
PMView Pro User's Guide

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Introduction to PMView Pro

Welcome to PMView Pro, a graphics viewer/editor/converter for Windows NT/2000/XP, Windows 95/98/*Me*, and OS/2 Warp. This User's Guide will help you learn to use the various features of the program.

System Requirements

To use PMView Pro, your computer must meet the following minimum requirements:

- Pentium® class processor or higher
- Windows 95/98/*Me*, Windows NT/2000/XP, or OS/2 Warp
- 16 megabytes of memory
- 10 megabytes of free disk space

Of course, these are minimum requirements to run the program. Graphics processing can be a very intensive processing and the memory and CPU requirements might be higher.

About PMView

PMView is a robust and configurable image viewing, conversion, and editing tool for bitmapped graphics. It loads your images blazingly fast, without compromising quality or robustness. PMView supports saving and loading of more than 40 different file formats, including JPEG, GIF, PNG, TIFF, and PhotoCD. PMView offers broader and faster support for these file formats than many other programs do, since we wrote all of PMView's code for format handling ourselves. PMView also incorporates various image recovery techniques. If the image is bad, PMView will try to make the best of the situation and show the image if only possible. It does not give up easily.

PMView is intelligent. It tries to figure out what you want instead of popping up meaningless error messages. It tries to provide good default settings for most actions. PMView is also very configurable. There are hundreds of different options that make it possible for you to configure PMView to your liking. For instance, PMView has fully configurable shortcut keys.

PMView is much more than a viewer. It has functions for doing screen captures including the unique feature to capture parts of a window that are outside the desktop. The print function in PMView is a true WYSIWYG (what you is is what you get) implementation that visually lets you adjust margins and see the printed output. PMView allows for printing an image using multiple sheets of paper, enabling the user to print out a huge poster using standard letter sized paper and gluing the parts together. Naturally, PMView also has a TWAIN-interface for scanning and advanced batch and scripting functions that lets you automate conversion of a large number of files in the background.

PMView has a unique automatic thumbnailing facility that will create thumbnails for your images. The thumbnails in the file open window make it possible for you to browse through hundreds of

images in minutes. You'll never again have to load a bunch of images just because you forgot the name of the one you're looking for. PMView lets you convert files from one file format to another with the click of a mouse button. Just right-click with your mouse on the file you want to convert and select what format to convert to. PMView will do the conversion in a background task and lets you continue working.

PMView also has an easy-to-use slideshow feature that lets you create slideshows just by dragging and dropping the images you want. The slideshow controller gives you an easy way to control your slideshow while it's running.

PMView is written in C++ and makes heavy use of C++ specific features like classes, templates and exception handling. Throughout this product, we have tried our hardest to provide you with the best possible performance. Our memory and file management routines will provide you with blazing speed and the best use of your hardware. PMView does not lay its foundation on third party code or libraries that would limit our possibilities to provide a robust and optimized solution.

PMView is dynamically multithreaded, meaning that threads will be created and destroyed as needed. There will never be threads spinning in the background doing nothing. We have also invented a Priority Boost system that will let you use idle time priority without having to worry about locking up PMView or your system. PMView works well on single CPU systems, but also includes advanced SMP features for multi-processor systems.

PMView is easy to use. It has an object oriented user interface with well-organized menus. PMView also comes with full context-sensitive on-line help. Press F1 at any time to obtain context sensitive help, or select Help from the main menu to get a list of all the help topics.

This chapter explains how to install PMView Pro on your computer.

Installation for Windows Users

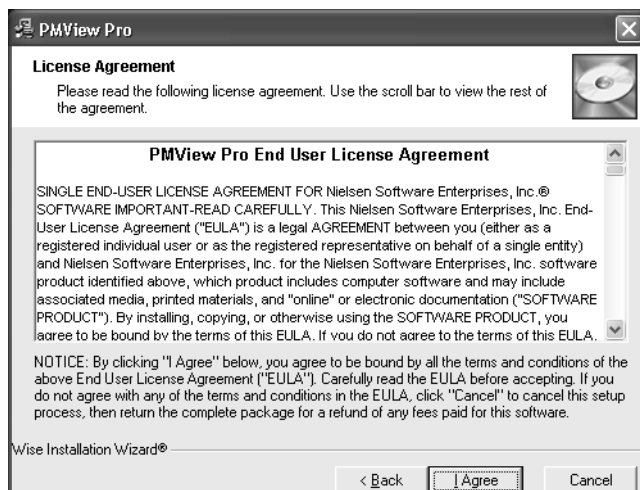
PMView uses a standard Windows installation that you are already familiar with. To install the program, simply follow these steps:

