less memory space than an RGB True Color image.

Note: To save images in this data type, you must use Screen Capture or Album and save them in the TGA format. The other formats do not support a 16-bit data structure. Image Editor does not support conversion to this data type and automatically converts RGB HiColor images to RGB True Color when they are opened.

This is an old image data type that you can open but not save. When opened, RGB 8-Color images are automatically converted to Indexed 16-Color.

This is a file format that allows Windows to display an image consistently on different devices (with similar capabilities). It supports Black & White, Indexed 16- and 256-Color, HiColor (565 and 555) and True Color images. You may want to use this format to save indexed-color images for later use in applications like Windows Paintbrush or in Windows itself (as, for example, your "Wallpaper"). ImagePals can both read and write to this format.

Note: ImagePals will convert 32-bit True Color images to 24-bit True Color when reading.

This is a device-independent file format used in Adobe PostScript language that retains information that can be outputted directly to a printer, or imported into another application. A low resolution TIFF preview enables you to view the image when imported into other applications. ImagePals allows you to read and write to this format (in raster form).

ImagePals cannot recognize EPS files that contain information other than in an image format.

Developed by CompuServe to allow device-independent transfer of images, GIF supports images up to 64 MB in size with up to 256 colors (8-bit), Black & White, Indexed 16- and 256-Colors.

GIF formats support LZW compression and is ideal for converting to and from this platform. ImagePals supports its 89A standard and can read and write to GIF format.

Note: GIF files do not record image resolution.

Developed by the Joint Photographic Experts Group, this file format is a new industry standard compressed file format that offers compression ratios up to 100:1 (original file: compressed file). As a standard it offers device-independence, i.e. you should be able to open any JPG file in all applications that support this format. JPG supports Grayscale, True Color and CMYK (4-2-4) True Color images. ImagePals can read and write to this format.

JPEG differs from LZW compression in that it is a "lossey" compression scheme: it discards data during compression. To minimize the visual effect of this loss, JPEG identifies and discards information that is least important to the human eye. Use this format when disk space is at a premium, or you have very large images.

Developed by ZSoft Corporation for PC Paintbrush. This is the default format used by some scanning and painting applications (including PC Paintbrush). PCX supports Black & White, Indexed 256-Color, HiColor (24-bit), Grayscale, True color and CMYK True Color images. ImagePals has the ability to read and write to this format.

Note: Some versions of the PCX format do not record the resolution of an image. The version used by ImagePals does. If you import an image with no resolution defined, it will set it at your current display resolution. You can redefine the resolution with the Resolution command in the Edit menu.

Developed by TrueVision for its full-color video boards (in particular the TARGA board), this is the format used by many specialized systems. ImagePals supports Grayscale, Indexed 256-Color, Hi Color and True Color (Alpha Channel) TGA images, and can read and write to this format.

Note: Some TGA files do not record the resolution of images.

Developed by Aldus and Microsoft to promote the use of desktop scanners and DTP (desktop publishing), non-compressed TIF is hardware and software independent, but there are many types which are not.

ImagePals can both read and write files in the TIF format. In addition to Black & White and Grayscale images, ImagePals also supports Indexed 16- and 256-Color, True Color and CMYK True Color (4-2-4) TIF images with LZW, PackBits and CCITT G3 1-D compression options.

Choose this format for exchange of image data between graphic media. Applications that support TIF images include: ColorStudio, CorelDraw, PageMaker, PhotoShop, to name a few.

CGM is an official standard for graphics interchange developed by the American National Standards Institute. It uses three different standard encodings that include character, binary word and readable text.

CGM is device dependent and is ideal for 2-D CAD program and drawing programs such as CorelDraw. ImagePals can read files in the CGM format.

The Windows Clipboard format may include different types of data. This data can be a device-independent bitmap (DIB), device-dependent bitmap (DDB) or Metafile.

The clipboard bitmaps support Black & White, Indexed 16- and 256-Color, and RGB True Color images. You can read and write files in this format.

Graphics format used by the Micrografx Designer/Draw programs by Micrografx Corp. ImagePals can read this format.

This is a Windows file format which stores bitmaps as resource files. ImagePals can read CUR files but cannot write to this format.

Developed by Quark Inc. DCS format is an output enhancement to EPS for saving image processing files. ImagePals supports DCS CMYK (4-2-4) True Color images and images in Grayscale.

Developed by Autodesk Inc. for PC-based CAD applications, DXF is the standard for CAD drawing data exchange and supports 2-D vector formats including wireframes and filled planes. ImagePals can read in the DXF format.

