Thumbs+Plus

Versions 2.0d (shareware) and 2.1 (registered/retail)
Features available only in the registered version are marked by ®.

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Keyboard

For information on the keystrokes available in each window (main or view), click on the appropriate entry below.

Main Window

View Window

Keyboard - Main Window

`Ctrl`

`←` Switch between the directory list and the file list.

`Ctrl`

`→` Switch between the directory list and file list.

You may press the first letter of a directory or file name to jump to the first name in the list (beyond the current position) with that name.

Also see: <u>Selecting Files</u> for more information on the keyboard interface for selecting files.

Menu accelerator keystrokes:

`Shift`
`Ctrl`
`C` <u>Edit - Auto Clip Save</u>

`Ctrl`
`C` <u>Edit - Copy</u>

`Ctrl`
`V` <u>Edit - Paste</u>

`Ctrl`
`A` <u>Edit - Select All</u>

`Shift`
`Ctrl`
`M` <u>Edit - Select Mask</u>

`Shift`
`Ctrl`
`A` <u>Edit - Unselect All</u>

`Ctrl`
`Enter` <u>File - Batch</u>

`F5` <u>File - Copy</u>

`Ctrl`
`F5` <u>File - Create Directory</u>

`Delete` <u>File - Delete</u>

Key(s)	Action
Shift Enter	File - Edit
F6	File - Info
Ctrl I	File - Information
Shift F6	File - Install Font
Ctrl L	File - Label
Shift F5	File - Move
Ctrl N	File - New Database
Ctrl O	File - Open Database
Shift F9	File - Print Catalog
Ctrl Shift F9	File - Print Setup - Catalog Setup
Ctrl F9	File - Print Setup - Page Setup
Ctrl Ctrl	File - Print Setup - Printer Setup
F9	File - Print
Ctrl F6	File - Remove Font
Ctrl Shift F5	File - Rename

F8	File - Slide Show
Enter	File - View
F7	File - Wallpaper - Centered
Ctrl F7	File - Wallpaper - Remove
Shift F7	File - Wallpaper - Tiled
F1	Help - Contents
Ctrl F1	Help - Search
Ctrl R	Options - Confirmations
Ctrl J	Options - File Loading - JPEG
Ctrl H	Options - File Loading - PhotoCD
Ctrl U	Options - File Loading - TrueType fonts
Ctrl P	Options - File Loading - WordPerfect
Ctrl F	Options - File Types
Ctrl G	Options - General
Ctrl M	Options - Monitor Gamma
Shift Ctrl D	Options - Save for Startup - Directory Path
Shift	

Ctrl E	Options - Save for Startup - Initial Database	
Shift Ctrl P	Options - Save for Startup - Window Position	
Ctrl S	Options - Slide Show	
Shift Ctrl L	Options - Status Line	
Ctrl B	Options - Toolbar	
Ctrl W	Options - Viewer	
Ctrl T	Thumbnail - Database Statistics	
Shift F2	Thumbnail - Make All	
F2	Thumbnail - Make	
F3	Thumbnail - Refresh	
Ctrl Delete	Thumbnail - Remove Orphans	
Shift Ctrl Delete	Thumbnail - Remove Tree	
Shift Delete	Thumbnail - Remove	
Ctrl F2 Shift	Thumbnail - Scan Drive	

Ctrl F2	Thumbnail - Scan Tree
Ctrl -	Tree - Collapse all
/	Tree - Collapse to Path
-	Tree - Collapse
Ctrl *	Tree - Expand All
*	Tree - Expand Branch
+	Tree - Expand One Level
Ctrl X	Tree - Indicate Expandable
Shift Ctrl I	Tree - Indicate Thumbnails
Ctrl +	Tree - Refresh Tree
Shift Ctrl F	Tree - Show Offline
Shift Ctrl O	Tree - Show Thumb Dirs Only
F4	Window - Show All
Shift F4	Windows - Close All
Ctrl F4	Windows - Minimize All

Keyboard - View Window

Menu accelerator keystrokes:

| F4 | Edit - Autocrop |

| Esc | Edit - Cancel Selection |

| F8 | Edit - Clone |

| Ctrl |
| C | Edit - Copy |

| Ctrl |
| R | Edit - Crop |

| Ctrl |
| E | Edit - Select All |

| F2 | Edit - Thumbnail From Selection |

| Ctrl |
| Z | Edit - Undo |

| Shift |
| Alt |
| F4 | File - Close All |

| Ctrl |
| F9 | File - Page Setup |

| Ctrl |
| F8 | File - Printer Setup |

| F9 | File - Print |

| Ctrl |
| Shift |
| Z | File - Reload |

| Ctrl |
| A | File - Save As |

| Ctrl |
| S | File - Save |

Key	Action
F1	Help - Menus
Ctrl + F1	Help - Search
C	Image - Color Adjust
D	Image - Color Depth
F5	Image - Convert to Bitmap
L	Image - Count Unique Colors
L L	Image - Filter - Last Filter
L L	Image - Filter - New Filter
L	Image - Filter - Select Filter
L	Image - Flip Horizontal
L	Image - Flip Vertical
L	Image - Histogram
L	Image - Invert
L	Image - Rotate/Resize
L	Image - Swap Red & Blue
6	Image - Turn (90)
2	Image - Turn (180)
4	Image - Turn (270)
D	View - Assumed Gamma
D D	View - Autosize Window
D	View - Comments
D	View - Full Screen
D	View - Gridlines
D D	View - Maintain Aspect Ratio

D

D   <u>View - Options</u>

D

D   <u>View - Stretch to Fit Width</u>

D   <u>View - Stretch to Fit Window</u>

D   <u>View - Zoom In</u>

D

D   <u>View - Zoom Out</u>

Introduction

ThumbsPlus is a graphic file previewer, locator and organizer which simplifies the process of finding and maintaining graphics, clip-art files, fonts and animations. It displays a small image (Thumbnail of each file. You can use ThumbsPlus to browse, view, edit, crop, launch external editors, and copy images to the clipboard. You can use drag-and-drop to organize graphics files by moving them to appropriate directories. ThumbsPlus will also create a slide show from selected graphics, and install bitmap files as Windows wallpaper.

You can print individual graphics files, or the thumbnails themselves as a catalog. ThumbsPlus can convert to several formats, either one at a time or in batch mode. You can also perform image editing in batch mode. ThumbsPlus will also convert metafile graphics to bitmaps (rasterize).

ThumbsPlus currently handles the following types of files. Types marked with an ® symbol are only available in the registered version only.

.AVI®	Video for Windows animation file
.BMF	Corel Gallery files (preview image only)
.BMP	Windows Bitmap files (also recognizes .DIB and .RLE extensions)
.CDR	CorelDraw V3/4 files (preview image only)
.CEL	AutoDesk Animator Cel files (old and new formats)
.CGM	Computer Graphics Metafile (binary encoding)
.EPS	Encapsulated Postscript files (preview image only)
.GEM	GEM Metafiles
.GIF	CompuServe Graphics Interchange Format files
.ICO	Windows Icon files
.IFF/LBM	Amiga IFF format
.IMG	GEM Image format
.JPG	JPEG compressed files (in JFIF format)
.MND	Mandelbrot for Windows image files (also handles .MNI)
.MOV®	Apple QuickTimeTM for Windows
.PCD	Kodak PhotoCD files
.PCX	ZSoft Picture files
.PSD	Adobe Photoshop files
.RAW	Raw grayscale
.RAS	Sun Raster format (also .SUN)
.TGA	Targa TruevisionTM files (also .WIN)
.TTF	TrueType fonts
.TIF	Tagged Image Format files
.WMF	Windows Metafiles and Placeable Metafiles

.WPG   Word Perfect graphics (versions 1 & 2)

By using the Graphic Import Filters   supplied by Microsoft with **Word for Windows, PowerPoint, MS Publisher** and other packages, ThumbsPlus will also handle these (and more) graphic file types:

.DRW   Micrografx Designer and Draw
.DXF   AutoCAD Interchange Format
.HGL   HP Graphic Language
.PIC   Lotus 1-2-3 Graphics files
.PLT   AutoCAD Plot files

You can also use Object Linking and Embedding (OLE) to create thumbnails for and view any proprietary file type for which the server application is loaded on your system. Some types for which this has been tested are:

.BMF   Corel Gallery
.CDR   CorelDRAW! version 5
.DOC   Word for Windows document
.DRW   Micrographx Draw (using Designer 4.1 as the server)
.DS4   Micrographx Designer (using Designer 4.1)
.MGX   Micrographx Designer
.PPT   PowerPoint presentation

Directory Color Codes

If the option to <u>Indicate Thumbnails</u> is on from the <u>Tree</u> menu, each directory folder is colored to indicate the presence of thumbnails on the path.

There are no files in this directory with thumbnails, and no sub-directories have thumbnailed files either.

This directory contains no thumbnails, but one or more sub-directories do.

This directory contains thumbnails, but has no sub-directories with thumbnails.

This directory contains thumbnails, and has sub-directories with thumbnails.

This off-line directory has thumbnails.

This off-line directory has sub-directories with thumbnails, but none of its own.

This off-line directory has both thumbnails and sub-directories with thumbnails.

New Features (in 2.0 through 2.1, since 1.3d)

Additional internal file type handling:

- TIFF, Tagged Image Format.
- CGM, Computer Graphic Metafile
- EPS, Encapsulated Postscript (TIFF or Windows Metafile preview only)
- GEM, Atari and Ventura GEM Metafiles
- IMG, Atari or Ventura GEM images
- IFF/LBM, Amiga IFF and Deluxe Paint LBM
- PCD, Kodak PhotoCD files
- PSD, Adobe Photoshop (in 2.0c)
- BMF, Corel Gallery (preview only)
- RAS, Sun Raster format
- RAW, Raw Grayscale
- WAV, Windows sound files
- WPG, Word Perfect graphics (in 2.0c)
- CEL, AutoDesk Animator Cel files (in 2.0d)
- ®AVI, Video for Windows (in 2.1)
- ®MOV, QuickTimeTM for Windows (in 2.1)

®TWAIN Scanner Support (2.1)

ThumbsPlus can be used with any TWAIN-compliant scanner to scan images directly into the program for processing and storage.

Additional filter capability plus OLE:

ThumbsPlus can scan your disks searching for appropriate Aldus Rev. 1 filters, which you may have received with other packages. You can then assign these filters to file types that ThumbsPlus cannot handle internally.

Other file types can be handled via OLE if an appropriate server is available on your system.

Significant image editing capabilities, including:

Image Rotation and Resizing. Several improvements were implemented in version 2.0d.

Color Adjustment, including brightness, contrast, gamma correction, and hue.

Color Depth, including several optimized and fixed palette selections and several dithering methods. You can even paste a palette from an image on the clipboard to implement a common palette for several images. More palettes (including Indeo and Cinepak palettes) and additional optimization methods were added in 2.0d. Palette saving and loading from files was added in 2.0d also, along with support for generating identity palettes.

Miscellaneous functions, including Flip Horizontal, Flip Vertical, Invert and Swap Red & Blue.

You can now select from a stretched-to-fit window. (2.0c)

Quicker image turning, for rotation by 90, 180 or 270 degrees. (2.0d)

Save palettes and select palettes from .PAL files. (2.0d)

®Digital image filtering for raster images. Filters supplied include several blurring, sharpening, edge detection, despeckling and embossing filters. There is also support for

user-defined linear and multi-pass filters. (2.1)

Several viewing enhancements, including:

On-the-fly <u>gamma correction</u>, with the ability to store a default assume gamma value for each image type, and a visually-calibrated <u>monitor gamma</u> value for each monitor mode. (Monitors may exhibit different color characteristics for different color depths and resolutions.)

On-the-fly quick <u>dithering</u> of 24-bit (truecolor) images on 8-bit displays. This gives you the ability to see a reasonable estimate of the image, though the quality is not nearly as good as would be obtained on a 24-bit display.

<u>Zoom-in</u> to view portions of raster images in greater detail.

<u>Zoom-in</u> was implemented for <u>metafile</u> and <u>vector</u> graphics in 2.0d.

There are now several selection cursors available for use in the view/edit window.

File conversion and saving capabilites, including:

Save images (bitmaps) as Windows bitmaps (.BMP), Compuserve GIF (.GIF), JPEG (.JPG), Targa Truevision (.TGA), PC Paintbrush (.PCX) or Tagged Image File Format (.TIF).

Edit or add comments to GIF, JPEG and TIFF images.

Interactively preview the "lossiness" of specific <u>JPEG quality</u> levels before committing to one (Truecolor or Highcolor display required).

<u>Batch conversion</u> of files to a specific type, with concurrent editing. You can edit (autocrop, rotate, resize, color adjust, color depth) and convert files in a single pass, and even include comments for the types which support them,

<u>Automatic clipboard save</u> provides the ability to automatically save clipboard contents to disk files. ThumbsPlus saves each time the clipboard changes.

Selectable format (BMP, GIF, JPG, PCX, TGA).

Clipboard <u>metafiles</u> can be saved as .WMF or converted to a <u>raster</u> format.

Specify the desired path and file name prefix.

Useful for screen or window capture, too (using PrintScreen and ALT+PrintScreen).

File list improvements (2.0c) (see the <u>File List</u> selectionfrom the Options menu), *including*:

Sort by name, extension, date or size

Show date and/or size along with the file name

Show files that match a mask (i.e., A*.GIF)

Show font names in the list, rather than file names

Indication that fonts are installed (by showing the name in green)

Ability to show hidden and system files

Slide show improvements (2.0c):

ESC will abort loading an image during the slide show

Show slides in random order

Show file names at bottom of window

Miscellaneous other enhancements:

<u>Install</u> and <u>remove</u> TrueType fonts: singly, selected groups, or entire directories full.

Label diskettes from within ThumbsPlus.

Several performance enhancements, including less repainting of the directory and file lists, faster scaling of bi-level (monochrome) bitmaps, and quicker program startup.

ThumbsPlus can now be associated with any viewable file type -- pick "ThumbsPlus Picture" as the association in the File Manager "Associate" dialog box.

Automatic saving of profile (INI) options for each dialog box, rather than Set/Use defaults as before. *(2.0c)*

You can now specify the title line for a printed Catalog. *(2.0c)*

A Wallpaper - Remove option has been added, *(2.0c)*

Automatic or manual "orphaned" thumbnail removal (gets rid of thumbnails for files that have been moved or deleted externally). *(2.0c)*

CMYK TIFF files are now supported. *(2.0c)*

The status bar has been updated to reflect when directories and files are being read. *(2.0c)*

You can now abort long image loads by pressing ESCape. *(2.0c)*

You can export thumbnails as Windows bitmap files (with a .TNB extension) for use in other applications.

TrueType fonts (.TTF) can now be viewed. ThumbsPlus displays a window with the character set and sample text. There's also a TrueType Loading setup dialog box. (2.0d)

Converting metafiles to bitmaps (rasterizing) now asks for the desired size of the resluting bitmap, rather than using the current window size. (2.0d)

A Help button has been added to each dialog box. You may also use the F1 key to obtain help for a specific dialog box.

Progress indicate during image functions is now shown in a small status strip at the bottom of the window. (2.0d)

Thumbnails may now be scaled to as much as 2000% for catalog printing. (2.0d)

Bugs fixed in 2.0d (since 2.0c)

Saving TIFF files no longer causes a General Protection fault.

Problems fixed matching TrueType font names.

Autocrop now works correctly with 24-bit images.

Improved highlighted directory list entry.

New and Open Database commands were moved to the File menu for CUA compatibility.

Removing orphans no longer removes all thumbnails.

Several missing accelerator keystrokes and menu help items were added.

Printing now works from the View window.

A slide show color problem (on some 256-color displays) was fixed.

Several problems with improperly rounding or showing image resolution (DPI) were corrected.

Several other small corrections.

Main Window

The main window consists of the normal Windows interface (title bar, menus, etc.) and three functional areas, as shown below:

🖰 *Click on the picture above (anywhere the cursor becomes a hand) to find out about the various parts of the display.*

Additional information:
The toolbar provides short-cuts to several frequently-used commands.
The **directory list** displays disks and directories from which you may select a directory to display. Unless disabled from the Tree menu, directories are color-coded to indicate the presence of previously "nailed" images:

Selecting a directory works much like the Windows File Manager; most operations and menu short-cuts work similarly, and you can drag-and-drop selected files to move or copy them to different directories and drives.

When you select a directory from the **directory list**, file names (and thumbnails, if generated), display in the file list.

You may select one or more files from the file list, then take action on the selected image(s) from the toolbar or menus.

You may also drag the selected files to a new directory or disk.

Selected File

The captions (file names) of selected files are highlighted. Some <u>toolbar</u> and <u>menu</u> options will be grayed if no files are selected.

Scrollbar

A scrollbar allows you to select the part of a list of items you want to display, when all of the items will not display in the area. For vertical scroll bars, click on the left and right arrows to move a column at a time; for horizontal scroll bars, click on the up and down arrows to move a line at a time.

You can drag the box to move proportionally within the scrolled data; you can click on either side of the box to move a full window of information at a time.

Selected Directory

The currently selected directory in the directory list is highlighted. This is the directory that contains the files in the <u>file list</u>.

Disk and Volume Icons

All disk drive in your system and all removable disks (floppies and CDROMs) that you have scanned for thumbnails are represented by small <u>icons</u> in the directory list.

Removable diskette, such as 3.5" and 5.25" floppies.

A local, fixed hard drive.

A network (remotely mounted) drive.

A <u>CDROM</u> drive.

A memory (RAM) disk, used only for temporary storage.

An offline volume which has been scanned for thumbnails. You can view the thumbnails for these volumes without having to insert them in a drive.

Disk Labels

Every disk or diskette used in DOS and Windows can have a volume label. If you want to keep track of files on multiple disks, it will be much less confusing (to you and to ThumbsPlus) if each disk is labeled uniquely.

Vertical Split Bar

The cursor will change when over this area. You can press the left mouse button and drag the split bar to the desired position, so the directory and file lists are the sizes you want.