1. Start the installation program by running the executable file that you downloaded or received on CD. You will see the welcome screen:

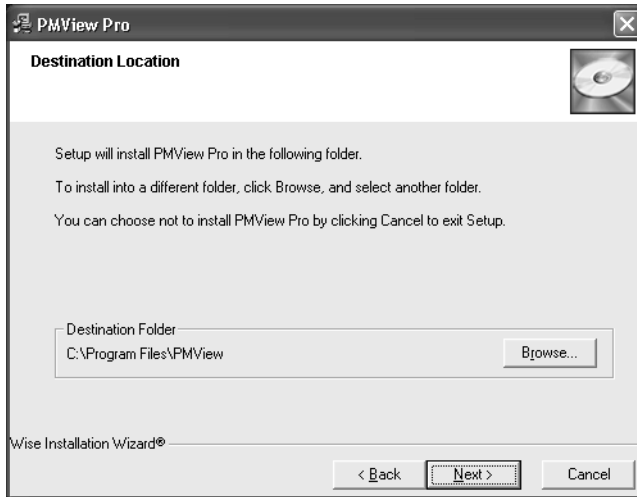
Installation



2. Click the Next button to continue. You will then see the license agreement for the use of PMView:

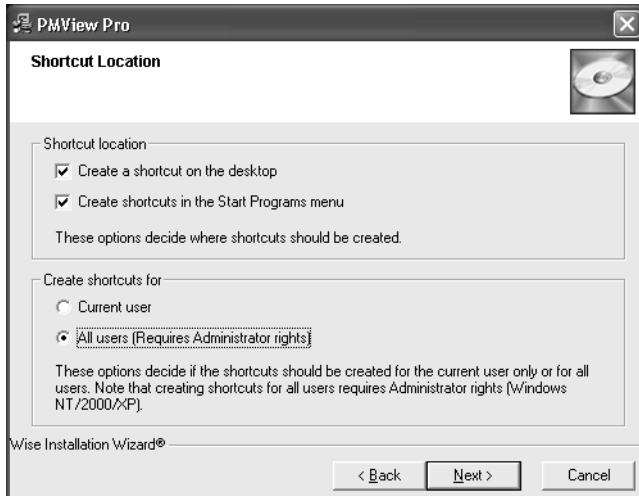


3. If you agree with the terms of the license agreement, click the “I Agree” button and you will see the screen that allows you to choose the location on your hard drive where the program will be installed:



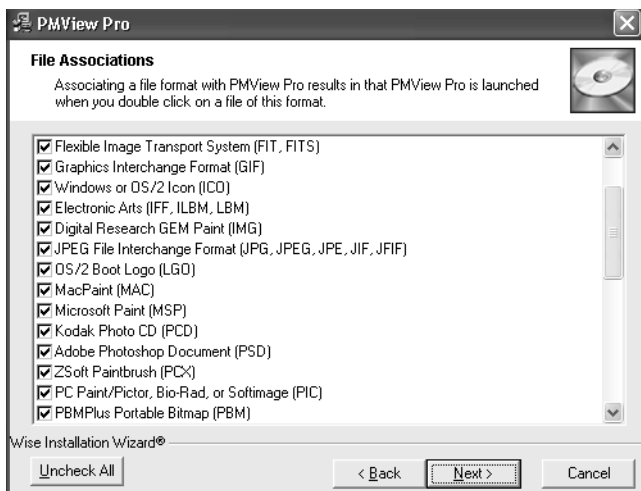
4. A default directory will be listed. If you wish to change the location, click the Browse button and you can then select another directory. This window will display the amount of free disk space on the selected hard drive partition and also the amount of free space that will be available after PMView is installed. Ensure that you choose a disk partition with sufficient free space. When you are finished,

click the Next button and you will see the shortcuts screen:

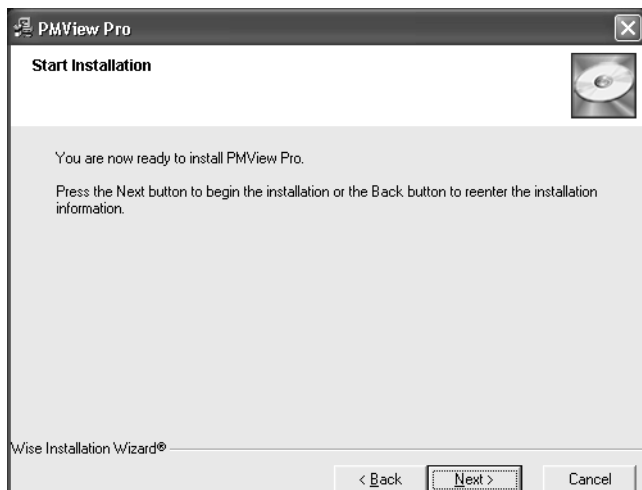


5. The installation program will, by default, create a PMView shortcut on your desktop and in your Start Button menu. Unchecking the boxes will skip the creation of the appropriate shortcut.

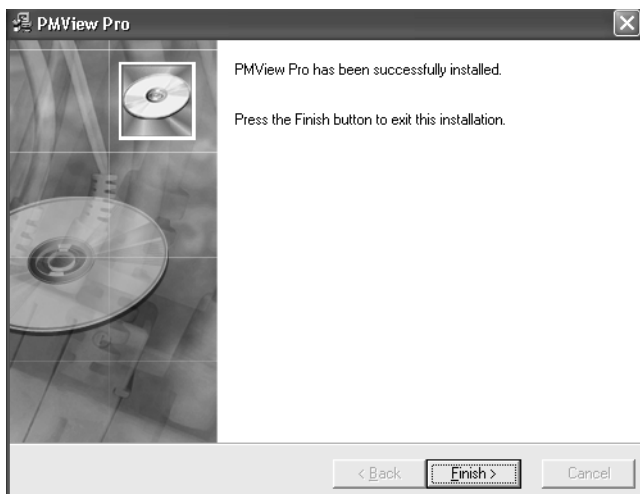
If you are installing the program under Windows NT/2000/Me/XP, you can choose to have the shortcuts available for the current user or for all users. In order to create the shortcuts for all users, you must have Administrator privileges. Once you have made your selections, click the Next button to continue to the associations screen:



6. Associations allow you to have PMView automatically start when you double-click a graphics file in Windows Explorer. By default, the installation program will associate PMView with all graphics files that it supports. If you do not wish to have PMView associated with a particular type of graphics file, simply uncheck that file type. Press the Next button and you will see the window that starts the actual installation of files:



7. Click the Next button to begin installing PMView onto your hard drive. As files are copied, a progress window will keep you updated. Once the files are installed, the final installation window appears:

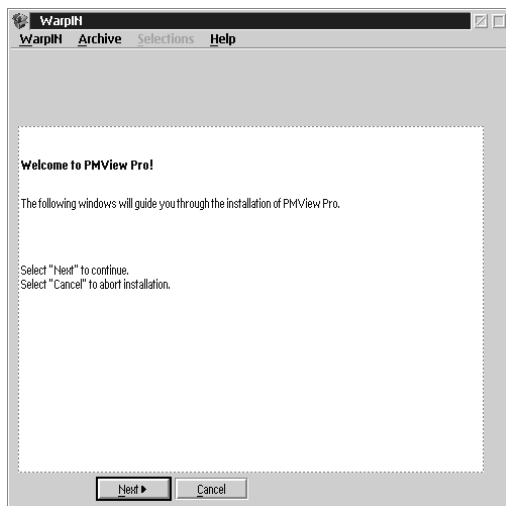


8. Press the Finish button to complete the installation. The installer will then exit and you can start PMView from the Start Menu icon, or by opening any image whose format is associated with PMView.