Applications that support DXF graphics include CorelDraw, PageMaker, Auto CAD, Cadkey, and FastCAD.

Developed by Hewlett Packard Co., for its plotters and laser printers, HGL is used in all CAD programs, as well as in word processing and charting programs. ImagePals is able to read in this format.

Windows Icon resource files may contain more than one image for a particular resolution. ICO formats support 16×16, 32×32, or 64×64 with 2-, 8-, or 16-Color images. ImagePals can both read and write files in the ICO format.

Developed by Electronics Arts for use in Deluxe Paints programs especially in the AMIGA platform. IFF/ILBM support 4-bit color map and 24-bit direct color. ImagePals can read and write to IFF file format.

Originally developed for their programs in the GEM environment by Digital Research Corporation. IMG file format allows you to compress Monochrome, Grayscale or Indexed Color images. ImagePals can both read and write files in the IMG format.

Developed for its MacPaint programs by Apple Computer Inc, this bitmap file format supports most Mac-based programs including PageMaker.

This file format provides support for 1-bit black & white images (delivers Grayscale only through dithering). Images are 720 x 576 pixels. ImagePals can both read and write to this format.

This bitmap format supports 1-bit Black & White images (delivers Grayscale only through dithering). ImagePals can read and write files to this format.

PIC was developed by Lotus Development Corp. to save vector charts and graphs for its Lotus 1-2-3 program. Applications that support PIC format include Javelin, MS Word, WordPerfect, and many other word processing and graphics programs. ImagePals is able to read files in the PIC format.

Developed by Eastman Kodak for its Photo CD products which allows you to view photos from Photo CDs. To enable you to view these photos in different display modes, PCD files contain 5 resolutions and allow you to choose from 3 different data types; Grayscale, Indexed 256-Color, and True Color photos. ImagePals can read files in the PCD format but cannot save to this format.

Create by Adobe Systems, Inc. for its PhotoShop package, PSD supports Black and White, Indexed 256-Color, Black & White, Indexed 256-Color, Grayscale, True Color, CMYK True Color images. ImagePals can both read and write to PSD format.

PXR is the picture storage standard created by Pixar. This file format encodes and compresses Grayscale and True Color pictures. ImagePals can read and write PXR formats.

Developed by Apple Computer Inc. for Mac applications which support both image and graphics formats; for PC word processing, desktop publishing, graphics programs; and for UNIX graphics translation applications; this format is ideal for both bitmap and vector data exchange. ImagePals can read both PICT I and PICT II formats.

This format PCT uses a coded binary (two-part numbering combination) PackBit (two byte coded compression) system to store bitmaps and provides excellent compression for monochrome images. PCT supports 8-bit, or 256-Color images drawing upon a 48-bit RGB palette.

Developed by Sun Microsystems for its FrameMaker application, this type of format uses run-length encoding (RLE) compression. ImagePals supports Black & White, Grayscale, True Color, Indexed 16- and 256-Color, and True Color map RAS files. ImagePals can both read and write files in the RAS format.

A file format especially for simple, long and repeated values that stores data in PackBit form. ImagePals supports Indexed 16- and 256-Color RLE files. Many paint applications, such as MacPaint, use this type of file format for storing data. ImagePals can both read and write files in the RLE format.

Developed by Scitex as a format for image processing applications. SCT supports Grayscale and CMYK True Color (4-2-4 bit) images. ImagePals can read and write to SCT format.

WMF is a device-independent format for the exchange of raster and vector graphics data. WMF supports Black & White, Indexed 16- and 256-Color and RGB True Color images.

In ImagePals, saving files in WMF format saves data according to the type of display you have. For example, if you save a True Color image as WMF on an indexed 256-Color display, when you open the file, you will see it as indexed 256-Color. ImagePals can read both vector and raster formats and write to this format (in raster form).

Created by WordPerfect Corp., for importing images into its word processing applications WordPerfect, WPG records vector graphics. ImagePals can read files in the WPG format.

A dBASE III and dBASE IV file format. ImagePals can read DBF files.

A type of file format used for storing presentation graphic files. PPT files may contain graphics, text and data and are stored in the RLE format.

Abbreviation for Adaptive Delta Pulse Code Modulation. It is a method of storing audio information in a digital format.

A method to smooth over the jagged edges of text that appear in bitmap images.

The ratio of width to height in an image or graphic. Keeping the aspect ratio means any change to one value is immediately reflected in the other.

A filtering process which takes the gray/color value of each pixel and averages it with the values of surrounding pixels. The value of each pixel is then replaced with the averaged value.