Maximize

This button maximizes ThumbsPlus (resizes it to fill the screen). You can click this button again to restore ThumbsPlus to its previous size.

Minimize

This button minimizes ThumbsPlus (reduces it to an <u>icon</u>). You can double-click the icon to restore ThumbsPlus.

Title Bar

This caption shows the current program (ThumbsPlus in this case), along with the file it has open.

System Menu

Selecting this button brings down the standard Windows system menu, from which you can move, size, restore, minimize, maximize, or close ThumbsPlus. You can also bring up the Task List (with the Switch To option) to switch to another application in Windows.

Status Line

The status line shows information about the currently selected drive, directory and files. It also shows the number of files in the directory.

When dragging to a directory, the text in the status line will turn red if there is insufficient space to copy the selected files.

When selecting from a menu or passing the mouse over toolbar buttons, a description of the action appears on the status line.

The status line may be turned on or off using the <u>Options - Status Line</u> menu selection.

Toolbar

Click on any button below to see a description of its action.
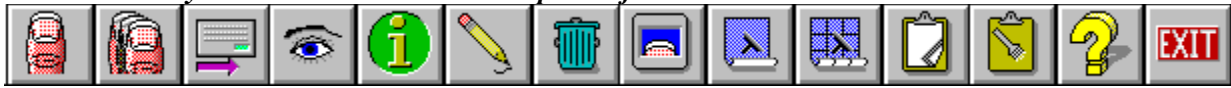
ThumbsPlus Menus

👆 *Click below on the menu of interest.*

File	Edit	Tree	Thumbnail	Options	Window	Help

File - View   Enter

Opens a <u>view window</u> for each of the currently selected files, up to the maximum specified in the <u>General Options</u> dialog box. This option will be grayed if no files are selected.

From the <u>General Options</u> dialog box, you can selecting Viewing as the default (double-click) action for files.

File - Edit   Shift+Enter

Edits the first selected file by launching the editor defined for its file type.

From the <u>General Options</u> dialog box, you can selecting Editing as the default (double-click) action for files.

File - Info F6
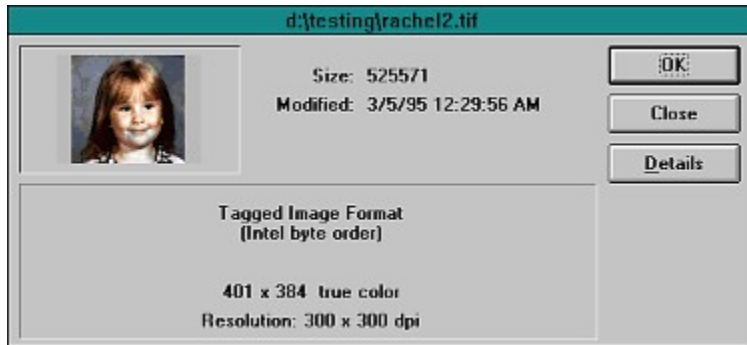
This option displays an information window for each selected file in turn. Press **Next** to continue to the next selected file or **Cancel** to stop.

Deletes the selected file(s). If confirmation of file deletion is selected from the <u>Confirmations</u> dialog box, you will be prompted whether or not to delete each file.

File - Wallpaper - Center   F7

This option installs the first selected file in the <u>file list</u> as the Windows <u>wallpaper</u> on the desktop. If the file is not a Windows <u>bitmap</u> file, or if it is not on a local hard drive, it is converted to a bitmap and copied to a temporary file, which is installed.

This option centers the bitmap on the screen, and is recommended for large images.

File - Wallpaper - Tile   Shift+F7

This option installs the first selected file in the <u>file list</u> as the Windows <u>wallpaper</u> on the desktop. If the file is not a Windows <u>bitmap</u> file, or if it is not on a local hard drive, it is converted to a bitmap and copied to a temporary file, which is installed.

This option tiles the screen with the bitmap, and is recommended for small images.

File - Wallpaper - Remove   Ctrl+F7

This options removes the Windows desktop <u>wallpaper</u>.

File - Slide Show   F8

Displays the selected images one at a time, in full-screen mode, with a delay between images. Press any key or the left mouse button to end the slide show. You can configure the slide show by selecting Options - Slide Show.

File - Copy   F5

Prompts for the desired directory to copy the selected files to, and copies them there. Alternately, you can <u>drag</u> the selected files to the intended directory. To force copying (rather than moving, which is the default when dragging files to a directory on the same disk), you can hold down the **CTRL** key while dragging.

File - Install Fonts   Shift+F6

This option is available if the first file selected is a TrueType font. It installs any selected fonts that are not already installed, and updates the WIN.INI file so they will be available the next time Windows starts.

File - Remove Fonts   Ctrl+F6

Any selected TrueType fonts that are currently installed will be removed, and removed from the WIN.INI file. Be sure the first selected file is a <u>TrueType</u> font so that this selection will be available.

File - Label Disk   Ctrl+L

Use this selection to create a volume label for a diskette. ThumbsPlus cannot keep track of which diskette contains which files unless they are labeled.

Batch Convert/Edit - Miscellaneous Batch Operations

This dialog box allows you to select various image operations that you can do from the View window menus.

Metafile Rasterization. These items are used when a metafile or vector graphic is converted to a bitmap. They are the same items requested from the Image - Convert to bitmap menu option.

   Width - The width of the bitmap to create from the metafile.

   Height - The height of the bitmap to create from the metafile.

   Maintain Aspect Ratio - Force the bitmap to be the same aspect ratio as the original metafile.

Autocrop. All same-colored borders from the image are removed. This option works only for bitmap (raster) images with solid borders. The lower-left corner pixel is used as a reference pixel -- all contiguous border of this color is cropped from the image. This function is done individually from the Edit - Autocrop menu selection in a view window.

Invert. Replaces each pixel in the image with its inverse -- black becomes white, red becomes green, etc. (See Image - Invert.)

Swap Red & Blue. Swaps the red and blue value of each pixel. This is required for some file types for which the RGB order is ambiguous or incorrectly reported in the file header. (See Image - Swap Red & Blue.)

Flip Horizontally. Replaces the image with a mirror image (left-to-right). (See Image - Flip Horizontal.)

Flip Vertically. Replaces the image with a mirror image (top-to-bottom). (See Image - Flip Vertical.)

Equalize Histogram®. Computes an intensity histogram and equalizes (as much as possible) the intensity levels in the image. This improves the appearance of some images, but may give others too much contrast. See Image - Histogram for more information.

File - Batch Convert/Edit   Ctrl+Enter

With ThumbsPlus, you can convert and edit (in a single pass) many files in the background while you continue to work on other things (even start another copy of ThumbsPlus) This option displays a dialog box, which you use to control the batch process. Once you've made the selections and press the OK button, ThumbsPlus will prompt you for any options for the specific output format you've chosen, including comment fields and compression options.

You must select the files you wish to process before selecting this option. See Selecting Files for more information on how to select specific files. Each option in the dialog box is discussed below.
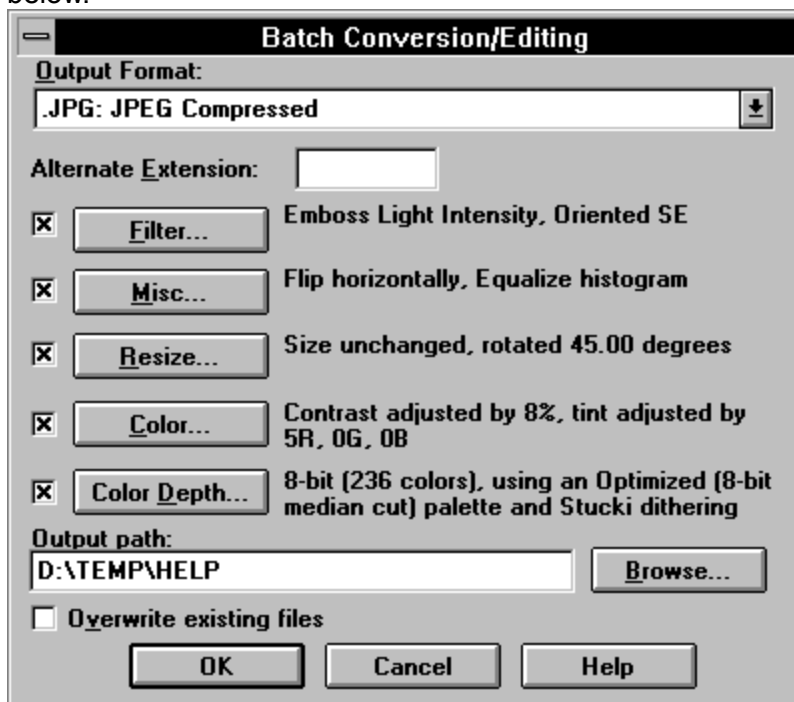
Output Format

Select the output format for the files. ThumbsPlus will save each file in this format. If you select a metafile format, such as WMF, then the image editing options will be disabled, and only metafiles will be processed. If you select the WMF (encapsulated bitmap) format, ThumbsPlus will generate a metafile containing the bitmap -- it will not trace the bitmap to obtain a vector representation.

Alternate Extension

If you want the output files to have an extension different from the one selected in the Output Format, the enter it here.

Filter®

Check this box to enable <u>digital image filtering</u> of each image. Click on the button to use the <u>Filter</u> dialog box to select and configure the filter to use. ThumbsPlus displays a description of the filter to the right of the button.

Misc.

Brings up the <u>Miscellaneous Batch Operations</u> dialog box, which allows you to select the size for converting <u>metafiles</u> to <u>bitmaps</u>, and various miscellaneous functions such as autocrop, flip, and histogram equalization.

Resize

Check this box to enable rotation and/or resizing of each image. Click on the button to use the <u>Rotate/Resize</u> dialog box to set the options. ThumbsPlus displays a description of the action to be taken on the right of this button. If you rotate and resize, you may want to select an output Color Depth (below), as files are promoted to either 24-bit (truecolor) or 8-bit grayscale for proper rotation and resizing.

Color

Check this box to enable color adjustment of each image. Click on the button to use the <u>Color Adjustment</u> dialog box to set the amount of brightness, contrast, <u>gamma</u> and hue adjustment to apply to each image.

Color Depth

Use this selection to specify the output color depth, just as you would for an individual image. The <u>Color Depth</u> dialog box will allow you to specify the number of colors you desire, the palette you want to apply (even one pasted from the clipboard!), and the type of <u>dithering</u>.

Output Path

Specify here the disk and directory you wish to send the converted and edited files to. You can use the **Browse** button to locate a directory you want to use.The files will be named the same as the input, except that the appropriate extension (default, such as BMP, JPG, or TGA, or specifically set in the Alternate Extension) will be used.

Overwrite Existing Files

Check this box if you want ThumbsPlus to overwrite files of the same name. If this box is not checked, and ThumbsPlus encounters an output file already there, it will skip that input file and display a message in the "Errors Encountered" area in the progress dialog box.

File - Move   Shift+F5

Prompts for the desired directory to move the selected files to, and moves them there. If the directory is on another disk, this will copy each file, then delete the original. Alternately, you can drug   the selected files to the intended directory. To force moving (rather than copying, which is the default when dragging files to a different disk), you can hold down the **SHIFT** key while dragging.

File - Rename   Ctrl+Shift+F5

Prompts for a new file name for each selected file, and renames it accordingly. You cannot move a file to a different directory with this option; use <u>File - Move</u> instead.

File - Create Directory   Ctrl+F5

Prompts for a directory name to create as a sub-directory for the current directory (selected in the **Directory List**).

Note that since it has no thumbnailed files int it, this new directory will not be visible in the directory list unless <u>Tree - List Thumb Dirs Only</u> is **not** checked.

File - Print Catalog   Shift+F9

Prints a catalog of the thumbnails in the database, organized by directory. If you choose to print only the selection, then ThumbsPlus will print thumbnails for the selected directory in the Directory List, and all its sub-directories. If you choose to print All, then ThumbsPlus will print all thumbnails in the current database.

Note: ThumbsPlus does not re-examine the directories on disk during the printing operation, so thumbnails will print for files which were thumbnailed, but deleted from outside of ThumbsPlus. You can use the Remove Orphans to get rid of these before printing a catalog.

The format of the catalog is extensively customizable by the Catalog Setup dialog box.

File - Catalog Setup   Ctrl+Shift+F9

This dialog box allows you to customize the printing of thumbnail catalogs.
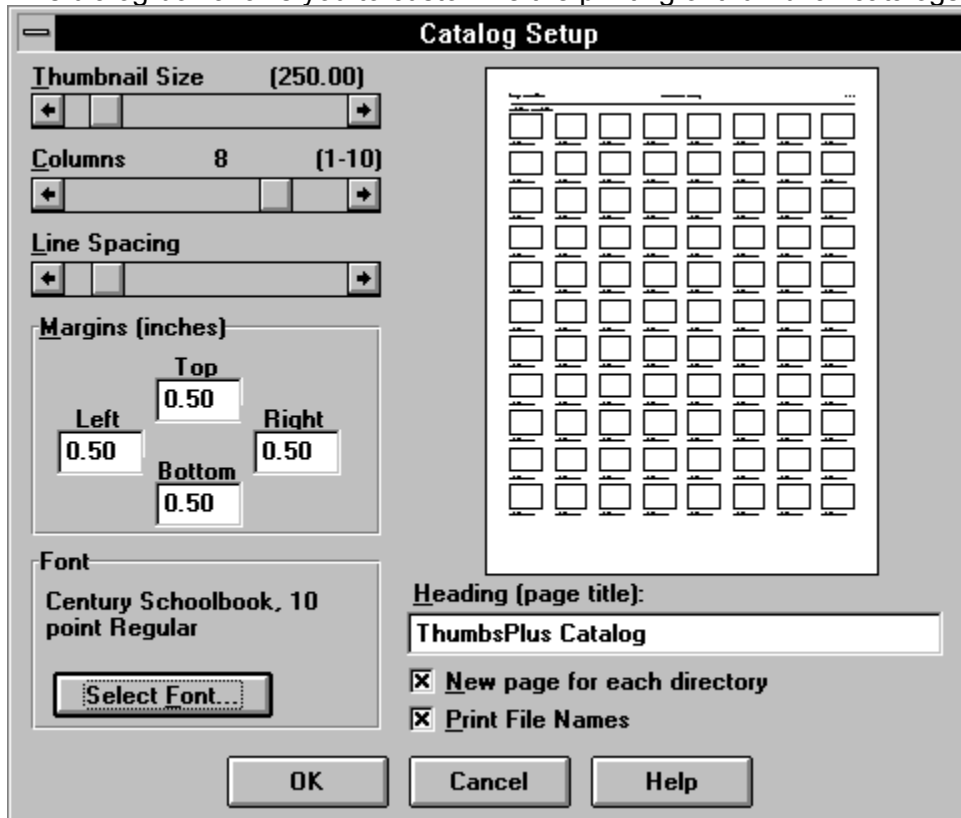
Thumbnail Size

You can vary the printed size of the catalog from 50% to 500% of the size of the thumbnail in the database (96x72 pixels), thus cramming more or fewer thumbnails onto a page. Higher percentages provide more opportunity for monochrome printers to dither, but may look "chunky" because of the stretching of the bitmap.

Columns

You can vary the number of columns to print; however, the maximum number is based on the **Thumbnail Size** and the resolution and page size of your printer.

Line Spacing

Allows you to specify the amount of space between lines of thumbnails in the catalog.

Margins

Allows you to set the top, left, right and bottom margins (in inches).

Font

You can select the font to print the headings and the file names.

New page for each directory

When selected, ThumbsPlus will start a new page for each directory.

Print file names

Select this checkbox to cause ThumbsPlus to print the file name for each file under its thumbnail. Unselect it to cram more thumbnails onto a page.

Preview Window

This window shows a miniature layout of the page, per the options you have selected.

File - TWAIN Select Source®

Use this option to activate the TWAIN Data Source Manager (DSM), from which you may select the desired TWAIN source (generally a scanner, camera or other input device).

File - TWAIN Acquire®

This selection will acquire one or more images from the currently selected TWAIN data source. You must have TWAIN software from your scanner, camera, or other TWAIN data source vendor to use this option.

You will most likely receive a dialog box that lets you preview, crop and set-up the scanner.

ThumbsPlus does not provide support for any scanners which are not TWAIN compliant.

ThumbsPlus will not currently load images larger than about 16Mb (though the amount of memory on your machine may limit this further).

If you have multiple TWAIN sources, you can use File - TWAIN Select Source to select the particular source you wish to use.

File - Print   F9

This selection prints all selected graphics files. Each prints on a separate page, with no textual information. You can set the margins and other options using the Page Setup dialog box. To print a catalog of thumbnails, use the Print Catalog menu option.

File - Page Setup   Ctrl+F9

This dialog box allows you to customize the printing of individual graphics files.

```
┌─────────────────────────────────────────────┐
│ ▬              Page Setup                    │
├─────────────────────────────────────────────┤
│ ┌─Margins (inches)──────┐                    │
│ │            Top:       │  ☒ Stretch image to fit page │
│ │          ┌──────┐     │                    │
│ │  Left:   │2.00  │ Right:│ ☒ Maintain aspect ratio │
│ │ ┌──────┐ └──────┘┌──────┐│                  │
│ │ │2.00  │  Bottom: │2.00  ││ ☐ Print Borders  │
│ │ └──────┘ ┌──────┐ └──────┘│                  │
│ │          │2.00  │        │                  │
│ │          └──────┘        │                  │
│ └────────────────────────┘                    │
│   ┌────────┐  ┌────────┐  ┌────────┐          │
│   │  OK    │  │ Cancel │  │  Help  │          │
│   └────────┘  └────────┘  └────────┘          │
└─────────────────────────────────────────────┘
```
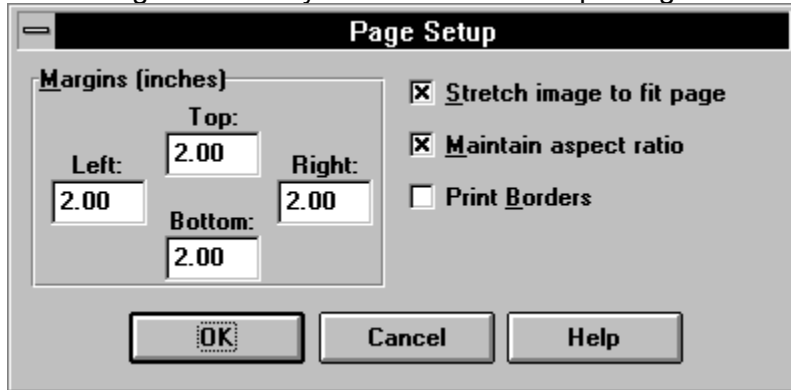
Margins

Set the top, left, right and bottom margins on the page (in inches).