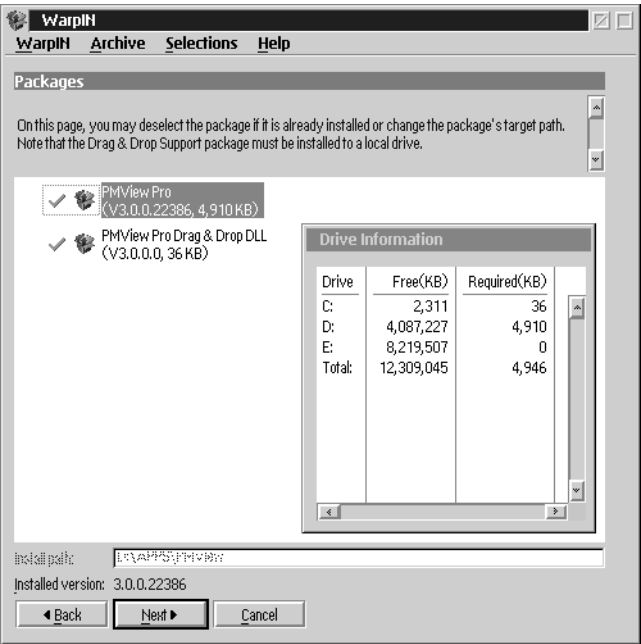
Installation for OS/2 Users

PMView Pro uses the WarpIN OS/2 installation program, this is new to version 3.0. It is recommended that you either remove any previous PMView versions from the system, or install to a different directory to avoid errors. To install the program simply follow these steps:

1. If you downloaded a Zip file, unzip it in a temporary directory and then run the install.exe file. If you received PMView on CD, all you have to do is run the install.exe file. You will then see the installation screen:

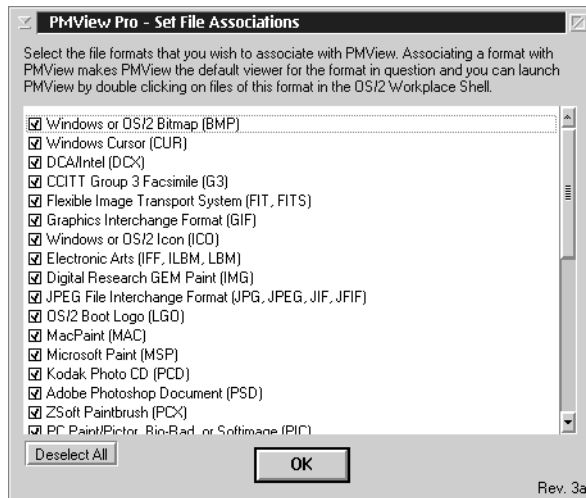


2. Read the information and when you are ready to begin installing, press the Next button. You will be asked to accept the license agreement for PMView Pro. Once you have read the agreement, press I Agree to go to the installation directory selection:

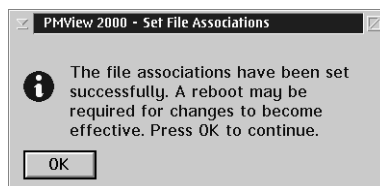


3. Enter the directory where you would like to install PMView. The WarpIN installer will select APPS\PMVIEW as the install directory of the selected drive by default. You will need to use the WarpIN menus to adjust the base path if needed. Once you have these settings the way you want them, click the Next button to begin the installation of the files to your hard disk. Prior to the installation progress indicator, you will be prompted to confirm the number of packages that will be installed. A progress window will show you the progress of the installation. If you installed a previous release of PMView, you may be prompted to overwrite the PMVDDrop.DLL file. It is recommended that you overwrite the file if prompted.

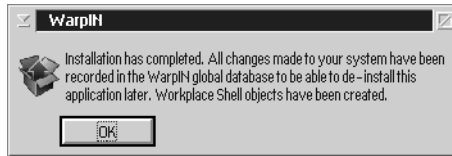
4. A window will appear that allows you to set the associations for various image file types to PMView so that when you double-click on a file in the Workplace Shell, it will be opened with PMView.



You can select and unselect file types by clicking them in this window. When you have the selections you want, click the Ok button. A message window will advise you to reboot after the installation completes to ensure that the file associations are updated:



5. Once the installation completes, you will see a final message window:



Click Ok to continue.

6. You will be returned to the main installation window at this point. Click the OK button there to close the installation program. We recommend that you reboot at this point and then you are ready to use PMView Pro for OS/2.

This chapter describes the menus of PMView Pro.

The File Menu

The File Menu is used to access the functions of PMView that deal with such operations as opening and saving files as well as acquiring images through screen capture and scanners.

New

This File Menu item allows you to create new files. Using this submenu, you have the following options:

- **Image** creates a new image file.
- **Slideshow** creates a new slideshow file.
- **PMView Window** opens a new PMView window, useful if you want to compare two images onscreen at once.