The smallest element of a computer's memory. Among other things, bits are used to record the color values of pixels in an image. The more bits used for each pixel, the greater the number of available colors. For example:



1-bit: each pixel is either black or white.



4-bit: each pixel can be any one of 16 colors or gray shades.



8-bit: each pixel can be any one of 256 colors or gray shades.



16-bit: each pixel can be any one of 65,536 colors.



24-bit: each pixel can be any one of 16.7 million colors.

The data transfer rate is the amount of compressed data to be passed to the storage device each second--every storage device has its own specification as to what this rate should be. As a general guideline, older hard drives transfer 300 KB/sec, newer hard drives 600 KB/sec, standard CD-ROM drives 150 KB/sec, double speed CD-ROM drives 300 KB/sec.

An image made up of a collection of dots or "pixels" arranged in rows.

An image that contains only black and white pixels.

The brightness of an image is a description of how much light appears to be emitted from it. An absence of light (black), has zero brightness; pure white light has maximum brightness.

Refers to one of the components of a color model. Different color models use different components to represent image colors. The RGB color model uses red, green and blue color component channels. The HSB color model uses hue, saturation and brightness color component channels. (Grayscale images can be thought of as single-channel images.)

Used in an HSB color model, chrominance consists of both the hue and saturation portions of a color.

An application which accepts linked or embedded object files.

A file, or portion of a file, placed into the timeline of a video editing program.

A temporary storage area shared by all Windows programs used to hold data during cut, copy, and paste operations. Any new data you place onto the clipboard immediately replaces the existing data.

Replicating one part of an image within or between different images.

A color model in which each color consists of varying degrees of the colors cyan, magenta, yellow and black.

A color model is a way to mathematically describe and define colors and the way they relate to each other. Each color models has a specific purpose; the two most common color models are RGB and HSB.

Complementary colors are opposite in value to primary colors. For example, cyan, magenta, and yellow are complementary colors of red, green, and blue.

An image composed of the start and end images of a morph control window. By adjusting the composition ratio, you can preview how a morph operation will turn out.

A method for making files smaller in size on disk. There are two types of compression: lossless and lossey. Files compressed with a lossless scheme can be restored to their original state. Lossey schemes discard data, which may lead to quality degradation upon decompression of that file. The ImagePals programs support schemes of both types depending on the format of the file.

The contrast of an image describes the difference between light and dark. In an image with high contrast, the transition from dark to light is very clear; in an image with low contrast, the difference between light and dark is more graded.

Points placed upon start and end images that indicates corresponding areas in a morph.

A line that joins two control points in order to establish a fixed distance between them during a morph.

The way an image is internally described and represented by a computer. The data type of an image controls the amount of information that the image can retain and therefore its displayed appearance. The ImagePals programs read and write the following types: Black & White, Grayscale, Indexed 16- and 256-Color, RGB True Color and CMYK True Color. RGB 8-Color images can also be read, but they are automatically converted to Indexed 16-Color.

To create a copy of an object from one program, a server program, in the document of another program, a client program. The embedded object retains a copy of the object's native data and a link to its server program that may be edited directly from the client.

Image arrived at after a morph. Its relation to the start image is created through control points.

The process of transferring information from one program to another.

Frame is used to mean a single picture which is part of a series. When the series is viewed at speed, a "moving picture" is created.

Frame rate defines how many frames of a video sequence are played in one second.

The ways in which a computer stores images or information on a disk.

Algorithms that manipulate the values of pixels to produce special effects.

A file whose data is composed largely of vector graphics. Vector graphics do not have a basic component, like a pixel, but are defined as lines between points, and fills between lines.

A shadow effect that often occurs when performing morph operations. This problem can usually be solved by placing more control points and lines along the areas that appear to ghost.

A method of using a pattern of black and white dots to produce what appears to be shades of gray. This is a common type of dithering.

For images, this normally means a 16-bit (5-6-5) data type that can contain up to 65,536 colors. TGA file formats support images of this type. Other file formats require prior conversion of a HiColor image into True Color. For displays, HiColor normally refers to 15-bit (5-5-5) display adapters that can display up to 32,768 colors.

A color model that specifies colors in a way that is easier for people to visualize than the RGB model. H represents the hue, or basic color; S represents the saturation, or purity of the color; and B represents the Brightness, or amount of light the color appears to emit.

An image is a reproduction, or picture of something. In this case, the term is used to describe digitized pictures, consisting of pixels, which can be shown on a computer display and manipulated by image enhancement software.

Creating a reference in the document of a client program to an object in a server program. The linked object can be edited directly from within the client program. When the object changes in the server program, the changes are automatically reflected in the client program.