Stretch image to fit page

Will cause ThumbsPlus to stretch the images to fill the printed page (within the margins).

Maintain aspect ratio

When selected, ThumbsPlus will ensure the the width and height maintain the ratio in the original image, to avoid distortion.

Print Borders

Causes ThumbsPlus to draw a simple black rectangle around the edge of the image.

File - Printer Setup   Ctrl+F8

This selection displays the Printer Setup dialogbox, which allows you to select an alternate printer and set printing options.
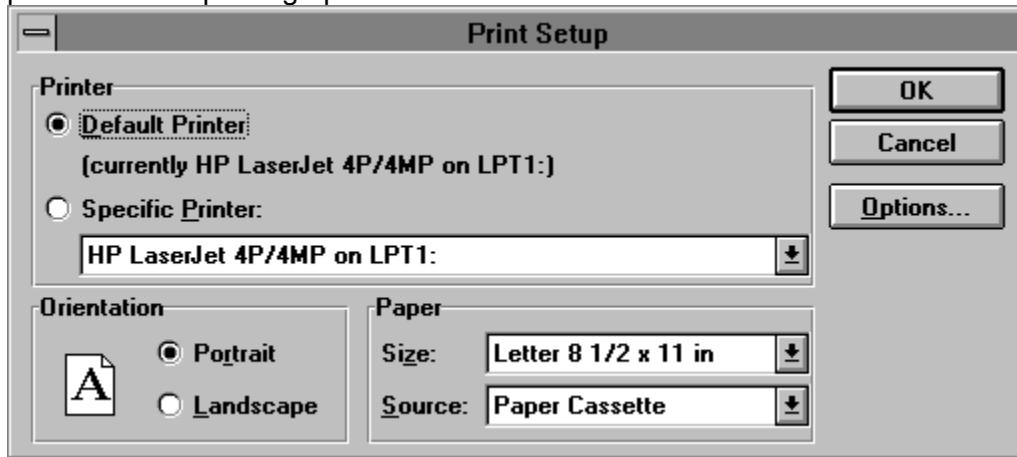
File - Exit   Alt+F4

Select this option to exit ThumbsPlus

Edit

Copy	Ctrl+C
Paste	Ctrl+V
Select All	Ctrl+A
Clear All	Ctrl+Shift+A
Select Mask...	Ctrl+Shift+M
√ Auto Clip Save...	Ctrl+Shift+C

Click on any selection above.

Edit - Copy   Ctrl+C

This option copies the first selected file to the clipboard in the appropriate format for the file (bitmap for raster images or metafilefor vector images).

If no files are selected, this menu option is grayed.

You can make this option the default (double-click) option from the General Options dialog box.

Edit - Paste   Ctrl+V

This option pastes the current clipboard contents to a ThumbsPlus <u>View Window</u>. If the clipboard is empty, or the contents are not in a recognized graphics format, this options is grayed.

Edit - Clear All   Ctrl+A

This option deselects all selected files in the file list.

Edit - Select All   Ctrl+Shift+A

This option selects all files in the <u>file list</u> for processing by any of the commands which accept multiple files, such as <u>view</u>, <u>info</u> or <u>slide show</u>.

Edit - Select Mask   Ctrl+Shift+M

This option prompts for a filename mask (i.e., "A*.GIF") and selects all files matching the mask. Any previous selection(s) are cleared.

Edit - Auto Clip Save   Ctrl+Shift+C

This selection allows you to automaticly save the clipboard contents to a disk file each time they change (and a compatible format -- bitmap or metafile -- is on the clipboard).

This is very useful for window or screen capture, too -- turn it on, and each time you press PrintScreen (for the entire screen) or ALT+PrintScreen (for the current window), ThumbsPlus will save the screen or window as a graphic file.
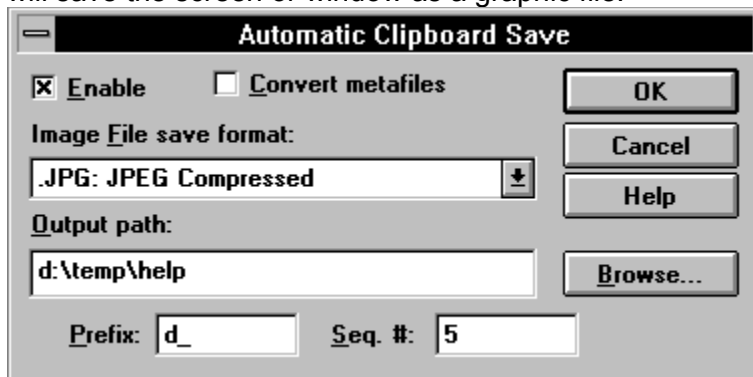
Enable

When checked, automatic clipboard saving is enabled. The Auto Clip Save menu selection is also checked when enabled.

Convert Metafiles

When checked, metafiles on the clipboard will be rasterized and saved; otherwise, they will be saved as Windows metafiles (.WMF).

Image File save format

Select the desired file type to save.

Output Path

Select the directory where you want the auto-saved files to be stored. The **Browse** button allows you to find a directory easily.

Prefix

Enter a prefix for the file name. Use less than 8 characters; whatever is left will be filled in with a sequence number. For example, if you enter SCRN here, and select BMP as the type, the files will be saved as SCRN0000.BMP, SCRN0001.BMP, etc.

Seq.

This is the next sequence number to use in the generated file names.

Tree

Expand One Level	+
Expand Branch	*
Expand All	Ctrl+*
Collapse Branch	-
Collapse All	Ctrl+/
Collapse to Path	/
Refresh Tree	Ctrl++
Indicate Expandable	Ctrl+Shift+X
√ Indicate Thumbnails	Ctrl+Shift+I
List Thumb Dirs Only	Ctrl+Shift+O
√ Show Offline Volumes	Ctrl+Shift+F

🖑 *Click on any selection above.*

This option expands the currently selected directory entry in the **Directory List** by showing any sub-directories. Any sub-directories are also expanded, thereby showing this "branch" of the tree in its entirety.

If <u>Indicate Expandable</u> is checked, the folders for directories which have sub-directories are marked with a '+'.

If <u>Indicate Thumbnails</u> is checked, directories are <u>color-coded</u> to indicate the presence of thumbnails.

Tree - Expand One Level   Keypad +

This option expands the currently selected directory entry in the **Directory List** by showing any sub-directories. Double-clicking an expandable entry also performs this action.

If <u>Indicate Expandable</u> is checked, the folders for directories which have sub-directories are marked with a '+'.

If <u>Indicate Thumbnails</u> is checked, directories are <u>color-coded</u> to indicate the presence of thumbnails.

Tree - Expand All   Ctrl + Keypad *

This option expands **all** branches of **all** drives and off-line volumes in the directory tree.

Tree - Collapse Branch   Keypad -

This option hides any subdirectories of the currently selected entry. Double-clicking on an expanded entry also does this.

If <u>Indicate Expandable</u> is checked, the folders for directories which can be collapsed are marked with a '-'.

Tree - Collapse All   Ctrl + Keypad -

Hides all directories, leaving only the top level (drive and off-line volume) entries.

Tree - Collapse to Path   Keypad /

This option collapses all entries except those directories on the currently-selected path. For example, if the current directory is C:\WINDOWS\SYSTEM, all entries for drives other than C are hidden, all first-level directories of C: are shown, and all sub-directories of WINDOWS are shown.

Tree - Refresh Tree   Ctrl + Keypad +

This option rereads the directory tree. Use this option if you change the directory structure from another application. This option also collapses the tree to the current path (<u>Tree - Collapse to Path</u>).

Tree - Show Offline Volumes   Ctrl+Shift+F

Select this option to display disks which have been scanned but are not currently on an inserted disk. This will display each such volume as a small diskette, with the disk label next to it. For this option to operate properly, it is important that each diskette have a unique label. This options works for CDROMs as well as diskettes.

This option will also allow you to view directories and files which have thumbnails, but have been removed from the disk by a program other than ThumbsPlus. The folders for these directories, and the names for these files, will be grayed. If you do not intend to restore these files to the disk, you can use Thumbnail - Remove or Thumbnail - Remove Tree to remove the thumbnails from the database.

Tree - Indicate Expandable   Ctrl+Shift+X

Checking this menu item causes ThumbsPlus to display a '+' in directory entries which contain sub-directories and may be expanded, or '-' in directory entires which are already expanded.

Tree - Indicate Thumbnails   Ctrl+Shift+I

Checking this option causes ThumbsPlus to use differently colored folders to indicate
"interesting" directories. Folders for directories which contain thumbnails are colored green;
folders for directories which do not themselves have thumbnails, but whose subordinate
directories do, are colored blue. This option is really useful only after drive(s) have been
scanned for images (see Scan Drive).

Tree - List Thumb Dirs Only   Ctrl+Shift+O

Select this option to only show directories which contain thumbnails. This is only useful once graphics files have been located (usually by <u>Scan Drive</u>).

Thumbnail

Make	F2
Make All	Shift+F2
Scan Drive	Ctrl+F2
Scan Tree	Shift+Ctrl+F2
Remove	Shift+Del
Remove Tree	Shift+Ctrl+Del
Remove Orphans...	Ctrl+Del
Export Selected	
Database Statistics...	Ctrl+T
Refresh File List	F3

Click on any selection above.

Thumbnails - Make   F2

This option does the hard work of ThumbsPlus: it reads the graphic files selected in the **Image List** and reduces them to create <u>thumbnails</u>, and stores the thumbnails in the ThumbsPlus database. These minature pictures of your graphics files make life with Windows easier by helping you find specific images or drawings quickly and easily.

To create or update thumbnails for all files in the current directory, use the menu option <u>Thumbnails - Make All</u>. To scan a disk drive for all recognized files, use <u>Thumbnails - Scan Drive</u>.

Unlike these other options, **Thumbnail - Make** does not check for updated files and always makes thumbnails, regardless of whether one is already on file.

Thumbnails - Make All   Shift+F2

This option creates or updates <u>thumbnails</u> for all recognized files in the current directory. If a thumbnail already exists for a file, its update date and time are checked against what is stored in the ThumbsPlus database. If the file has been modified since the thumbnail was made, it is regenerated from the file.

While running, a progress box displays which indicates how much of the work is complete. Click **Cancel** to quit making thumbnails. This progress box also contains a list box where any errors which occur are listed. These errors include the file name being "nailed" at the time of the error. If any errors occur, the progress box will remain until you click **OK**.

Thumbnails - Statistics   Ctrl+T

This option provides disk usage information about the ThumbsPlus database. You may also Purge the database from this dialog box, which rewrites the ThumbsPlus file excluding any deleted thumbnails.

```
┌─────────────────────────────────────────────┐
│ ▬        Thumbnail File Statistics           │
├─────────────────────────────────────────────┤
│                                              │
│      Images in file        12615             │
│      Space in use          304990            │
│      Deleted space        16413763           │
│   Average compression        99.7            │
│                                              │
│  ┌──────┐     ┌────────┐     ┌─────────┐     │
│  │  OK  │     │ Sort...│     │ Purge...│     │
│  └──────┘     └────────┘     └─────────┘     │
└─────────────────────────────────────────────┘
```
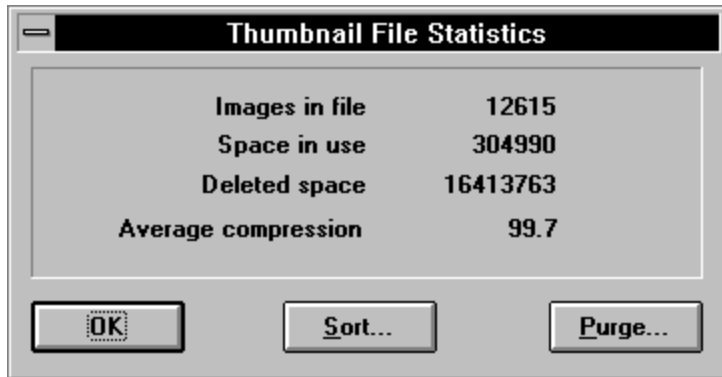
Images In File   The total number of thumbnails which are stored in the ThumbsPlus database, not including deleted thumbnails.

Space in Use   The number of bytes of disk space used by the thumbnails, not including the index.

Deleted Space   The amount of disk space in use by thumbnails which have been deleted. Whenever a thumbnail is replaced, the original thumbnail's space becomes deleted space. The Purge button will reclaim this deleted space, making it available for new thumbnails or other applications.

Average Compression   ThumbsPlus compresses the thumbnails using a simple Run Length Encoded algorithm. This number indicates the amount of space saved by this algorithm. A standard bitmap of a thumbnail would take 6912 (96 * 72) bytes; ThumbsPlus saves much of this space (generally 50-85%).

Thumbnails - Remove Tree   Shift+Ctrl+Del

This option removes all thumbnails for the current directory tree selected in the Directory List. The corresponding files are **not** deleted.

Thumbnails - Remove   Shift+Del

This menu selection removes all thumbnails that are selected. This option does **not** delete the corresponding files.

Thumbnails - Remove Orphans   Ctrl+Del

This selection will remove any "orphaned" thumbnails (those for files that have been deleted from another program) in the current directory tree or the current drive.

The Reclaim Disk Space After Processing option causes a Purge of the database after the orphans are removed. This reclaims the disk space that was used by the orphaned thumbnails. You may also purge the database by clicking on the Purge button in the Database Statistics dialog box.

Orphaned thumbnails may also be removed automatically whenever you change to a directory by checked "Automatically remove orphans" in the General Options dialog box.

Some users prefer that orphans remain for removed files, especially those that have been archived.

File - New Database   Ctrl+N

Use this option to create a new thumbnail database. For more discussion on ThumbsPlus databases, see the File - Open Database command.

File - Open Database   Ctrl+O

If you have a lot of graphics files, you may want to organize them into separate databases. This option allows you to select another database to open.

ThumbsPlus databases should have the extension ".TUD". Each of these databases has an associated index file, with the extension ".TUX".

ThumbsPlus can only one a single database at a time, though you can run ThumbsPlus multiple times, each time with a different database.

You can specify the database for ThumbsPlus to use on the command line, from Program Manager. You can also double-click on .TUD files from File Manager to bring up ThumbsPlus with a specific database.

To create a new database, use the <u>File - New Database</u> menu option.

Thumbnails - Refresh File List   F3

This option re-reads the current directory and searches for thumbnails for any files there. You should select this option if you delete, move or add to the files in the current directory.

When you select **Scan Drive**, ThumbsPlus examines all files on the current drive looking for files that it recognizes and creates a thumbnail for each of them. If a thumbnail already exists for a file, its update date and time are checked against what is stored in the ThumbsPlus database. If the file has been modified since the thumbnail was made, it is regenerated from the file.

While running, a progress box displays which indicates how much of the work is complete. This progress indicator is based on the total space in use on the drive, and is updated by the size of each file as it is examined. Since graphics files are usually grouped together, and different types of files take various amounts of time to analyze and reduce, this indicator does not really indicate the amount of progress made in *time*, but only how far through the disk ThumbsPlus has looked.

Click **Cancel** in the progess box to quit making thumbnails. This progress box also contains a list box where any errors which occur are listed. These errors include the file name being "nailed" at the time of the error. If any errors occur, the progress box will remain until you click **OK**.

Note that most CD-ROM disks have useless "total size" information stored on them, so the progress percentage is essentially meaningless for these drives.

Thumbnails - Export Selected

This option creates bitmap files of all currently selected thumbnails. The files are 96 x 72 pixels, 8-bit color (236 colors used), and stored in Windows Bitmap (BMP) format with a .TNB extension and the same name as the original file.

The files created with this option may be renamed or converted to other types. You can set up the ".TNB" file type in the File Types dialog box as equivalent to BMP files so they may be viewed, renamed or converted in ThumbsPlus.

Thumbnails - Scan Tree   Shift+Ctrl+F2

When you select **Scan Tree**, ThumbsPlus examines all files in the current directory and any of its sub-directories.

While running, a progress box displays which indicates how much of the work is complete. This progress indicator is based on the total space in use on the drive, and is updated by the size of each file as it is examined. Since graphics files are usually grouped together, and different types of files take various amounts of time to analyze and reduce, this indicator does not really indicate the amount of progress made in *time*, but only how far through the disk ThumbsPlus has looked.

Click **Cancel** in the progess box to quit making thumbnails. This progress box also contains a list box where any errors which occur are listed. These errors include the file name being "nailed" at the time of the error. If any errors occur, the progress box will remain until you click **OK**.

Options

General...	Ctrl+G
File List...	Ctrl+E
File types...	Ctrl+F
Confirmations...	Ctrl+R
Viewer...	Ctrl+W
Slide show...	Ctrl+S
Monitor Gamma...	Ctrl+M
Save for startup	▶
File Loading	▶
√ Toolbar	Ctrl+Shift+B
√ Status Line	Ctrl+Shift+L

Directory Path	Ctrl+Shift+D
Initial Database	Ctrl+Shift+E
Window Position	Ctrl+Shift+P

JPEG...	Ctrl+J
Photo CD...	Ctrl+H
WordPerfect...	Ctrl+P
TrueType Fonts...	Ctrl+U

Click on any selection above.