Open

Use this File Menu item to bring up the File Open Window for selecting a file to open. Both individual images and slideshow files are opened in the File Open Window. The Ctrl + O hotkey sequence

provides quick access to this function. See the Windows chapter for a discussion of the File Open window.

Recall

For quick access to the files most recently opened, use this menu item. It contains the last nine files you opened. You can reset the list by choosing **Clear List** below the list of files. Use the Ctrl + R hotkey sequence to access this function.

Next/Previous

Use this menu item to quickly cycle through the images in the current directory. The options are

- **First** - view the first image in the directory.
- **Previous** - view the previous image.
- **Next** - view the next image.
- **Last** - view the last image in the directory.

This menu item also has two settings:

- **Read Ahead** - enables the preloading of files so that access to them is quicker.
- **Wrap** - Enables or disables wrapping. When enabled, PMView will automatically wrap to the first image when you advance beyond the last image with Next or wrap to the last image when you advance beyond the first image with Previous. When disabled, PMView will not do this wrapping and stays at the last (or first) image.

You will also notice a third option here for the **File List**. The default option is **Keep Refreshed**. This option will refresh the file list when needed, but should be disabled if you have a large number

of files in any one directory (1,000 or more), or if you notice the *Next/Previous* action is slow. The second option to **Refresh** performs the same function that is automatically performed by the first option. The shortcut to refresh the file list is F5.

Save

This menu command saves the current image. If the image has been previously saved, this will overwrite the old image. If it has not been previously saved, the File Save Window will appear, allowing you to specify the path and name of the file. Ctrl + S is the hotkey sequence for this function.

Save As

Similar to the Save command, except that the File Save Window is always displayed. Use this command when you want to save an image to a new file (such as when converting from one image format to another).

Close

Removes the currently loaded image from PMView but PMView itself remains open. The hotkey sequence for this function is Ctrl + Q.

Info

This dialog shows you various statistics about the currently loaded image.

- **Filename** The (long) name of the file.
- **Filesize** The size of the file in bytes (kilobytes)
- **Image format** The file's image format.
- **Image size** The size of the image in pixels

- **Number of colors** The number of colors being used to display the image.
- **Resolution** The resolution of the image in pixels per inch (dpi).

Page number The number of the current page and the total number of pages in the file.

Print

Displays the printing dialog window which allows you to set various printing options and print the current image. See page 65 for a discussion of the printing options that you can control with this window. You can also display this window by using the Ctrl + P hotkey sequence.

Copy/Move to

Either of these options will bring up the **File Move** dialog when selected. This dialog lets you copy or move selected file(s). Note that if more than one file is selected you cannot alter the name of the target file.

- **Source directory** This displays the directory from which files will be copied or moved. (You cannot edit this field.)
- **Target directory** This lets you type in or select the destination directory to which files should be copied or moved. By default this is set to the most recently used directory. You can select another directory in the list of most recently used directories by clicking on its name. If the desired directory is not in the list, you can type its name in the field.

- **File name** This lets you change the name of the destination file. Note that this field is only available when you copy or move a single file.
- **If file exists** This lets you select the type of action to take when a file with the same name as the file copied or moved already exists at the destination.
- **Ask** This option will show the Confirm File Replace dialog. The dialog will show you file information and thumbnails of the source and existing target file and let you decide what to do.
- **Replace** When using this option, an existing target file will be replaced.
- **Skip** When using this option, no action will be taken if the target file exists.
- **Rename** When using this option, the target file will automatically be renamed if a target file with the same name already exists.

Skip if identical If checked, the files will be bitwise compared and if the files are identical no action is taken. If not checked, the selected type of action is always taken.

Delete

This deletes the currently displayed image from disk.

Note: PMView will ask for file delete confirmation in accordance with the setting on the Confirmations page in PMView's Options Notebook.

The shortcut key for Delete is Ctrl+D.

Warning: This command is irreversible.

Convert

This dialog lets you convert the selected file(s) to a different format. Note that if more than one file is selected you cannot alter the name of the target file.