Used in an HSB color model, the luminance refers to the perceived brightness of a color. (See HSB.)

A mask is a selection marquee. This marquee can be defined by a selection tool or generated from the contours of a Grayscale image.

Developed by Microsoft as a means to play audio and video data. It is also used to connect a computer to an external video source such as a VCR or laserdisc.

Industry standard interface that allows communication between musical synthesizers, musical instruments and computers.

A timed animation process in which elements of a first (start) image fade and distort into corresponding elements of a second (end) image.

The smallest unit in an image. Computer images are made up of rows of pixels, each of which can be a different color. Pixels are normally so small that you can only see an image when it is created by a collection of them.

The prime colors are the basis of the RGB color model: red, green, and blue. By varying the values of each of these colors, it is possible to create any other color on screen.

The resolution of an image determines the size of the individual pixels in an image, and thus the size of the whole image. Resolution is shown in pixels per inch (PPI) or dots per inch (DPI).

A color model used to define colors by specifying their red, green, and blue components. This is one of the standard color models used to specify and record colors on a computer. (See Color Model.)

Saturation defines the purity of a color. A color with a high saturation appears very intense and strong, a color with low saturation appears washed-out.

A server is a program that allows you to take information or objects from it and place them into a document in another OLE client program. Album and Image Editor can both act as server programs.

Image that undergoes a morph. Its relation to the end image is created through control points.

A small, low resolution representation of an image.

The Image Editor program provides various transformation commands that allow you to create special effects in images or selections. These commands include Flip, Rotate, Free Resize, Slant and Distort.

An image that contains enough color to appear "true" to life. For an image, this normally means 24-bit color, providing up to 16.7 million colors.

The ratio of width to height of a pixel, a selected area, or an image.

The brightness of an image is a description of how much light appears to be emitted from it. An absence of light (black) has zero brightness; pure white light has maximum brightness.

The contrast of an image is the difference between light and dark. In an image with high contrast, the transition between dark and light is very clear; in an image with low contrast, the transition is not so obvious.

Method by which images with a limited color palette appear to contain more color. Most notably, Black & White images appear to contain near-continuous changes in tone (gray shades). By arranging pixels of different colors close together, dithering can simulate colors not directly supported by an image data type. The various dithering techniques differ in the way they calculate and arrange new pixel values.

A unit of measure for screen and printer resolution that represents the number of dots a line can print or display per inch. Also called pixels per inch (ppi).

Graded shades of gray. For an image this normally means 254 different grays plus black and white: 256 "grays" in all.

The hue of a color describes whether a color is basically red, yellow, green, blue, etc. In ImagePals, the hue value is specified in degrees from 0° to 359°.

The Object Pool is a unique feature in the Image Editor program. It allows you to easily store images or selection areas as images or masks for future use.

In computing terms, an image is a picture that is represented on screen as a collection of dots, called "pixels".

This stands for National Television Standard Committee. This committee defined the video standards used by the American television industry, about 30 frames per second.

Video Graphics Array: a type of display card that provides a standard resolution of 640x480 supporting 16 colors.

A protocol used by several devices for controlling external video sources from computers.

A method of distortion based on a grid pattern. By moving the control points that appear at each grid intersection, you can control the distortion of the image.

The process of incorporating information from one program into another.

In an Indexed-Color image, each pixel contains four bits (16-Color) or eight bits (256-Color).

An arrangement of audio and video data in which every piece of audio is followed by one piece of video, for example: AVAVAV

A color made transparent so that a background image can show through. Most commonly used when overlaying one video sequence on top of another, allowing the underlying video to display wherever the key color appears.

A method to help in the compression of video files, which works by assigning certain frames as key frames whose video data is completely saved at the time of compression. The video data of any intervening frames between two key frames is then only partially saved. On decompression these partial frames reconstruct their data from the key frames.

Saturation defines the purity of a color. A color with high saturation appears very intense and strong; a color with low saturation appears washed-out.

Color model used by some PC Video boards. In the television industry this model is used to specify colors for PAL video signals. The Y defines the brightness of a pixel, the U and the V together define the color.

A function developed by Microsoft as a means of transferring and sharing information (objects) between programs. OLE differs from cut, copy and paste operations in that the object in the client program retains a link to the server program it originated from.

Phase Alteration Line describes the video standard used by the UK television industry. Video signals conforming to this standard produce twenty-five frames per second.

Scaling maintains the aspect ratio of the image. When this option is not selected, the image prints at the size determined by its resolution.