Options - Save for Startup - Window Position   Ctrl+Shift+P

This option saves ThumbsPlus's current window position and size. Subsequent runs of ThumbsPlus will place the main window at its current position. Note that this is set for the current database only, so that you can configure different datbases to start at different window positisions.

Options - Save for Startup - Initial Database   Ctrl+Shift+E

This option sets the current database as the default database for ThumbsPlus. Unless another database is specified on the ThumbsPlus command line (File - Properties in Program Manager), ThumbsPlus will open this database.

Options - Save for Startup - Directory Path   Ctrl+Shift+D

This option saves the current directory as the startup directory for the current database; whenever you open this database, ThumbsPlus will position to the current directory. This helps, for example, if you have a "Fonts" database, and a directory containing fonts. You can set the startup directory for the Fonts database to the Fonts directory, so that you don't have to click around in the directory list to find the fonts.

Options - File Loading - JPEG   Ctrl+J

This dialog box sets the options for loading JPEG files.
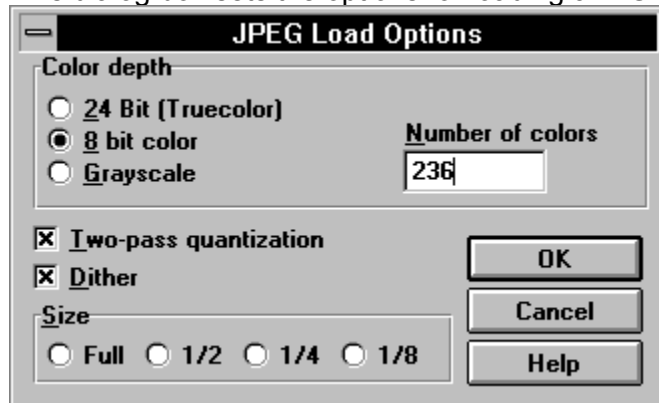
The JPEG library allows you to select how to load JPEG files. JPEG files are always stored as 24-bit (truecolor) images, but the library can automatically dither them to 8-bits for displaying on 256-color devices. This dithering will interfere with editing, however: if you want to edit JPEG files on an 8-bit display, it is best to load them as Truecolor even though they don't look as nice. In other words, on an 8-bit (256 color) display, JPEGs are best loaded for *viewing* as **8-bit color**, but best loaded for *conversion or editing* as **24-bit (Truecolor)**. For quick viewing on 8-bit displays, load them as **Grayscale**.

The **Two-Pass Quantization** and **Dither** options apply only if loading as 8-bit color; deselecting either or both will speed the load and conversion to 8-bit, at a sacrifice in appearance. The JPEG load dithering is similar to the Floyd-Steinberg dithering available as an option in the Color Depth dialog box.

The **Full, 1/2, 1/4** and **1/8** size options allow you to load a JPEG file at smaller than its actual dimensions. This speeds up loading considerably, and allows you to load files that are too large for your system's memory configuration.

Options - File Loading - WordPerfect   Ctrl+P

Use this dialog box to set options for rendering WordPerfect graphic (WPG) files.
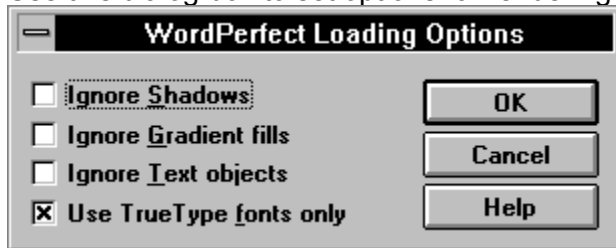
Ignore Shadows. If this box is checked, ThumbsPlus will not render object shadows in WPG files. This may speeed processing, and may make files easier to edit in other (non-WP) applications.

Ignore Gradient fills. If this box is checked, ThumbsPlus will not render gradient fills. This will greatly speed processing and reduce the size of resultant metafiles (either copied to the clipboard or saved to disk).

Ignore Text objects. Check this box if you dont want text information in WPG files rendered.

Use TrueType fonts only. Check this box to force ThumbsPlus to select a TrueType font for any text in WPG files. This option is meaningless if **Ignore Text Objects** is checked.

Options - File Loading - TrueType Fonts   Ctrl+U

Use this dialog box to control the actions taken when ThumbsPlus thumbnails and views TrueType fonts.
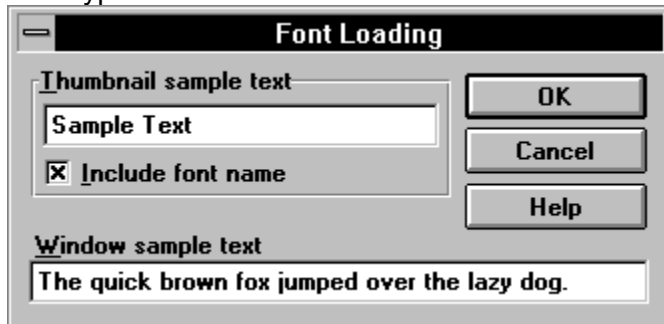
Thumbnail Sample Text. This text is used to create the thumbnail for the font. By default, this is blank and the font name alone is used to create the thumbnail.

Include Font Name. Checking this box causes ThumbsPlus to use both the sample text above and the name of the font for the thumbnail.

Window Sample Text. This text is displayed at the bottom of the font view window to show an example of how the text looks with several characters together.

Options - File Loading - PhotoCD   Ctrl+H

PhotoCD Loading

Size to load
- ○ 9̲6 x 64
- ○ 1̲92 x 128
- ○ 3̲84 x 256
- ◉ 7̲68 x 512 (base)
- ○ 1̲536 x 1024

Color format
- ◉ R̲GB (24-bit)
- ○ P̲alettized (8-bit)
- ○ G̲rayscale

[OK]   [Cancel]   [Help]
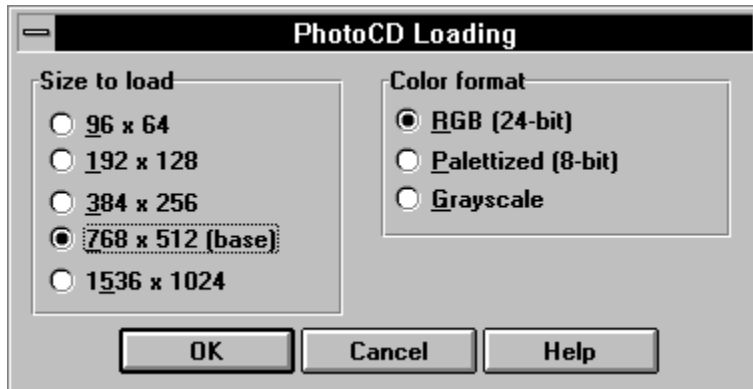
This dialog box selects the options for loading PhotoCD images.

The **Size to load** section allows you to select the desired size of the loaded image. Note that the horizontal and vertical sizes will be reversed for images stored in portrait orientation.

The **Color format** section allows you to select the color resolution of the loaded image.

Options - Monitor Gamma   Ctrl+M

This option allows you to calibrate the <u>gamma correction</u> value for your monitor. A gamma value of 0.0 means that ThumbsPlus will not gamma correct any image.

```
┌─────────────────────────────────────────┐
│ ▭            Monitor Gamma               │
├─────────────────────────────────────────┤
│  Value:  │ 2.1    │      0.0 - 5.0        │
│                                           │
│  ◄ │          ▓▓▓          │ ►            │
│  ░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░           │
│  ░░░░░░░┌─────────────┐░░░░░░░            │
│  ░░░░░░░│             │░░░░░░░            │
│  ░░░░░░░│             │░░░░░░░            │
│  ░░░░░░░└─────────────┘░░░░░░░            │
│  ░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░           │
│  ┌──────────────────────────────────┐    │
│  │ Adjust the gamma value (using the │   │
│  │ scroll bar or the edit field)     │   │
│  │ until the central gray box most   │   │
│  │ closely matches the shade of the  │   │
│  │ surrounding area. Set to 0.0 to   │   │
│  │ disable gamma correction.         │   │
│  └──────────────────────────────────┘    │
│   ┌────────┐  ┌────────┐  ┌────────┐     │
│   │   OK   │  │ Cancel │  │  Help  │     │
│   └────────┘  └────────┘  └────────┘     │
└─────────────────────────────────────────┘
```
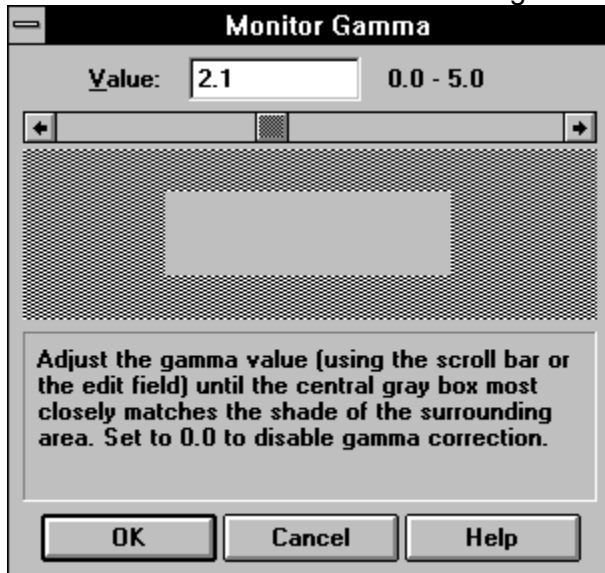
Simply adjust the scroll bar, using either the arrows at the ends or by dragging the central box, until the central gray square is as close as possible to the color of the surrounding pattern. For best results, calibrate in a darkened room.

As some monitors exhibit different characteristics at different display resolutions and color depths, ThumbsPlus will save a different gamma value for each combination.

Some image types have a specific gamma value for which they are corrected (for example, GIF files are corrected for a monitor gamma of 2.0). If you choose to use gamma correction, you need to set each type appropriately, from the <u>Assumed Gamma</u> dialog box. Unless this value is set for a specific file type, it will not be adjusted.

Options - Status Line   Ctrl+Shift+L

This menu option toggles the <u>status line</u> on or off.

Options - Toolbar   Ctrl+Shift+B

This menu option toggles the toolbar on or off.

Options - File Types   Ctrl+F
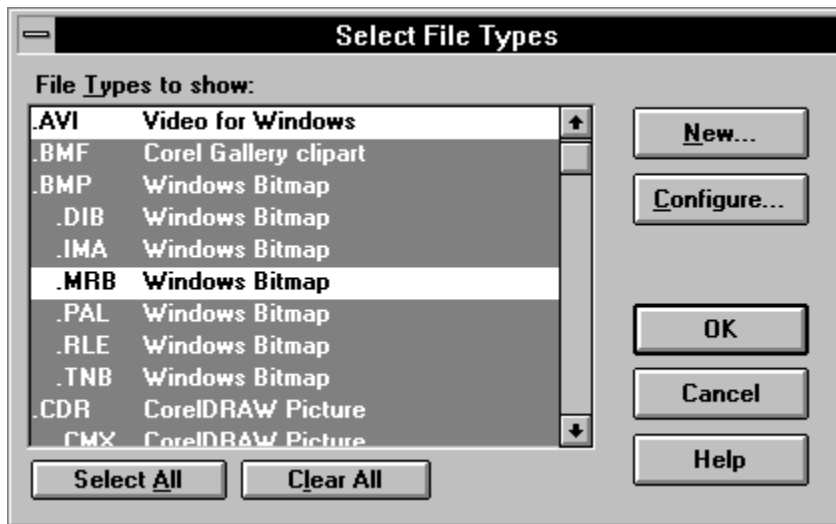
New. Runs the File Type Configuration dialog box so you can define a new file type for ThumbsPlus to handle.

Configure. Runs the File Type Configuration dialog box to change the configuration of a specific file type.

Select All. Select this option to show all configured file types in ThumbsPlus. Files that are not recognized will not have thumbnails, but you can move, copy, delete and rename these files.

Clear All. Select this option clear all selected file types, so you can start selecting from scratch.

File Type Configuration

This dialog box, which is accessed from the Options - File Types dialog box using the **New** or **Configure** button, allows you to define a new file type for ThumbsPlus to support, or to modify the configuration of a specific type.

ThumbsPlus can recognize any file type it supports internally, regardless of its specific name or extension. However, for files accessed through external filters or OLE, the extension may be important.

Extension. Enter the one, two or three character extension (without the period) for the file type to define.

Description. Enter a description of the file type. If the file type is equivalent to another (see below) you can leave the description blank --ThumbsPlus will automatically use the description of the base file type.

Equivalent to type. If the file type is equivalent to a type already known to ThumbsPlus, select that type here. This will disable most of the other entries in the dialog box, since the access to the type is defined through its base type.

Class. Select the type of file. For most purposes, Vector and Raster are appropriate. Several of the types give more information about the type of file and may be useful for categorizing OLE-based files. OLE-based types not classed as Raster are loaded as Vector.

Load file using. Select the method that ThumbsPlus should use to load the file:

    Internal - ThumbsPlus should use its internal loading routines to load the file. The file must be recognizable by ThumbsPlus.

    Filter - Use a Aldus Rev. 1 filter to load the file. The next field (**>>**) should be used to select the filter; if the list is blank, use   the Hunt for filters button to search for filters on your

system.

OLE - ThumbsPlus should attempt to attach to an <u>OLE</u> server for the file type to render it as a metafile or bitmap. Select the appropriate server from the next (**>>**) field.

None - ThumbsPlus should not attempt to load the file. It can still be shown in the file list, with an appropriate icon, if Edit Using is set to Association.

Edit file using. Select the method that ThumbsPlus should use to edit the file. Note that raster images may be edited to some degree from within a ThumbsPlus view window.

Association - Use the Windows File Manager association, as registered by FIle Manager, to launch the program to edit the file. If you don't select a specific item from the next list (**>>**), ThumbsPlus will use the file extension to attempt to locate an association.

Command - Enter a specific command to edit the file. You can use '%F' in the string as a <u>token</u> to be replaced by the file name.

None - Don't attempt to launch an editor for this file type.

Print file using. Select a method for printing the file type If it is loadable into ThumbsPlus, the **Internal** method usually works best. Otherwise, you may select **Command** or **Association**, as described under **Edit File Using**.

Hunt for filters. This button brings up a dialog box from which you can scan your disk drives searching for Aldus Rev 1 graphic filters to be used for loading graphics files. Note that Accusoft filters (which usually end in 9, as in IMWPG9.FLT) will be found, but will not work properly.
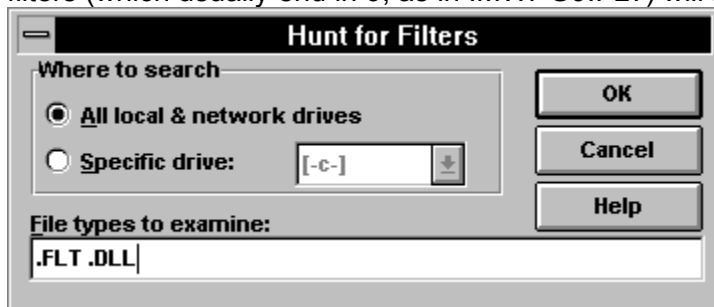
Options - File List   Ctrl+E

This option displays a dialog box from which you can control the display of the file list and thumbnails in ThumbsPlus.

File Listing Options

Order by:
Extension ▼

Show for each file
- [X] **N**ame
- [ ] **D**ate/Time
- [X] **S**ize
- [X] **T**humbnail

[X] **I**nclude hidden files
[X] **S**how **f**ont names

[ ] Name **m**ask:
a*.gif

Thumbnail Si**z**e
- (●) 1x
- ( ) 1.5x
- ( ) 2x

[OK]

[Cancel]
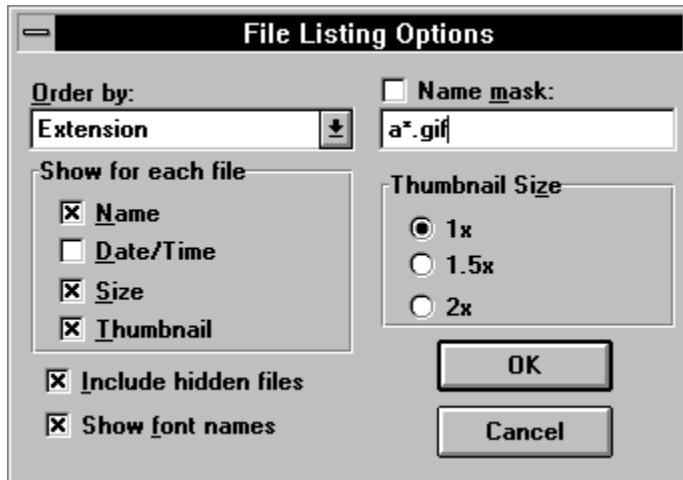
Order By. Selects the order in which files are displayed in the file list. You can sort by name, extension, size or date.

Show for Each File. Select the items you wish to view for each file.

Include Hidden Files. Causes ThumbsPlus to display system and hidden files in addition to normal files.

Show Font Names. When this is selected, ThumbsPlus will scan TrueType font files and load the font names. It will display these instead of the file names. Additionally, the font names will be green if the font is installed.

Name Mask. Check this box and enter a mask to select files based on a mask rather than on the types selected in the File Type dialog box.

Thumbnail Size. ThumbsPlus can enlarge the thumbnails on the fly. This is especially useful for very high resolution displays (1240x1024 and higher). Select the desired thumbnail size here. The stretching operation makes the file list display slightly slower.