- **Script** This lets you select, create, edit or delete a conversion script. Click New to open up the Script Editor and create a new script. A conversion script is only needed for more complex conversions. Use the predefined <None> option if all you want is to convert the file to a different format.
- **Output format** This lets you select the output format. The Options button is enabled if the selected file format has format specific settings.
- **Output directory** This lets you type in or select the destination directory where converted files should be placed. By default this is set to the most recently used directory. You can select another directory in the drop down list of most recently used directories. If the desired directory is not in the list, you can type its name in the field. If the Use same directory as original setting is checked, converted files will be placed in the same directory as the source files.
- **File name** This lets you change the name of the destination file. Note that this field is only available when you convert a single file.
- **If file exists** This lets you select the type of action to take when a file with the same name as the file copied or moved already exists at the destination.

- **Ask** This option will show the Confirm File Replace dialog. The dialog will show you file information and thumbnails of the source and existing target file and let you decide what to do.
- **Replace** When using this option, an existing target file will be replaced.
- **Skip** When using this option, no action will be taken if the target file exists.
- **Rename** When using this option, the target file will automatically be renamed if a target file with the same name already exists.
- **Delete original** If checked, the source file will be deleted after it has been converted.

Quick Script

This menu will list all scripts that have been marked as Quick Scripts in the Script Editor. The quick script will be processed in a background task, so you can continue working with PMView while the file is processed.

Note: This function is also available on the file object menu in the File Open Window. Running quick scripts in the File Open Window has the added advantage that multiple files can be processed at the same time.

Set As Wallpaper

This menu contains various functions that let you set the currently loaded image as your desktop background. The options are

- **Centered** - centers the image on the desktop and keeps the size of the image.
- **Tiled** - tiles the image on the desktop by retaining its size but piecing together multiple copies of the image if it is smaller than the desktop.
- **Scaled** - scales the image to fit the desktop by stretching it in both directions if the image is smaller than the desktop.

None - removes any background image on the desktop. *Note:* The image file itself is not deleted.

TWAIN

- **Acquire** - If you have a TWAIN-compliant scanner, you can use this menu item to scan an image directly into PMView.
- **Select Source** - Use this menu item to select the TWAIN-compliant scanner to be used when scanning an image into PMView.

The interface between an application and an image device's software is handled by a file named TWAIN_32.DLL. When you install the software for an image device, a copy of TWAIN_32.DLL is placed in the Windows directory. When PMView starts, it checks if the file is installed. If it is, the TWAIN-specific menu selections **Acquire** and **Select Source** are made available. If it isn't, the menu selections are grayed out.

It should also be noted that if you have a TWAIN-compliant device installed, but **Acquire** and **Select Source** on the **File** Menu are grayed out, check to see if TWAIN_32.DLL is installed in the Windows directory. If it isn't, try reinstalling your device software. Make sure you turn on any options that pertain to TWAIN drivers. If TWAIN_32.DLL is still missing, contact the device manufacturer.

Capture

PMView can capture images on your screen. The sub-menu provides the following capture functions:

- **Window** - captures an entire window, including the frame.
- **Window Interior** - captures the contents of a window but not the frame
- **Screen** - captures the entire screen.
- **Area of Screen** - captures an area of the screen that you specify.
- **Setup** - lets you change various settings for capturing such as the activation key and delay.

The Edit Menu

The Edit menu provides access to the system clipboard for cutting and pasting operations, undo/redo operations and cropping.

Undo/Redo

Undo or redo the last change you made to the current image. Use the Ctrl + Z hotkey sequence to access this function quickly from the keyboard.

Free Undo Memory

Clears the undo/redo history.

Undo Enabled

Toggles the undo/redo function. When the menu item has a check beside it, undo/redo is active.

Cut

Removes the current selection and puts it on the clipboard. The hot-key sequence is Ctrl + X.

Copy

Copies the current selection and puts it on the clipboard. Use Ctrl + C to access this function from the keyboard.

To mark a selection, hold down the left mouse button and move the mouse to size the rectangle. Afterwards, if you would like to move the selection rectangle you can point with the mouse somewhere inside the selected area, hold down the left mouse button and move. If you would like to resize the selection, you can grab any of the eight handles and move the selected edge. The four handles at the corners enables you to move two edges at the same time. The four handles at the center of the edges lets you move only the selected edge.

If you need to make a very precise selection you can zoom into the image with any of the Zoom functions.

Use the Selection Info window to view the coordinates and size of the selected area.

You can cancel the selection by pressing Esc.