If neither of these is selected, images print starting from the top left corner. If both are selected, the image is centered on the page.

Position is relative to the top left corner of the output page. These options are disabled when you select the corresponding centering option or *Scale to fit the page*.

Please access this help file directly from the program

CGM Open options



Force Vector Fonts controls the way fonts are converted (this option often has no visible effect)



Ignore Background controls the way any background in the original is converted



Dot Lines defines how styled lines are converted



Default Color Table assigns the Harvard Graphics default 256-Color table to the opened image

DXF Open options



Image controls if the graphic's original colors should be retained or converted to black on white



Background controls the color of the background (paper) when converted



Text Font controls the way fonts are converted (this option often have no visible effect)



Palette specifies how many colors the original graphic contains

PIC Open options



Pen determines how elements in a PIC chart or graph are converted



Image specifies the size of the image after conversion



Default resets values to their defaults

Photo CD Open options







Resolution allows you to select the size and resolution of the image to be read



Data Type determines the data type of the image to be read









Open options

The Options button displays the open options dialog box for images and graphics file of particular file formats. This dialog box allows you to define the way the images are opened. This button is only available for some file formats and the dialog box that appears depends on the selected file format.

-  **Computer Graphics Metafile (CGM)**
 -  **ASCII AutoCAD (DXF)**
 -  **Kodak PhotoCD (PCD)**
 -  **Lotus Picture Format (PIC)**
-

Save options

The Options button displays the save options dialog box for a chosen file format. This dialog box allows you to define the way files are saved in the chosen format. This button is only available for some file formats and the dialog box which appears depends on the selected file format.

-  **Windows Bitmap (BMP)**
 -  **Encapsulated PostScript (EPS)**
 -  **IFF File Format (IFF)**
 -  **JPEG file interchange format (JPEG)**
 -  **Photoshop File Format (PSD)**
 -  **Sun Raster (RAS)**
 -  **Targa (TGA)**
 -  **Tagged Image File (TIF)**
-

BMP Save options



Bitmap Type determines if the BMP file is saved in Windows or OS/2 format

IFF Save options



Compression gives you the choice of saving with or without RLE compression

TIFF Save options

- ▾ **Format** should be chosen based on whether the image is going to be transferred to an Apple Macintosh or to be used on IBM-compatible PC's
 - ▾ **Compression** displays the compression options available for saving images of the current data type in this format
 - ▾ **Strip Size** determines the size of the contiguous strips your images are divided into for saving
 - ▾ **Tile Size** determines the size of the squares your images are divided into for saving
 - ▾ **Use Horizontal Differentiation** allows you to further increase the amount of compression
 - ▾ **Preview TIFF** allows you to choose to include a small version of the image for display purpose
-

RAS Save options



Compression gives you the choice of saving without compression or with RLE compression



first

Byte Order determines if Most Significant Byte (MSB) or Least Significant Byte (LSB) is placed



Color Order determines the order colors are encoded: blue, red, then green (BGR), or red, green, and then blue (RGB)



TGA Save options



Compression gives you the choice of saving with or without RLE compression

JPEG Save Options



Compression Level determines how much an image is compressed



Subsampling allows you to improve the compression ratio for RGB True Color images



Save Preview saves a thumbnail preview of the image for display purpose (for example, automatically activates the Preview button in Open dialog box)

EPS Save Options



Format determines how the EPS file is saved



Preview TIFF allows you to choose to include a small version of the image for display purpose

PSD Save Options



Compression gives you the choice of saving with or without RLE compression

This option causes styled lines to be converted to thin dotted lines. If this option is not selected, styled lines are converted to thick solid lines.

Set this option correctly or else some of the colors (from 8 to 15 in the color table) will be read incorrectly.

You can choose to break your image into 256 x 32, 128 x 32, 128 x 64 or 64 x 64 squares. The bigger the size of the squares, the stronger the compression.

This option has little effect on uncompressed files, so we suggest you use the default of 8 for these. For compressed files, the larger the strip size, the greater the amount of compression possible. Some applications will not read TIFF files which are saved with large strip sizes. For these applications use 4K strip sizes.

The effect of this routine depends on the nature of your image. For some images (containing random changes in color and many stray pixels) it will have little or no effect, for others (with large areas of continuous color) it will improve the compression considerably.

This option has no direct relationship with the actual compression ratio achieved, but generally, the higher the level, the greater the amount of compression.

This option is unavailable for Grayscale images.

ASCII is the basic format that can be read by all EPS-compatible software. Binary may not be compatible with other software, but files saved in Binary format will occupy about half as much disk space as those saved in ASCII format.