Options - General   Ctrl+O

This option displays a dialog box which allows you to set the parameters for the operation of ThumbsPlus

```
┌──────────────────────────────────────────────────┐
│ ─              General Options                      │
│ ┌─Automatically Crop images:─┐ ┌─Minimize ThumbsPlus:─┐
│ │ ☒ On copy to clipboard     │ │ ☐ When viewing       │
│ │ ☒ When making thumbnails   │ │ ☐ On copy to clipboard│
│ │ ☐ When viewing             │ │ ☐ When editing an image│
│ └────────────────────────────┘ └───────────────────┘ │
│ ┌─Default action:────┐ ┌─Font:──────────────┐         │
│ │ ⦿ View image       │ │ Arial, 10 point Regular│      │
│ │ ○ Copy to clipboard│ │                     │         │
│ │ ○ Edit image       │ │   [ Select Font... ]│         │
│ └────────────────────┘ └────────────────────┘         │
│ ☐ Auto remove orphans                                  │
│                                                        │
│      [  OK  ]      [ Cancel ]      [  Help  ]          │
└──────────────────────────────────────────────────┘
```
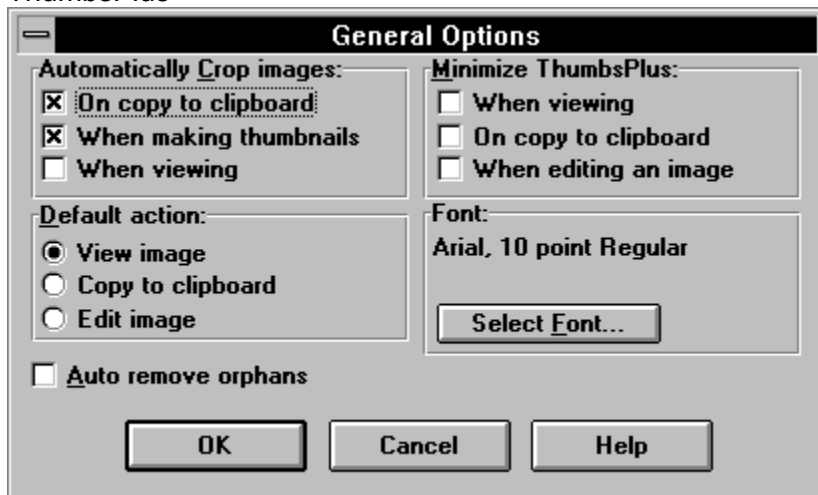
Automatically Crop Images. Automatically crops, by removing all continuous border of the same color, any image. This may be on or off for each of the following operations:

> On copy to clipboard
> When making thumbnails
> When viewing

Default Action. Selects the default action (taken for a double-click with the left mouse button). Select one of the following operations:

> View Image
> Copy to Clipboard
> Edit Image

Font. Shows the currently selected font for the **Image List** and the **Directory List** in the main window. Click on **Select Font** to change this font.

Minimize ThumbsPlus Window. Selects times when you would like the ThumbsPlus main window to automatically reduce to an icon for less screen clutter; similar to the **Minimize on Use** option in the program manager. You may elect to minimize ThumbsPlus at any of the following times:

> When viewing
> On copy to clipboard
> When editing an image

Auto Remove Orphans. Selecting this will cause ThumbsPlus to scan for orphaned thumbnails (thumbnails for files that have been removed from another program) whenever you change directories, and automatically remove them. You may instead remove orphans manually using the Remove Orphans option on the Thumbnail menu.

Options - Confirmations   Ctrl+N

This menu selection allows you to configure which items ThumbsPlus prompts for confirmation. For example, if you want ThumbsPlus to make sure before deleting files, that option should be checked. The dialog box looks like this:
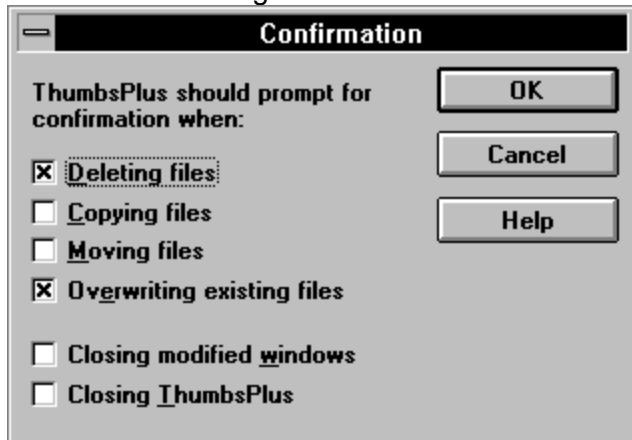
Each option determines whether or not ThumbsPlus will display a dialog box to confirm the listed operation after it is selected.

Options - Slide Show   Ctrl+S

This dialog box allows you to control the operation during a Slide Show.
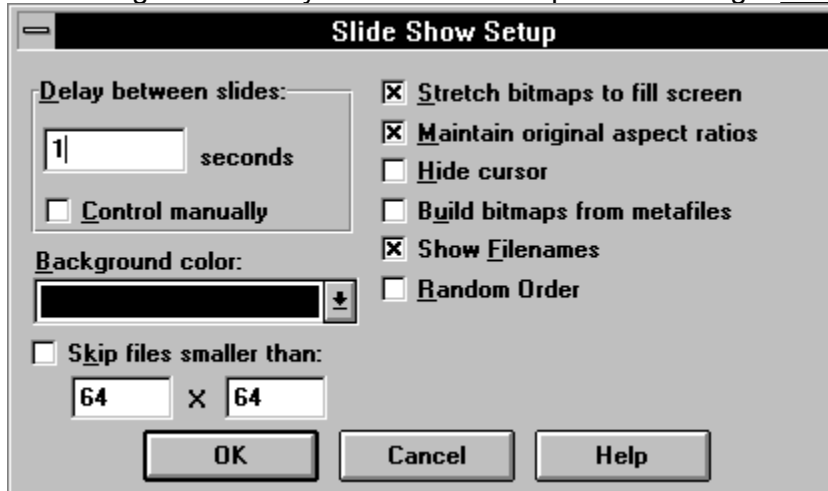
Delay between slides. Select either a number of seconds that ThumbsPlus will wait between slides, or mark the **Control manually** checkbox to manually switch slides (using the left mouse button or the space bar).

Background color. Select the background color to use for images smaller than the screen.

Stretch bitmaps to fill screen. Causes ThumbsPlus to stretch images to fill the screen as much as possible.

Maintain orignal aspect ratios. When stretching bitmaps, ThumbsPlus will ensure that the width-to-height ratio remains constant, rather than distorting the image.

Hide cursor. Hides the mouse cursor during the slide show.

Build bitmaps from metafiles. When this checkbox is selected, ThumbsPlus will build an in-memory bitmap from a metafile before displaying it. This eliminates watching the metafile draw.

Skip files smaller than. When selected, ThumbsPlus will not display raster images smaller than the entered size (width and height).

Options - Viewer   Ctrl+W

You control the operation of viewing files with this dialog box.

Initial Size

Automatic   The size of the view window is based on the size of the image or metafile being displayed.

Full Screen   The entire screen is used to display the picture, without menu bar or caption. See <u>View - Full Screen</u> for more information on this mode.

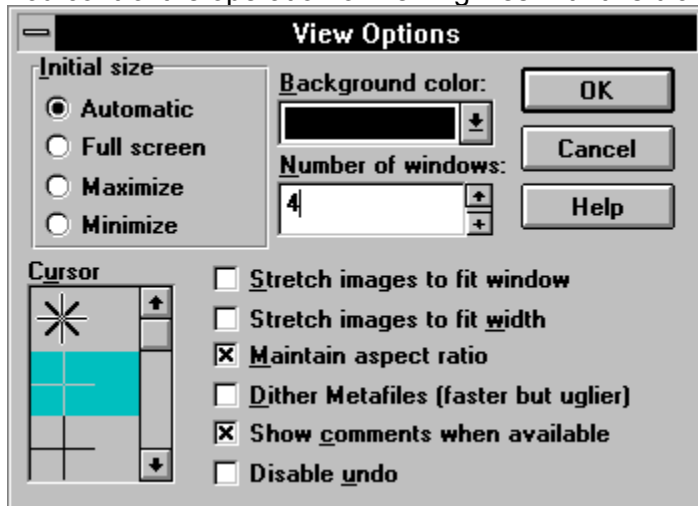**Maximize**   The window is maximized.

Minimize   The window is iconized.

Stretch images to fit window. Images are stretched to fill as much of the window as possible, depending on the setting of **Maintain aspect ratio**.

Maintain aspect ratio. The ratio between the width and height of the image is kept constant, to avoid distorting the image.

Dither Metafiles. Windows Metafiles generally include 24-bit color information. On 256-color palette-based displays, these colors will be <u>dithered</u>. ThumbsPlus generates (up to) 236-color palettes for displaying metafiles, resulting in much smoother displays. However, generating the palette and modifying the metafile display to take it into account slows the display process down. Select this option if you are in a hurry. Also select this option if you are using a 16-color or 24-million color display driver.

Images to display concurrently. Selects the maximum number of View windows which ThumbsPlus can manage at one time. Select a number between 2 and 40.

Background color. Select a background color for the sides or top if the window is larger than

the image.

Number of windows. ThumbsPlus can display multiple view windows simultaneously. Once this limit is reached, ThumbsPlus will close the oldest window before opening another.

Options - Save All Options   Ctrl+Shift+S

This menu selection saves the current ThumbsPlus configuration (profile)as the default when starting ThumbsPlus. The information saved includes:

All options in the Options dialog boxes.

The current directory tree options, from the Tree menu.

The Toolbar and Status Line settings, from the Options menu.

Options - Restore All Options   Ctrl+Shift+R

Use this selection to set all ThumbsPlus options to their last saved settings, as saved from within the dialog boxes or by the Options - Save All Options selection.

```
┌──────────────────────────────┐
│ Window                       │
├──────────────────────────────┤
│ Show All              F4     │
│ Close All             Shift+F4│
│ Minimize All          Ctrl+F4│
├──────────────────────────────┤
│ 0: d:\photoshp\calibrat\cmyk.tif│
│ 1: c:\windows\winnt.bmp      │
│ 2: c:\windows\ball.bmp       │
│ 3: c:\windows\256color.bmp   │
│ 4: c:\kidbmps\squares.gif    │
│ 5: c:\kidbmps\evan.bmp       │
│ 6: c:\fonts\cursive\ballroon.ttf│
└──────────────────────────────┘
```

[F5] *Click on any selection above.*

This menu also contains a list of all currently opened windows. Selecting any of these entries will cause that window to display.

Windows - Show All   F4

Causes ThumbsPlus to display all open <u>view windows</u> (in the order they were opened).
Minimized (iconized) windows are restored; hidden windows are brought to the front.

Windows - Close All   Shift+F4

Closes all opened <u>view windows</u>. If you have selected confirmation on closing modified windows from the <u>General Options</u> dialog box, ThumbsPlus will prompt you before closing any modified windows.

Windows - Minimize All   Ctrl+F4

This option will minimize (reduce to an icon) all open <u>view windows</u>. These icons display on the normal Windows <u>desktop</u> for easy access.

Help - Contents   F1

Displays the <u>Contents</u> section of this help file.

File - Save   Ctrl+S

This option saves the current file under its current name. It may be used to save a <u>cropped</u> or otherwise modified image. ThumbsPlus currently only supports three formats for saving files: Windows <u>Bitmap</u> and Compuserve GIF formats for raster images, and Windows <u>Metafile</u> format for vector images.

If the current file has an extension representing another format (such as .PCX or .CGM), it is changed to reflect the format being saved (.BMP, .GIF or .WMF).

File - Save As   Ctrl+A

This option saves the current file, allowing you to select a file name from a standard Windows Save As dialog box. It may be used to save a <u>cropped</u> or otherwise modified image. ThumbsPlus currently supports several types to save as: BMP, GIF, JPG, TGA and PCX for images, and WMF for <u>metafiles</u>.

Some file types also have optional information (such as comments) which can be saved in the file. If there are options available for the type you select, an Options dialog box will appear after you click OK in the Save As dialog box.

The <u>JPEG Save Options</u> dialog box even shows a preview of the "lossiness" of the compression.

The <u>TIFF Save Options</u> dialog box allows you to set the compression and resolution of the file, and to add or modify image comments.

The <u>GIF Save Options</u> allows you to specify the GIF level of the output, and to add or modify image comments.

If the current file has an extension representing another format (such as .PCX or .CGM), it is changed to reflect the format being saved.

File - Save As - TIFF
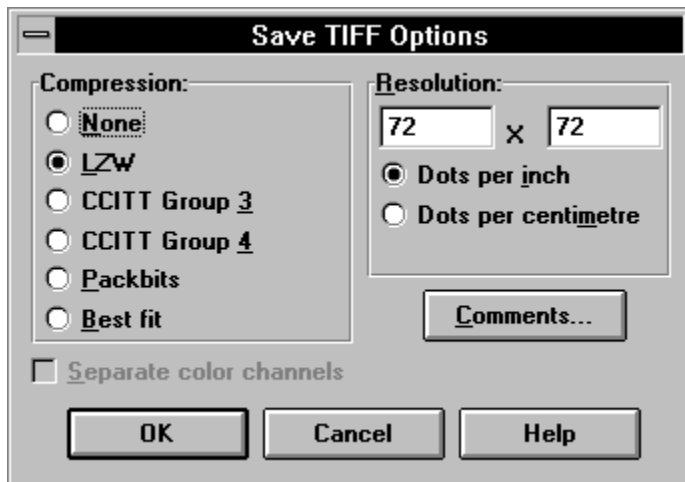
Compression.

None is the most compatible with other applications, and fastest to load.

LZW is best for 8-bit color and grayscale, and for 24-bit color files.

CCITT Group 3 and **CCITT Group 4** are valid only for bi-level files.

Best Fit will cause ThumbsPlus to use **CCITT group 4** for any bi-level files, and LZW compression for any others.

Comments. Allows you to edit the contents of the TIFF Description tag.

Resolution. Allows you to set the suggested resolution for the image, in dots-per-inch or dots-per-centimetre.

Separate color channels. Allows you to store RGB (Truecolor) images in separate red, green and blue channels. You should not use this option with LZW compression.

File - Save As - GIF

GIF files may be saved as the older **87a** format, or the newer **89a**. Version 89a files can have comments, which you can edit by clicking the **Comments** button.

You can also save GIF files as **interlaced**.

File - Save As - JPEG
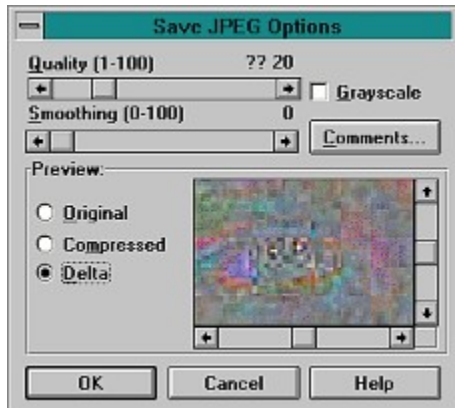
Quality. Select a quality value, between 1 and 100. Values between 25 and 95 are recommended. Values below 25 are likely to degrade the image far too much, and values above 95 make the file larger without any appreciable quality increase.

Smoothing. This option is sometimes useful for storing dithered 256-color images as JPEGs; it attempts to smooth the differences between pixels caused by dithering, but tends to blur the image somewhat.

Grayscale. Stores the image as a single-channel, 8-bit grayscale image. This removes all color information from the image.

Comments. Click on this button to edit or add comments to the image file.

Preview. Allows you to see the effect of the lossy compression on the image. You may scroll this preview around to different parts of the image to see the effect on specific details. The Delta option shows the differences between pixels, before and after compression. Medium gray is "zero difference."

A truecolor or highcolor (24-bit or 16-bit) display driver is required to utilize the JPEG loss preview.

File - Save Palette As   Ctrl+P

This option saves the <u>palette</u> of the current file to a .PAL file, which is really just a <u>PCX</u> file with a different extension. You can use these PAL files (or any bitmap file with a palette) to apply a palette to a given picture using the <u>Color Depth</u> dialog box, or even to apply the same palette to multiple files in <u>Batch Convert/Edit</u>.

You can make the .PAL files visible in ThumbsPlus by selecting them in the <u>Options - File Types</u> dialog box from the main window.

ThumbsPlus .PAL files are not similar to or interchangeable with .PAL files from other applications.

ThumbsPlus stores a small (generally 64x64) pixel bitmap along with the palette, so that useful thumbnails may be generated from the files.

File - Print   F9

This selection prints the graphic in the current view window. All options from the <u>Page Setup</u> and <u>Printer Setup</u> dialog boxes are applied.

File - Reload   Shift+Ctrl+Z

This option reloads the current image from its disk file (the last time it was saved, or the original if you havent saved it). It effectively undoes all changes since the last time the file was saved.

File - Close   Alt+F4

This option closes the view window and removes it from the screen. If you have modified the image and selected confirmation for closing modified images (from the Confirmations dialog box), ThumbsPlus will ask you if you wish to save the modified image.

File - Close All   Shift+Alt+F4

This option closes all open view windows. If you opted to confirm closing modified images (from the <u>Confirmations</u> dialog box), ThumbsPlus will prompt you to save each one before closing it.

File	
<u>S</u>ave	Ctrl+S
Save <u>A</u>s...	Ctrl+A
Save Palette As...	Ctrl+P
<u>C</u>lose	Alt+F4
C<u>l</u>ose All	Shift+Alt+F4
R<u>e</u>load	Shift+Ctrl+Z
<u>P</u>rint...	F9
Page <u>S</u>etup...	Ctrl+F9
Pri<u>n</u>ter Setup...	Ctrl+F8

F5 *Click on any selection above.*

Edit - Clone   F8

This menu selection copies the current image to a new window. The file is not re-opened, so any changes made already are reflected in the copy.

Edit - Copy   Ctrl+C

This menu selection copies the currently selected area in the view window to the clipboard.

Edit - Crop   Ctrl+R

Use this menu option to reduce the view window to only the selected area of the image. Anything outside the selected area is eliminated. This change will only be written to the disk file if you use the <u>File-Save</u> or <u>File-Save As</u> option.

Edit - Cancel Selection   ESC

This option removes the selection rectangle from the window.

Edit - Undo   Ctrl+Z

This selection restores the image to its state before the last <u>Rotate, resize</u>, <u>Color Adjustment</u>, <u>Color Depth</u>, or <u>Crop</u> operation.