Paste

Pastes the image that is currently on the clipboard into PMView. The paste can be done in two ways, accessible by the sub-menu:

- **As Selection** - pastes the clipboard contents onto the current image as a selection that can be positioned before it is finally pasted into the image. You can also use Ctrl + V to access this function.

- **As New Image** - clears the current image and pastes the contents of the clipboard into PMView.

Crop

Trims the image by removing the pixels outside of the selected area. The shortcut key is Alt + X.

Preserve Color Depth

Selects whether PMView should optimize colors for viewing or preserve the full color depth for editing.

If not set, PMView will convert loaded images to look as good as possible on your display. The image data may be converted, thus you should not use this mode if you intend to save the image to disk. For instance, loading a deep color image on a 256-color system will reduce the number of colors to 256 colors. If you save this converted image, color information may be lost!

If set PMView does not convert loaded images. The full color information of the original image will be retained. If your current video mode is unable to display all color information in the image, PMView will use dithering when showing the image. We recommend that you always enable this option when saving files.

The Transform Menu

This menu item contains functions for performing various transformations on the image such as filtering (smoothing, sharpening, *etc.*), rotation, and resizing.

Mirror

The functions in this menu item allow you to reflect the image about a line:

- **Horizontal** - rotates the image so that the horizontal positions of pixels are flipped about the center of the image while the vertical positions remain unaffected:

PMView wəiVMƆ

- **Vertical** - rotates the image so that the vertical positions of the pixels are flipped while the horizontal positions are unchanged:

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- **JPEG Lossless Horizontal** reverses (mirrors) left and right on the image.
- **JPEG Lossless Vertical** reverses (flips) top and bottom on the image.

Note that the JPEG Lossless functions are only available if the currently loaded image is in the JFIF file format. These functions operate directly on the file on disk and consequently do not need to decode the JPEG data, resulting in a lossless transformation. When the transform is finished, the image is automatically reloaded from disk and does not require further saving.

Rotate

These functions rotate the image about a point at its center:

- **90° Clockwise** - rotates the image 90° clockwise:

PMView

PMView

- **90° CounterClockWise** - rotates the image 90° counter-clockwise:

PMView

PMView

- **180° Upside Down** - rotates the image through 180°:

PMView PMView

- **Arbitrary Angle** - rotates the image through an angle that you specify:

PMView PMView

The **JPEG Lossless** options allow you to rotate the image in the same manner as the **JPEG Lossless Mirror** options. Remember that these options require that the currently loaded image is in the JFIF format and will not be available otherwise.

Size

Allows you to change the size of an image to one of several common sizes or to a specified size. In the dialog that appears, you will not only be able to set the size of the image, but you will also be able to choose from three options for the size action.

First is the **Letter/Pillar box** option. This is similar to adding a border around the image. For instance, if you size an image of a circle by 150% width and 110% height the circle will be increased in size by 10% and it will still be a round circle. The additional 40% width increase will be established by pillarboxing (black bars are added to the left and right of the image to fill the new area).

The **Keep Proportional** option will reduce any distortion of the image. If you uncheck this option and enlarge an image of a circle, the circle will become an ellipse.

The final option of **Resample Pixels** uses a pixel average method to recalculate the pixels of the new image. Using resampling is much slower, but gives a far better result. Note that the image will be converted to RGB deep color when resampling is used. If not checked, the pixels in the new image will be generated by dropping or duplicating image columns and rows.

Normal Filters

Applies various filters such as blurring, sharpening, and softening.

Edge Filters

Applies various filters that locate and enhance edges (areas of sharp contrast) in the image.

Special Filters

Provides access to the emboss and mosaic filters. The emboss filter makes the image look like it is raised out of a metal surface and the mosaic filter gives the image a low-resolution blocky appearance.

User Defined Filters

Provides access to filters that you can define and modify. PMView comes with a variety of specialized filters that you can use.

The Color Menu

This menu allows you to modify various color settings in an image.

Brightness/Contrast

Displays the Brightness/Contrast/Color dialog window where you can change these values for the image.

RGB Balance

Displays a dialog window that can change the relative amounts of red, green, and blue in an image.

Gamma Correction

The Gamma Correction dialog lets you adjust the gamma value for an image when the image was produced on a device with a different gamma. This function is used frequently with scanned images to lighten or darken them so that they look better when displayed on a monitor.

Solarize

The solarize function alters the colors of an image by inverting the colors above or below a specified threshold.