This menu item will show what will be undone, or show "Can't undo" if there is nothing to undo. Some operations are not saved for undo, as they can be re-selected to undo them.

Edit - Select All   Ctrl+E

This option selects the entire contents of the view window for processing.

Edit - Thumbnail from Selection   F2

This selection uses the currently selected area in the view window to generate a thumbnail for the image. This is especially useful for clipart files which contain many related images. You can select a representative part of the file and create the thumbnail from only that part.

```
Edit
Undo Crop              Ctrl+Z

Copy                   Ctrl+C
Crop                   Ctrl+R
Cancel                 ESC
Select All             Ctrl+E

Thumbnail from Selection  F2
Autocrop               F4
Clone                  F8
```

F5 *Click on any selection above.*
This menu provides options that operate on a selected area in the view window. Only bitmaps can be selected from; to operate on a portion of a metafile, it must first be converted to a bitmap using the View-Convert to Bitmap option.
Use the mouse to select an area in the view window: press the left mouse button to start a selection area at one corner, and hold it down while moving the mouse to the opposite corner. Then release the mouse button. ThumbsPlus will draw a rectangle around the selected area. If the area is large enough, ThumbsPlus will also display the selected area size in a small rectangle in the center of the area.

To select an area from the center out, hold the SHIFT key down, press the left mouse button at the place you want to be the center of the selection, and drag the mouse to a corner. Then release the mouse button.

View - Autosize Window   Ctrl+F6

This option will make the view window the same size as the image displayed in it (if possible).

View - Assumed Gamma   G

This dialog box allows you to assign the assumed gamma value for an image, and to set the default for a file type (so that any files loaded with the given type will be assumed to be adjusted for that gamma value.)
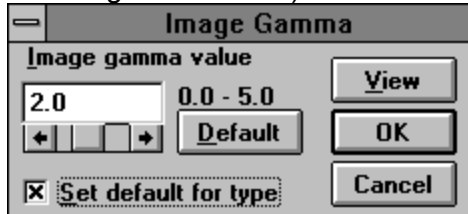
Use the arrows or the mouse to change the assumed gamma value. Select a value of zero (0.0) to turn off gamma correction for this image.

Check **Set Default for Type** to assume the selected value for all loaded images of this file's file type.

If you're using a palette-based (256-color) display driver, the change will be immediately visible. For 24-bit (truecolor) and 16-bit (highcolor) displays, you must click on the **View** button to see the changes.

View - Maintain Aspect Ratio   Shift+F6

This option causes ThumbsPlus to maintain the original file's aspect ratio when stretching to fill the window. This applies to both <u>metafiles</u> and <u>bitmaps</u>.

View - Zoom to Fit All   F6

When this option is checked, the image will be stretched (or shrunk) to fill the size of the window. Note that you cannot select portions of the image when stretched.

View - Zoom to Fit Width   Ctrl+W

When this option is checked, the image will be stretched (or shrunk) so that the width of the graphic fits the width of the window. This is most useful for portrait-oriented files, such as documents.

View - Gridlines   L

This option toggles the display of grid lines between pixels when zoomed in by 4x or more.

View - Zoom Out   Shift+Z

This function zooms back out after <u>Zooming in</u>.

View - Zoom In   Z

This selection "zooms in" on the current bitmap or metafile. For bitmaps, each pixel is shown as a square. For metafiles, only a portion of the file is viewed, but at increased magnification.

It is useful for viewing details in an image. It does not modify the image itself -- use Image - Rotate/Resize for changing the size of an image.

You can select Zoom In multiple times to view progressively smaller areas of an image. You may also use the keys 1-9 to zoom from 1x (unzoomed) to approximately 9x.

View - Comments   F7

When this option is available, it indicates that the graphic being viewed has comments embedded in it. Select it to view these comments. Comment viewing is currently supported for the following types of files:

GIF   - version 89a comment field

JPEG - COM marker field(s)

TIFF   - Description tag

View - Full Screen   F3

This option causes the View Window to use the entire screen, without title bar or menus. If the image is larger than the screen, you will still have scroll bars. While in full screen mode, use the right mouse button or the F10 key to see the View Window menus, which will appear vertically instead of horizontally. You can perform any of the View Window commands while in full screen mode; however, cropping an image will reduce the window to the size of the cropped image. You can select View-Full Screen again or press F3 to exit full screen mode.

Edit - Autocrop   F4

This option automatically crops the current image, removing any edges composed entirely of the same color. The <u>pixel</u> in the bottom left corner of the image is used as the reference pixel. Each of the four sides is compared to this pixel; any side entirely of that color is removed. This process is repeated for each side until a pixel of a different color is found.

## Image - Count Unique Colors   U

This option counts the number of colors in an image. For images stored as 8 bits per pixel or fewer, it is very fast; but for 24-bit images, it may take a while (and temporarily use up to 2Mb of memory). If there is insufficient memory to count the actual colors in an image, ThumbsPlus will ask if you want an estimate instead.

Image - Filter - Select Filter®   F
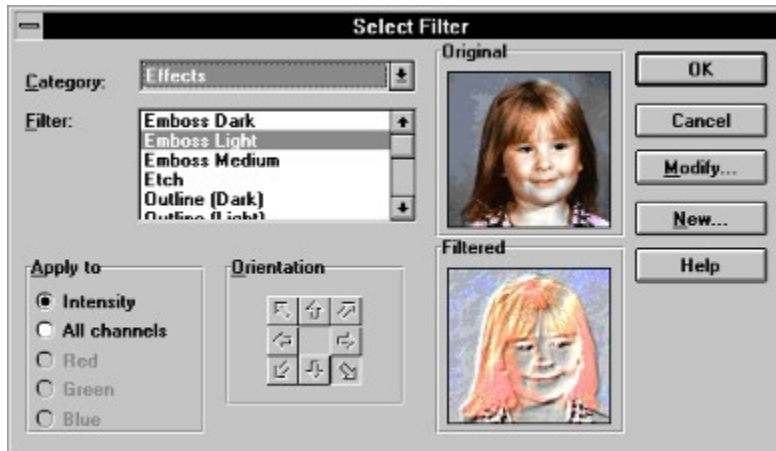
This dialog box allows you to select a filter for processing the current image (or group of images in Batch mode).

Category. Select the type of filter you wish to apply. Some types available are: Sharpen, Blur, Edge Detection, Effects and Noise.

Filter. Select the specific filter from that category. A sample of the results of the filter will be shown in the preview to the right.

Diameter. For statistical and morphological filters, you may select the diameter of the aperature to use for processing. Larger aperatures will produce more profound effects.

Apply to. Select the channel(s) to apply the filter to. Intensity applies the effect only to the intensity (brightness) of each pixel -- the hue is maintained. All channels processes all three channels (red, green and blue) separately. And, for some filter types, you may select only a single color channel.

Orientation. For linear filters (those defined by a *convolution mask*) which are not symmetrical, ThumbsPlus can rotate the mask to several positions. Select the arrow which represents the direction you wish to apply the filter.

Modify. Click this button to modify the currently selected filter. Note that only linear filters can be modified within ThumbsPlus. Statistical and multi-pass filters may not.

New. Click this button to add a new filter.
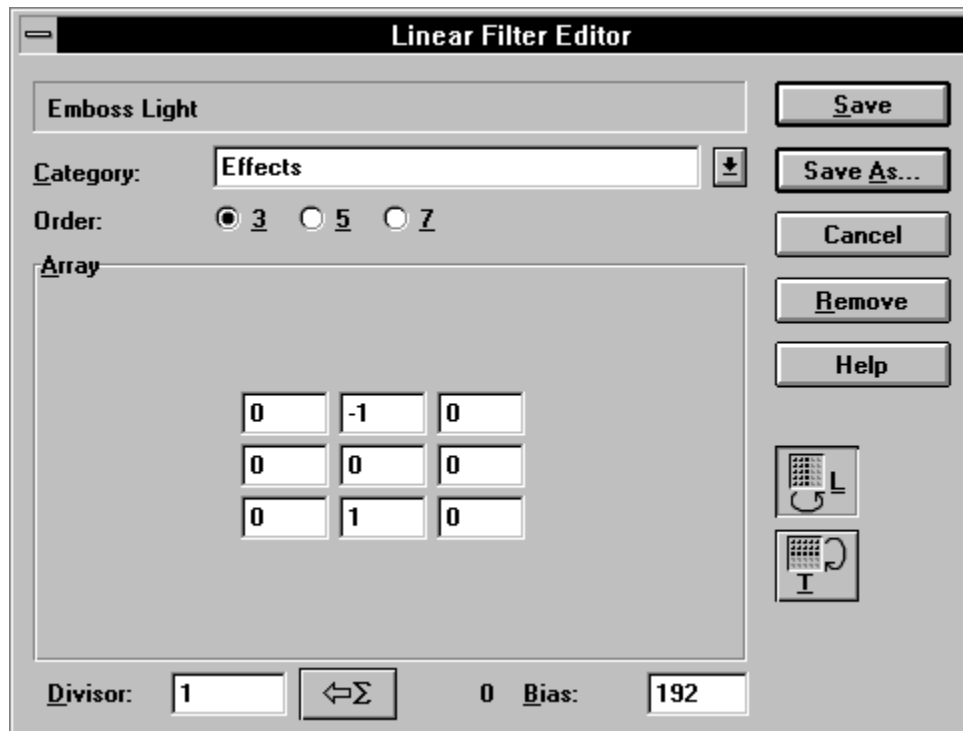
You use this dialog box to modify an existing linear filter or define a new one. Only linear filters (defined by a *convolution mask*) may be modified or added in ThumbsPlus.

Category. Select the category in which this filter belongs. Categories help to locate specific filters from the many choices.

Order. ThumbsPlus can apply 3x3, 5x5 or 7x7 filters. This selects the size of the filter. If you reduce the size once you've entered values, some will be lost.

Array. Enter the actual pixel accumulation values here. The central value represents the current pixel being processed. Each pixel is multiplied by the corresponding value in the array and added to a total.

Divisor. The sum of pixel x array values is divided by this value. For most filters, this divisor should be the same as the sum of values in the array; the   button will place this sum in the Divisor field.

Bias. This value is added to the result of (Array x pixels) / Divisor. It is used for some effects, such as embossing and etching. It is especially useful when the sum of values in the array is zero.

L. Click to force the array to be left-right symmetrical. All values on the left of the array will be repeated on the right (and if you change a value on the left, it will automatically change on the right). This button is on by default if you edit a filter that is left-right symmetrical.

T. Click to force the array to be top-bottom symmetrical. All values in the top of the array will be repeated automatically on the bottom (and if you change a value on the top, it will automatically change on the bottom). This button is on by default if you edit a filter that is top-bottom symmetrical.

Remove. Click to remove the current filter from the filter list (THUMBS.FLT).

Image - Filter - Last Filter®   Ctrl+F

Repeats the last filter selected (using <u>Image - Select Filter</u>) on the current image.

Image - Histogram®   M
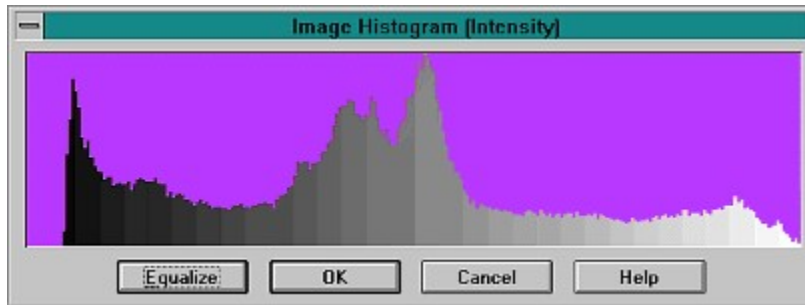
This option displays a histogram of the intensity of the image. It shows the relative number of pixels at each intensity level. If the values are bunched together, the picture lacks contrast; if they are skewed to the left or right, the picture is most likely too dark or too light.

In some cases, equalizing the histogram (using the **Equalize** button) will improve the appearance. ThumbsPlus will attempt to modify intensities to come as close to even levels of each as possible.

The histogram is most useful for 256-level grayscale and RGB Truecolor images.

Image - Invert   I

This selection inverts an image -- each color becomes the opposite color, creating a negative effect. This is most useful for printing Compuserve stock trend charts (and other dark drawn images), which otherwise use lots of toner or ink. It can also be useful for some incorrectly stored TIFF or PCX images (marked as MIN_IS_BLACK, but stored as MIN_IS_WHITE).

This option is its own inverse, so it is not saved for undoing.

Image - Swap Red & Blue   W

This option swaps the red and blue values of each pixel or color map entry. It is useful for images (especially Sun Raster) which are saved with these values reversed. Note that this operation is not saved for undo, as selecting it again undoes it.

Image - Flip Vertical   V

This option reverses the image from top to bottom. Note that this operation is not saved for undo, as selecting it again undoes it.

Image - Flip Horizontal   H

This option reverses the image from left to right. Note that this operation is not saved for undo, as selecting it again undoes it.

Image - Rotate/Resize   R

This dialog box allows you to either rotate or resize an image, or both simultaneously. You can also control how the rotation occurs (whether the corners are cut off) using a zoom control.

Zoom percentage. Zooms in or out. This is most useful for controlling what happens to the corners of the image during rotation. Use the arrow keys or mouse to slide the control box left or right to decrease or increase the zoom amount. This option is not available when fitting to the bounding box (see below).

Rotation angle. Angle (counter-clockwise) of rotation, in .01-degree increments.

New Size. Various options for the new size of the image, include specific percentages and specific sizes. You can also select Window to size the image to the current window size, or Custom to enter specific values.

These values may be entered either as exact pixel measurements, or as percentages of the original.

Aspect Fit. This selection sets how ThumbsPlus treats an original whose dimensions are of a different ratio than the destination. In other words, it controls the size of the destination file.

   Fit Both. The final image fits in the specified rectangle as closely as possible.

   Fit Height. The final image must be the same height as the specified height.

   Fit Width. The final image will be the same width as the specified width.

   Bounding Box. Most useful for rotations: the final image size is calculated as the size necessary to include the entire image after rotation. This avoids cutting of corners or edges.

   None. The aspect ratio of the original is ignored.

Interpolate (resample). Selecting this box (highly recommended!) will cause ThumbsPlus to set the values of new pixels to averages of surrounding pixels. This requires that the image be either 24-bit color or 256-gray level. If it is not, ThumbsPlus will automatically change the color

depth.

_____

ThumbsPlus remembers the last settings from this dialog box so that you can re-use them for additional images, or for batch processing.

If you rotate or resize a 256 (or fewer) color image and select interpolation, ThumbsPlus will automatically promote it to 24-bit (truecolor to be able to interpolate intervening pixels. You can then use the Color Depth selection to adjust the colors to the number you desire. Likewise, ThumbsPlus will promote any grayscale image less that 256 levels to an 8-bit grayscale image.

## Image - Turn   Ctrl+KeyPad6,2,4

These three options (to turn the image by 90, 180 or 270 degrees) rotate the image quickly.
Note that you can achieve these same functions (even in batch mode) by using <u>Rotate/Resize</u>
with an angle of 90, 180 or 270, and specifying **Bounding Box** as the **Aspect Fit**.

Image - Color Depth   D

Use this window to modify the color depth of an image. For example, it will convert a color image to grayscale, or a 24-bit image to 8-bit, or just about anything to monochrome (bi-level).
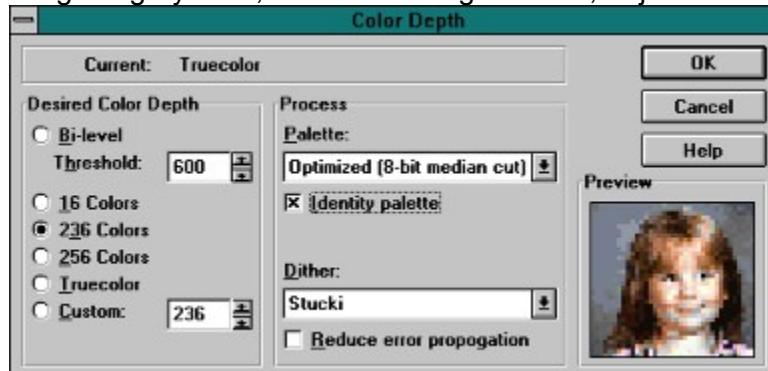
Desired Color Depth. Select the number of colors you desire in the final image.

Bi-level	Selects a two-color (black & white) destination image. Each pixel requires a single bit.
Threshhold	When you select bi-level as the desired color depth, you may enter a threshhold value for the dividing point between black and white. This number must range between 1 and 764. The sum of red, green and blue values for each pixel is compared to this threshhold; if below, the destination pixel becomes black; if above, it becomes white. Note that if dithering is selected, this value may not make as much difference, as any error is propogated through neighboring pixels.
16 Colors	Selects a sixteen-color destination image; each pixel requires 4 bits.
236 Colors	Selects a 236-color destination image; each pixel requires 8 bits. This selection is useful for 256-color Windows users, as it leaves the 20 colors that Windows requires.
256 Colors	Selects a 256-color destination image; each pixel requires 8 bits.
Truecolor	Selects a 24-bit destination image; each pixel requires 24 bits.
Custom	Select a number between 4 and 256. For color counts between 4 and 16, 4 bits per pixel are required; for a count of greater than 16, 8 bits per pixel are required.

Palette. Unless converting to Truecolor, you must select the palette to use. Several fixed and optimized palette selections are available:

Optimized (5-bit median cut)	Uses the "median cut" algorithm to select a color palette that best matches the colors of the original image. Selects from a total of 32,768 possible colors (5 bits each for red, green and blue).

Optimized (6-bit median cut)   Uses the "median cut" algorithm to select a color palette that best matches the colors of the original image. Selects from a total of 262,144 possible colors (6 bits each for red, green and blue). In some cases, this will mean a better color selection than the 5-bit algorithm, but it runs somewhat slower.

Optimized (8-bit median cut)   Uses the "median cut" algorithm to select a color palette that best matches the colors of the original image. This algorithm selects from a total of 16 million possible colors (8 bits each for red, green and blue). In some cases, especially rasterizing drawing with solid areas or gradient fills, this option produces much better results that 5 or 6-bit quantization. However, it is quite a bit slower, and will use very large amounts of memory if the number of colors in the original image is high. Not suggested for photographic images.

Optimized (popularity)   Selects the *n* most-used colors in the original image.

Grayscale   Creates a fixed levels-of-gray palette, with *n* evenly spaced colors.

ThumbsPlus Color   Selects the same colors used in the ThumbsPlus thumbnails; this is also the palette used for the Quick Dithering option (see below).

Windows Color   Uses the 16 standard Windows colors (yuck - but sometimes you need 'em).

Standard VGA   Selects the default 16 VGA palette colors.

6x7x6 Even Distribution   Creates a palette with 6 levels of red, 7 of green and 6 of blue, evenly spaced. (Not very pretty for most images, but okay for some dithering jobs.)

6x6x6 Even Distribution   Creates a palette with six levels each of red, green and blue, evenly spaced. This is similar to the 6x7x6 palette, but more useful for pictures with large amounts of gray.

Indeo   Uses the 236-color Indeo palette recommended for video frames. This is also a very useful general palette, somewhat similar to the ThumbsPlus palette.

Cinepak   Uses the recommended 236-color Cinepak palette recommended for video composition.

Pasted from Clipboard   Pastes a palette from the image on the clipboard. This is useful for adapting several images to a common palette.

Loaded from File   This option allows you to load a palette from an existing graphics file, or from a ThumbsPlus palette file (.PAL), which you may create using the Save Palette As... option on the View window File menu.

Identity palette. Checking this box will cause ThumbsPlus to adjust any 17 to 236 color palette to be a Windows identity palette, placing the 20 Windows system colors in the first 10 and last 10 color map positions.

Dither. When reducing the number of colors in an image, you may select a dithering method from those listed below.

(none)	No dithering. Colors are simply mapped to the closest available color in the selected palette.
Floyd-Steinberg	The most popular error diffusion <u>dithering</u> method. Fairly quick with reasonable results.
Burkes	Another error diffusion dither. Takes slightly longer than Floyd-Steinberg, and sometimes produces nicer results.
Stucki	A fairly complex error diffusion dither. Slower than Floyd-Steinberg or Burkes, but usually the nicest results, especially for truecolor to 256-color conversions.
Quick	Uses the ThumbsPlus palette to very quickly dither an image to 256 colors. With truecolor images on a 256-color display, this option will produce the same results as displayed in the window.

ThumbsPlus retains the last selections you made in this window so you can apply the identical changes to subsequent files, or during <u>batch processing</u>.

Image - Color Adjust C

Use this selection to alter the brightness, contrast, gamma and red, green and blue levels in an image.
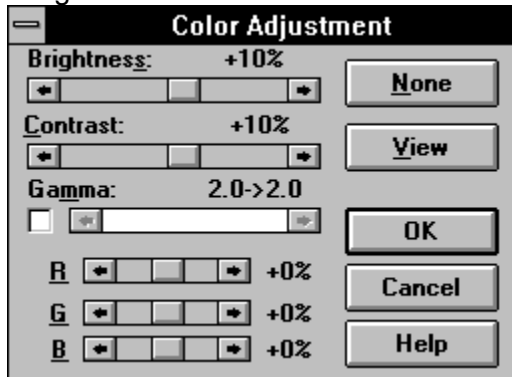
Brightness. This control changes the overall brightness of an image. Use negative values to darken an image, and positive values to lighten it. Use the arrow keys or the mouse to change the value.

Contrast. This control changes the contrast; that is, the difference between the light and dark areas. Positive values increase the difference between them, while negative values decrease the contrast.

Gamma. This control changes the color values or gray levels in an image to provide for a specific gamma correction. The display itself doesn't change (because ThumbsPlus knows the new assumed gamma value, and adjusts for it!), but the image itself does. This is most useful if you have linear files (gamma = 1.0), and wish to make them "standard" GIF files (gamma = 2.0), so they will display reasonably correctly with viewers which don't provide gamma correction.

R, G, B. These controls modify the amount of Red, Green and Blue in the image. They work similarly to the Brightness control, but individually on each color channel.

None. Sets all controls to zero.
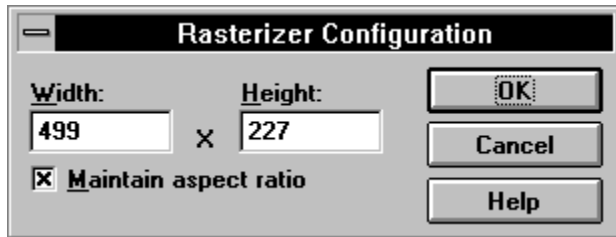
View. On Truecolor or Highcolor displays, this button repaints the image with the selected changes. This button is absent on 256-color displays, as ThumbsPlus automatically animates palette of the image to show the changes.

Note that ThumbsPlus "remembers" the last values you used to adjust an image, so you can use them to adjust another, or as input to Batch processing of images.

Image - Convert to Bitmap   F5

Rasterizer Configuration dialog box:

Width: 499 × Height: 227

[X] Maintain aspect ratio

OK | Cancel | Help

This option converts a metafile to a bitmap. You may enter the desired height and width, and whether or not to maintain the original aspect ratio of the metafile.

Width.   Enter the desired width of the bitmap. This defaults to the current window width.

Height.   Enter the desired height of the bitmap. This defaults to the current window height.

Maintain aspect ratio.   Select this option to force the bitmap to be the same aspect ratio as the original metafile. This defaults to the setting of the Maintain Aspect Ratio option in the View window.

Image

Filter	▶
Histog**r**am...	M
Color Adjust...	C
Color **D**epth...	D
Rotate & Resize...	R
Flip **H**orizontal	H
Flip **V**ertical	V
Swap Red & Blue	W
Invert	I
Count **U**nique colors	U
Turn	▶
Convert to **B**itmap	F5

Select Filter...	F
New Filter...	Shift+F
Sharpen Less	Ctrl+F

90°	Ctrl+KeyPad6
180°	Ctrl+KeyPad2
270°	Ctrl+KeyPad4

F5 *Click on any selection above.*

View

<u>F</u>ull Screen	F3
<u>A</u>utosize Window	Ctrl+F6
√ <u>M</u>aintain Aspect Ratio	Shift+F6
Assumed <u>G</u>amma...	G
<u>Z</u>oom In	Z
Zoom <u>O</u>ut	Shift+Z
Z<u>o</u>om to Fit All	F6
Zoom to Fit <u>W</u>idth	Ctrl+W
√ Grid<u>l</u>ines	L
<u>C</u>omments...	F7
<u>O</u>ptions...	Ctrl+O

F5 *Click on any selection above.*

ThumbsPlus

This "quickie" menu, which has no drop-down items associated with it, simply brings the ThumbsPlus main window to the top of all windows. It is useful when a large view window obscures or covers the ThumbsPlus main window.

View Window

The View Window provides a simple way to view and globally edit (crop, color adjust, modify color depth, rotate, resize, filter, invert, flip, etc.) graphics images from within ThumbsPlus. You can also save modified files in various formats. The View Window provides the following menu:

File	Edit	Image	View	Help	ThumbsPlus!

[F5] *Click on any selection above.*

Selecting Files

You select files from the **file list** (the area of the screen with <u>thumbnails</u>) by using the mouse or keyboard.

Using the Mouse to Select Files

You can use a mouse to select a file or group of files. Before you can select files, they must be visible in the **file list**.

To select a file:

 Click the filename or thumbnail.

To select multiple items in sequence:

1. Click the first file you want to select.
2. Press the ☐F5☐ key while you click the last file to select.

To select two or more file out of sequence:

 Press and hold ☐F5☐ while you click on each file.

To cancel the selection of a file:

 Press and hold ☐F5☐ while you click the selected file.

Using the Keyboard to Select Files

You can use the keyboard to select a file or group of files. Before you can select files, they must be visible in the file list.

To select a file:

 Use the following keys to select a file or directory.

Press	To select
↑	
↓	A file above or below the current selection.
End	The last file in the list.
Home	The first file in the list.
Page Up	The file at the top of the previous screen.
Page Down	The file at the bottom of the next screen.

To select two or more items in sequence:

1. Use ⬆️

⬇️ to move to the first file you want to select.

2. Press and hold down `F5` while you select the remaining files.

To select two or more items out of sequence:

1. Use the arrow keys to move to the first file you want to select.

2. Press and release `F5`

`F5`. The selection cursor begins to blink.
3. Move to the next file you want to select.
4. Press the SPACEBAR to select each file.

5. Press `F5`

`F5` when you finish selecting files.

To cancel the selection of a file:

1. Press and release `F5`

`F5` so that the selection cursor begins to blink.
2. Move to the selection you want to cancel, and then press the SPACEBAR.

3. Press `F5`

`F5` when you finish canceling selections.

Hints and Tips

File Manager Drag & Drop. ThumbsPlus will act as a drag-and-drop client from File Manager. Simply drag file names from File Manager to the ThumbsPlus window (or icon). ThumbsPlus will open a view window for each file (up to the maximum number of view windows specified in the Viewer Options). You can also drag files *from* ThumbsPlus to other applications.

View Window Shortcuts. Double-clicking with the left mouse button in a view window will change it to full screen mode. Double-clicking with the right mouse button in a view window will close the window.

Metafile Viewing. If you're displaying true-color (24-bits) or standard VGA, turn on "Dither Metafiles" from the Viewer Options dialog box. In the case of true-color, Windows never dithers; in the case of standard VGA, the special code to create solid colors for the dithered colors cannot work.

Background Colors. For full-screen displays of 256-color images on a palette-based (256-color) display, select either black or white as the background color from the Viewer Options or the Slide Show Options dialog box, as ThumbsPlus steals the other system colors to more accurately display the image.

Internal Drag & Drop. Although ThumbsPlus has only a single window, you can drag files to directories not visible on the directory list by scrolling it **after** selecting the files you want to move or copy.

Performance. Though there is no built-in limitation on the number of file ThumbsPlus can handle, I recommend creating multiple catalogs (databases) if you have more than about 5000 files. Besides reducing the memory required to handle the index, smaller catalogs will speed up access to thumbnails in the database.

Thanks To...

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Windows Video Drivers

By default Microsoft Windows uses a fixed 16-color display driver (called the Standard VGA driver). This driver is fine for text-based or minimally graphic applications, but falls down heavily when confronted with multi-colored graphic files, like GIFs and JPEGs. Using a 16-color driver, graphics appear grainy, grayish and generally ugly, because Windows maps them to the 16 Windows colors.

Most systems purchased within the last few years have contained Super VGA video cards, which require special video drivers for Windows. Usually, a diskette with Windows drivers comes with the system. Occasionally, the drivers are pre-installed on the system and available to Windows. Also, if you've upgraded your video card, you should have received Windows drivers with it.

Installing the Drivers

To install the drivers, have your driver disk *and* your Microsoft Windows installation disks handy. Then, follow these steps:

1. From Program Manager, run Windows Setup. (If you're running Windows for Workgroups, you must run the SETUP program in the Windows directory from DOS).

2. Select *Change System Settings...* from the *Options* menu.

3. If your drivers have been pre-installed, scroll through the display list and find an appropriate driver. Select this driver, then click **OK**. You may have to restart Windows to make the change effective.

4. If you have to install the driver from a diskette, pick the entry labeled *Other display (Requires disk from OEM)...*

5. Insert your diskette when prompted; you may also have to insert one or more Windows installation disks.

6. Pick an appropriate driver and click **OK**.

If you have problems starting Windows after selecting a video driver, run Windows Setup from DOS to select the original (VGA) driver:

```
C:\> CD \WINDOWS
C:\WINDOWS> SETUP
```

Selecting a Driver

Several different color depths and screen resolutions may be available; here is some information on the possible choices:

Four different color depths are generally considered "Super VGA;" these are:

256-color (8 bits required per pixel)

This provides the minimum number of colors to display a single color graphic; multiple graphics must usually share some colors, so quality is sacrificed on all but the "top most" window. 24-bit graphics must be pre-processed before display to achieve reasonable color; ThumbsPlus uses a fast "quick-dither" to the thumbnail palette. This is indicated by a [Q8] appended to the file name in the view window title bar.

32768-color (16 bits required per pixel)

This mode divdes the 16 bits into 5 red, 5 green and 5 blue pixels. One pixel is not used. This provides much better viewing capability than the 256-color mode, but requires more video memory. You can simultaneously view multiple 256-color graphic files. Truecolor (24-bit) files will suffer some loss in quality (because nine bits of each pixel are ignored), and may be somewhat slower to display because the video driver has to "map" the colors.

65536-color (16 bits required per pixel)

This mode provides similar capability to the 32768-color mode, with (very) slightly better results. The extra (16th) bit is usually used for green.

16-million color (24 bits required per pixel)

Eight bits are used for each color (red, green, blue). This provides true color viewing -- no color information is lost from 24-bit images, and as many as desired may be viewed simultaneously. This is the most accurate color mode, but generally slower than 256-color mode.

Your video card may be capable of several different color depths and several different resolutions. Here is a table showing the minimum amount of video memory required for most popular color resolutions for each color depth, rounded up to 512Kb (Kilobytes) increments. Note that video memory is separate from system memory -- it's on the video card itself, and not usuable for programs or data.

	256 (8-bit)	32768/65536 (Hicolor)	16.7 Million (Truecolor)
640x480	512Kb	1Mb	1.5Mb
800x600	512Kb	1Mb	2Mb
1024x768	1Mb	2Mb	2.5Mb
1280x1024	1.5Mb	3Mb	4Mb
1600x1200	2Mb	4Mb	6Mb

Video cards with less than 512K of memory are not capable of running Windows with more than 16 colors.

Your monitor must also be capable of displaying the required vertical and horizontal resolution.

Using higher color depths also requires more system memory, as bitmaps are often stored in system memory at the color depth (bits per pixel) required for the current display.

Supported File Types

The list below shows the file types that ThumbsPlus supports. If there is additional information available, the file type is underlined.

.AVI		®Video for Windows files
.BMP,.DIB,.RLE		Windows Bitmap files
.CDR,.PAT,.BMF		CorelDRAW, CorelGALLERY
.CEL		AutoDesk Animator CEL files
.CGM		Computer Graphics Metafile (binary encoding)
.EPS		Encapsulated Postscript files (preview image only)
.GEM		GEM Metafiles
.GIF		CompuServe Graphics Interchange Format files
.ICO		Windows Icon files
.IFF,.LBM		Amiga IFF format
.IMG		GEM Image format
.JPG,.JFI,.JIF		JPEG compressed files (in JFIF format)
.MND,.MNI		Mandelbrot for Windows image files
.MOV		®QuickTime Movies
.PCX,.PCC		ZSoft Picture files
.PCD	Kodak PhotoCD files	
.PSD	Adobe Photoshop files	
.RAS,.SUN		Sun Raster format
.RAW		Raw grayscale images
.TGA,.WIN		Targa Truevision™ files
.TIF		Tagged Image Format files
.TTF,.TTR		TrueType fonts
.WMF,.MF		Windows Metafiles and Placeable Metafiles
.WPG		DrawPerfect graphics files

BMP, DIB, RLE: Windows Bitmaps

This is the standard bitmap format supported by Microsoft Windows. ThumbsPlus supports all color depths (1, 4, 8 or 24 bit), and the compressed (RLE) formats for 4-bit (RLE4) and 8-bit (RLE8) bitmaps.

The standard VGA driver does not properly decompress 8-bit compressed BMP files; for best color viewing (and nicest thumbnails), you should load a 256-color or higher Windows video driver, which should eliminate this problem.

Some proprietary 8-bit drivers do not properly decompress 4-bit compressed files, though the situation is always improving, and this problem is becoming much less common.

ThumbsPlus currently writes only uncompressed BMP files.

GIF: CompuServe GIF

The GIF format was developed by CompuServe, an on-line service, to provide good file compression and relatively fast decompression speed. GIF is a very popular format for online services, but is limited to a maximum of 256 colors.

Two standards have been developed: 87a and 89a. ThumbsPlus fully supports the 87a standard, and will view comments from 89a files. Multiple-image, multimedia, text, and input extensions are not supported.

ThumbsPlus can read interlaced GIF files, but always saves in non-interlaced format.

PCX, PCC: ZSoft Picture

PCX and PCC files are a fairly early PC graphic format, which has been extended over the years to support more and varied color depths.

The only known PCX format not supported by ThumbsPlus is 2-plane CGM files (4 color). These files may be supported in the future if there is sufficient interest.

ThumbsPlus does support 24-bit (3-planes x 8-bits per pixel) PCX files.

PCX files may or may not be compressed; ThumbsPlus always writes version 5, compressed PCX files, in the color depth of the current image.

TGA, WIN: Targa Truevision™

ThumbsPlus supports 8-bit, 16-bit and 24-bit Targa files. The more recent Targa extensions (including the "Developer Area") are not yet supported, but planned for a subsequent release.

The alpha channel information not currently retained.

ThumbsPlus saves TGA files at the appropriate color depth for the graphic; 4-bit (16-color) files are promoted to 8-bit Targa files.

ICO: Windows Icons

ThumbsPlus supports Microsoft Windows icon files, which are associated with applications for display in Program Manager or alternate shell programs.

256-color icons are handled, but not well tested because of a general lack of availablity of 256-color icons.

JPG, JIF, JFI: JPEG (JFIF) Files

The JPEG format was developed to provide a high degree of compression for images. It is a "lossy" compression method, meaning that some color information from the original is lost. When saving JPEG files, ThumbsPlus allows you to specify the intended quality of the image.

JPEG is generally appropriate for photographed or scanned images, and works best for 24-bit sources. JPEG is generally inappropriate for any type of line-drawn art.

The JFIF specification describes a standard way to incorporate JPEG images in disk files; only JFIF images are supported by ThumbsPlus. Some software (notably GIF2JPG, by Handmade Software), writes non-JFIF files which ThumbsPlus cannot handle.

ThumbsPlus incorporates the Independent JPEG Group's source code (V4), and supports only baseline JPEG images.

Lossless JPEG is not currently supported. For lossless storage of 24-bit images, use Targa, BMP, or PCX.

ThumbsPlus allows several loading options for JPEG files. When using a 256-color display, the JPEG file may be reduced to 256 colors during loading. This is not recommended if the image is going to be edited. See JPEG Load Options.

For more information on saving in the JFIF format, see JPEG Save Options.

ThumbsPlus uses version 4 JPEG code to handle JFIF files and may not recognize some files created with earlier or later releases. Also, some programs create proprietary (non-JFIF) format files also called ".JPG", which ThumbsPlus does not recognize.

TTF, TTR: TrueType fonts

ThumbsPlus can thumbnail, install, and remove TrueType fonts.

The default format of the thumbnail is to show the font name in the font itself. The text in the thumbnail may be changed using the TrueType Loading Options dialog box.

When installing and removing fonts, ThumbsPlus updates the WIN.INI file to reflected the added or deleted fonts. ThumbsPlus never deletes TTF files from the disk (unless, of course, you use File-Delete.

MND, MNI: Mandelbrot for Windows images

Mandelbrot for Windows is another Cerious Software product, which generates Mandelbrot set fractals. The files generated by this program may be thumbnailed and viewed in ThumbsPlus.

MNI files contain information about generating the image only, but may contain a preview bitmap. This preview can be extracted by ThumbsPlus from these files.

CDR, PAT, BMF: CorelDRAW and CorelGALLERY

ThumbsPlus can create thumbnails for CDR, PAT and BMF files; however, it can only extract the preview bitmap from them. There is no internal support for the proprietary Corel format.

If you have Corel, you can set up CDR and PAT files for external <u>OLE</u> support (using the <u>File Type Configuration</u> dialog box), which will allow you to create much nicer thumbnails for them. However, the price is high: Corel is a very slow OLE server, so it takes much longer to create the thumbnails.

Corel files may also be viewed, printed, or copied to the clipboard as <u>metafiles</u> using the OLE support.

CorelGALLERY files (.BMF) can be viewed and thumbnailed via OLE also, as long as the Corel Gallery program itself is installed. As with the CDR files, OLE is considerably slower than the internal bitmap support.

EPS: Encapsulated Postscript

EPS files are Postscript language files, created for Postscript printers. ThumbsPlus can access only the preview image (which can be in either <u>TIFF</u> or <u>Windows Metafile</u> format).

Copying this format to the clipboard or otherwise saving or converting it only accesses this preview; the Postscript contents themselves are not accessed by ThumbsPlus.

IMG: GEM Images

The IMG format was originally designed for the Atari computers, then migrated to PCs for several GEM-based products, including Ventura Publisher. IMG files may also be embedded in .GEM metafiles.

ThumbsPlus supports reading of all known IMG types, but does not currently correct the aspect ratio for files with non-square pixels.

IFF, LBM: Amiga and Deluxe Paint

The IFF format is an Amiga image storage format. LBM was created for the Deluxe Paint package, and is essentially the same. ThumbsPlus supports all known IFF and LBM formats except HAM and Dynamic HAM, which may be supported in the future.

TIF: Tagged Image File Format

The Tagged Image Format was developed by several companies, including Aldus, to be the be-all and end-all of image file formats. Because of its scope and extensibility, it is an extremely complex format which no single product can support completely.

TIFF is a clear example of the danger of design by committee.

The known TIFF formats not yet handled by ThumbsPlus are:

- Images in YCbCr (YUV) or proprietary color formats.
- Multiple-image TIFFs (only the first image is accessed)
- JPEG-in-TIFF (JTIF) (let's take two very complex file formats and cram them together. That should make things **better**.)

The following compression methods and special-interest formats are supported:

- Tiled TIFFs
- CCITT RLE, Group 3, and Group 4 Fax compresions
- Packbits, Thunderscan and Next compresion
- LZW compression
- Motorola (MM) format

ThumbsPlus writes uncompressed TIFFs, or compressed via CCITT Group 3 or 4 FAX, Packbits, or LZW.

CGM: Computer Graphics Metafile

CGM files are <u>vector</u> graphic files useful as clipart. They scale well, and have the distinction of being the **only** ANSI standard graphic format. There are many flavors of CGM files; ThumbsPlus supports the most popular for PCs (binary encoding), with the following limitations:

- Embedded cell arrays (bitmaps) are not supported.
- New (version 3) extensions, such as Bezier curves, are not supported.
- Font support is incomplete
- Rotated (non-orthogonal) ellipses and elliptical arcs are not correctly rendered.
- Hatches are rendered with the closest hatching format available from Windows.

RAW: Raw Grayscale

Raw grayscale images are 256-level grayscale images stored with no header information; the horizontal and vertical widths are inferred from the size of the file, based on entries in the THUMBS.INI file:

```
[Raw]
Sizes=1024x512*2,1024x1024
```

This example tells ThumbsPlus that two sizes of Raw grayscale files should be recognized: 1024x512 (524288 byte) and 1024x1024 (1048576 byte). The '***2**' on the first entry tells ThumbsPlus to replicate each input scan line, generating a 1024x1024 image. Some medical imaging systems generate grayscale files for which this transformation is appropriate.

PCD: Kodak PhotoCD Images

Kodak PhotoCD files are a proprietary format developed by Kodak for photographic image storage. They are generally located on CD-ROM only, due to their extremely large size. They may be loaded at various resolutions.

ThumbsPlus can load at any of the following resolutions:

- Base/64 (96x64)
- Base/16 (192x128)
- Base/4 (384x256)
- Base (768x512)
- Base*4 (1536x1024)

ThumbsPlus can load as either Truecolor, 8-bit palettized or as grayscale files. Use the Photo CD Loading options dialog box to select the desired size and color depth for loading PhotoCD files.

WPG: Word Perfect Graphics

WPG files are a vector (metafile) format that WordPerfect Corporation developed for use with its word processing products. Like other formats, WPG has evolved over the years.

ThumbsPlus supports both the original WPG (WPG1) and new (WPG2) formats for graphics; some charting and textual items aren't supported in WPG1, and the following are not supported in WPG2:

- Poly B-Splines.
- Complex polygons (components are rendered and filled separately).
- Object group rotation, skew, taper and translation.
- Text items are partially handled.
- Bitmaps are not rotated, skewed or tapered.
- Gradient fills are partially supported.

PSD: Adobe Photoshop

PSD files are the native format used by Adobe Photoshop. There are various "flavors" of PSD files; ThumbsPlus can read most of them (as of Photoshop 2.5), with the following known limitations:

- L*a*b color space PSD files cannot be loaded.
- Only the first channel of multi-channel PSD files is loaded (as grayscale).
- Duotone files are loaded as grayscale.

Version 3.0 PSD files may be read as long as they are flattened (ThumbsPlus cannot handle multiple PSD layers).

WMF, MF: Windows Metafile

The Windows Metafile format is the standard Windows format for storing <u>vector</u> and <u>metafile</u> graphics. It is quite powerful, as anything that can be drawn on the screen or printed on a printer can be stored in a metafile. It does, however, lack several rather rudimentary graphics primitives, such as Bezier curves and non-orthogonal ellipses.

ThumbsPlus can read and write Windows metafiles; vector graphics are also passed to and from the clipboard in this format.

Also, using <u>OLE</u> to load or thumbnail proprietary formats most often uses Windows Metafiles as the format for transfer of the picture of the file.

GEM: GEM Metafile

GEM Metafiles are vector graphic files which include drawing commands for rendering pictures. They are similar to, but less complete than, CGM files. GEM files originated on the Amiga, and have gone through several enhancement periods.

ThumbsPlus does not claim to support all GEM files at this time; fonts are not handled very well, and curve support is incomplete. However, the support is sufficient for most clip-art, the most common type of file stored in GEM format.

CEL: AutoDesk Animator Cel Files

ThumbsPlus supports both the earlier and newer versions of .CEL files. The later version is a single-frame .FLC file.

AVI: Video for Windows®

AVI is the standard Windows video format.

The registered version of ThumbsPlus supports playing, viewing, and thumbnailing (any frame) of Video for Windows files.

Video for Windows version 1.1d or later must be installed to play AVI files.

MOV: QuickTime for Windows®

MOV is the standard Macintosh video format.

The registered version of ThumbsPlus supports playing, viewing and manual thumbnailing (from any frame) of QuickTime files.

Apple QuickTime for Windows must be loaded on the system to play MOV files. MOV files must be *flattened* to play on Windows. This means that the Macintosh resource and data file forks must be combined into a single file.

RAS: Sun Raster

Sun Raster files are a popular image format for SUN Unix systems. They can contain either color-mapped (256-color) or truecolor images.

Many packages write the colors reversed (Red for Blue, Blue for Red), without setting the appropriate flag in the header. You can use "Swap Red and Blue" from the Image menu of the view window to correct such files.

File

New Database...	Ctrl+N
Open Database...	Ctrl+O
View	Enter
Edit...	Shift+Enter
Information...	F6
Batch Convert/Edit..	Shift+F8
Copy...	F5
Move...	Shift+F5
Rename...	Ctrl+Shift+F5
Delete...	Del
Create Directory...	Ctrl+F5
Label Disk...	Ctrl+L
Install Fonts	Shift+F6
Remove Fonts	Ctrl+F6
Slide Show	F8
Wallpaper	▶
TWAIN Acquire...	
TWAIN Select Source...	
Print...	F9
Print Catalog...	Shift+F9
Print Setup	▶
Exit	Alt+F4

Center	F7
Tile	Shift+F7
Remove	Ctrl+F7

Printer Setup...	Ctrl+F8
Page Setup...	Ctrl+F9
Catalog Setup...	Ctrl+Shift+F9

F5 *Click on any selection above.*

Help Menu

This menu provides access to the ThumbsPlus Help system and the About box.

Japanese Version

VC

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ビレッジセンターでは、ThumbsPlusの日本語版の販売を来年
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F5

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.INI and .TUO File Settings

The following tables list the global and database-specific paramaters, and indicate the menu or dialog box from which the parameter can be changed:

Global Parameters (THUMBS.INI)

Section	Parameter	Menu/Dialog box	Description
[Registration]	UserName	File>Register	Your user name; entered when you register ThumbsPlus
	UserCode		Your user code; assigned when you register ThumbsPlus.
[Startup]	WindowLeft, WindowTop, WindowWidth, WindowHeight	Options >Save for Startup >Window Position	These parameters store the initial position and size of the ThumbsPlus main window for startup.
	ThumbnailFile	Options >Save for Startup >Initial Database	Path and file specification of the initial database for ThumbsPlus to load when starting. This may be overridden by specifying a database on the Command Line for the ThumbsPlus icon.
	No3dControls	(none)	When non-zero, disables 3-D controls and dialog box appearance.
[Confirmations]	FileDeletions	Options>Confirmations	When non-zero, requests you to confirm deletion of any file.
	FileCopies		Requests for confirmation for copying files.
	FileMoves		Requests for confirmation for moving files.
	Directory...		(Not yet implemented)
	CloseModified Window		Requests confirmation when closing a view window that has changed (been edited).
	CloseApplication		Asks "Are you sure you wish to exit ThumbsPlus" when you close the main window.
	FileOverwrite		Requests confirmation before overwriting a file with the same name (copy or move).
[KnownFilters]		Options >File Types >Configure >Hunt for Filters	This sections contains a list of the graphic import filters which have been located using the Filter Hunt dialog box.
[JpegLoading]	QuantizeColors	Options>Jpeg Loading	Selects whether the JPEG library reduces the color depth during the load of an image.
	TwoPassQuant		When quantizing colors, selects whether a two-pass quantization is selected.
	Grayscale		Discards color information and loads JPEG images in grayscale.
	Dither		Selects whether dithering is performed when reducing the color of a JPEG image on load.
	QuantColors		The number of colors to reduce to, when QuantizeColors=1.
[Batch]	Format	File >Batch Edit/Convert	File format (i.e., BMP) in which to store batch converted files.
	AutoCrop		Autocrop images during the batch conversion.

	Resize		Rotate or resize during the batch conversion.
	ColorAdjust		Images are color adjusted during the batch conversion.
	Depth		Specifies whether the color depth is adjusted.
	Overwrite		Overwrite files with the same name.
	AltExtension		Specifies an alternate file extension for output files.
	OutputPath		Specifies the directory where converted files are placed.
[AutoPaste]	Prefix	Edit>Auto Clip Save	Indicates the prefix for file names that are saved.
	Sequence		Next sequence number to use for Auto Clipboard Save.
	Format		File format for files saved from Auto Clipboard Save.
	ConvertMetafiles		Specifies whether metafiles are converted to bitmaps.
	OutputPath		Location to store Auto Clipboard Save'd files.
[Directories]	SaveAs	View>File>Save As	Destination directory for Save As... dialog bo.
	Copy Files	File>Copy	Destination directory for copying files.
	Move Files	File>Move	Destination directory for moving files

Local (Database Specific) Parameters (THUMBS.TUO)

Section	*Parameter*	*Menu/Dialog box*	*Description*
[Startup]	InitialDirectory	Options>Save Startup Directory	Initial open directory in the directory list.
[FileTypes]	SelectedTypes	Options>File Types	List of file types which are selected in the File Types dialog box.
[Options]	AutoCropClipboard	Options>General	Set to one (1) to automatically crop images when copied to the clipboard.
	AutoCropThumbnail		Set to automatically crop images when making thumbnails
	AutoCropView		Set to automatically crop images when viewing.
	MinimizeOnCopy		Set to automatically minimize the ThumbsPlus window whenever an image is copied to the clipboard.
	MinimizeOnView		Set to automatically minimize ThumbsPlus whenever an image is viewed.
	MinimizeOnEdit		Set to minimize ThumbsPlus whenever an image is passed to an external editor.
	AutoRemoveOrphans		Set to automatically remove orphans when changing to a new directory.
	DefaultAction		Specifies the default action to perform when double-clicking an image.
	FontName		The name of the font for the file and directory lists.
	FontStyle		The style of the file and directory list font.
	FontSize		The size of the file and directory list font.
	FontItalic		Non-zero to speficy an italic font.

	FontWeight		Weight of the font (400 = normal).
[FileList]	Order	Options>File List	Specifies the order in which files are listed.
	ShowFlags		Coded value for what to show for each file.
	UseMask		Whether or not to use a file mask rather than the list of selected types from the Options>File Types dialog box.
	Mask		The file name mask to use for the file list.
	ThumbnailSize		The size of thumbnails, in percent (100, 150, 200).
	ShowFontNames		Whether to show font names rather than the file names for Truetype fonts.
[Menu]	IndicateExpandable Branches	Tree>Indicate Expandable	Show expandable (or collapsible) directories with a "+" (or "-").
	IndicateBranchesWith Thumbnails	Tree>Indicate Thumbnails	Show directory branches with thumbnails by color-coding.
	ShowThumbnail BranchesOnly	Tree>Show Thumb Dirs Only	Only show directory branches with thumbnails.
	ShowOfflineVolumes	Tree>Show Offline Volumes	Include off-line (i.e., diskette and CDROM) volumes in the directory list.
	StatusLine	Options>Status Line	Hide (0) or display (1) the status line.
	Toolbar	Options>Toolbar	Hide (0) or display (1) the toolbar.
	DirectoryListWidth	(none)	Specifies the last set directory list width (using the vertical spacer between the directory and file lists).
[Catalog]	FontName	File>Print Setup >Catalog Setup	Name of the font for catalog printing.
	FontSize		Size of the font (points) for catalog printing.
	FontStyle		Font style for printing.
	FontItalic		Indicates italic font.
	FontWeight		Font weight for printing.
	LeftMargin, RightMargin, TopMargin, BottomMargin		Margins for catalog printing (in units defined from International Control Panel settings).
	PrintFileNames		Print file names below thumbnails in catalog (0,1).
	CatalogTitle		Title to print at top of catalog.
	LineSpacing		Spacing between lines
	ThumbnailSize		Scaled size of thumbnails (100-1000 percent)
	Columns		Number of columns of thumbnails
[PageSetup]	LeftMargin, RightMargin, TopMargin, BottomMargin	File>Print Setup >Page Setup	Margins for image printing (in units defined from International Control Panel settings).
	StretchToFit		Stretch images to fit page (within margins).
	MaintainAspectRatio		Maintain aspect ratio when stretching images.
	DrawBorder		Draw a border around the image.
[SlideShow]	BackgroundColor	File>Slide Show	Color index for background color for slide show.
	DelaySeconds		Number of seconds to delay between "slides."

	ManualControl		Set to advance slides with left mouse or keystroke.
	StretchToScreen		Stretch images to fit screen.
	MaintainAspectRatio		Maintain height:width aspect ratio when stretching.
	HideCursor		Hide the mouse cursor
	ConvertMetafilesTo Bitmaps		Convert metafiles (vector graphics) to bitmaps before displaying.
	SkipSmallFiles		Skip any files smaller than the specified size.
	SmallFileWidth, SmallFileHeight		Minimim size of files to display in slide show
	RandomOrder		Set to process files in random order (shuffled).
[Viewer]	StretchImageToFit	File>View	Stretch images to fit window when window is resized.
	FitPageWidth		Stretch image to fit the width of the window (vertical scroll only).
	MaintainAspectRatio		Maintain the proper aspect ratio when stretching images or metafiles.
	DitherMetafiles		Use quick (unoptimized) display for metafiles.
	InitialSize		Coded value for the initial window size.
	BackgroundColor Index		Color index of background color.
	MaxViewWindows		Maximum number of view windows that may be simultaneously opened (2-40).
	AutoDisplay Comments		Automatically bring up a comment display window when viewing any image that has internal comments.
[Comments]	FontName	View>View >Comments	Font name for comment display window.
	FontSize		Font size for comment window.
	FontStyle		Font style.
	FontItalic		Specifies an italic font.
	FontWeight		Font weight (400=normal)