Negative

Inverts the colors of an image.

Edit Palette

For images with 8-bit or smaller palettes, this menu item displays the Palette editor (see page 68) which allows you to edit individual colors in an image.

Load Palette

Loads a previously saved palette. When the palette is loaded, it is applied to the currently opened image.

Save Palette

Saves the current palette.

Convert To

The sub-menus of this menu item provide functions to convert the color depth of the image to another one:

- **Black/White** - converts the image to a 1-bit color depth (black and white)
- **Grayscale** - converts the image to a 8-bit grayscale (up to 256 grays)
- **Indexed 16-color** - converts the image to a 4-bit color depth (up to 16 colors). See page 69 for more information.
- **Indexed 256-color** - converts the image to an 8-bit color depth (up to 256 colors). See page 71 for more information.
- **RGB Deep Color** - converts the image to a 24-bit color depth (up to 16,777,216 colors)

The View Menu

This menu contains functions that control how the image is displayed, which parts of the PMView window are displayed, and a dialog for setting program preferences.

Page

For image files that contain more than one image, this menu item provides the ability to view the different images:

- **First** - displays the first image in the file
- **Previous** - displays the image located before the current one
- **Next** - displays the next image in the sequence
- **Last** - displays the last image in the file
- **Goto** - allows you to jump to a specified image in the file

Zoom

The Zoom functions allow you to zoom in or out on the image by various percentages.

Full Screen

Scales the image to fit the screen and displays it without any window frames. Use the F3 hotkey to access this function from the keyboard.

Wrap Image

If the PMView window is larger or smaller than the current image, this function will resize the window so that it fits the image. The F4 hotkey accesses this function as well. Yet another way to access this function is by double-clicking on the sizing grip in the right hand corner of the PMView status bar.

Show

The Show menu has functions to control the appearance of the PMView window as well as information on the image (size, number of pixels, *etc.*) and whether the selection info window should be displayed when selecting part of the image.

- **Title Bar** - toggles the visibility of the title bar on the PMView main window
- **Menu Bar** - toggles the visibility of the main menu
- **Tool Bar** - toggles the visibility of the tool bar
- **Status Bar** - toggles the visibility of the status bar at the bottom of the PMView window
- **Scroll Bars** - toggles the visibility of scrollbars if the image is larger than the PMView window
- **Image Info** - displays the Image Info window which shows information on the image such as the file name, size in pixels and bytes, number of colors, and the image type.
- **Selection Info** - toggles the display of the Selection Info window when an area of the image is selected

Preferences

This command will open the PMView *Options Notebook* allowing you to adjust various settings for the program.

The Help Menu

This menu provides access the various online help features of PMView.

Help Contents

Displays the table of contents of the online PMView help.

Keys Help

Shows the various hotkey sequences that can be used in PMView to access functions from the keyboard.

Using Help

Shows information on how to use the online help system.

Tip of the Day

This shows you the Tip of the Day dialog.

The Tip of the Day dialog box is normally displayed when you start PMView, except when you are opening a file. You can change this behavior so tips are never displayed or always displayed when PMView is started. If you turn the Tip of the Day off and later want to see the tips, choose "Tip of the Day" from PMView's "Help" menu.

Web Resources

Clicking on one of these options will open your browser to the specified online resource. Options include the PMView.com website, online forums, online technical support and an online version of the help file.

System Info

Displays a window with various pieces of information about your computer such as the CPU type, amount of memory, type of video display, *etc.*

About PMView

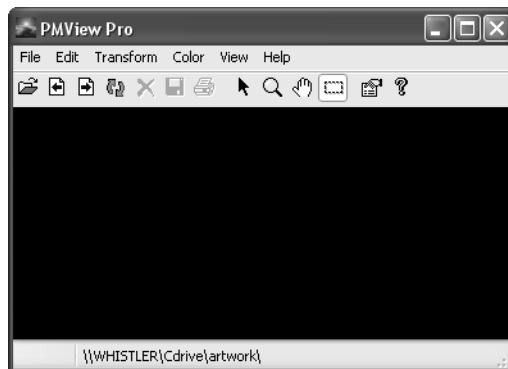
Shows the product information window for PMView. Your PMView license is displayed in this window if you have purchased PMView.

The PMView Windows

This chapter describes the various windows of PMView Pro.

The Main Window

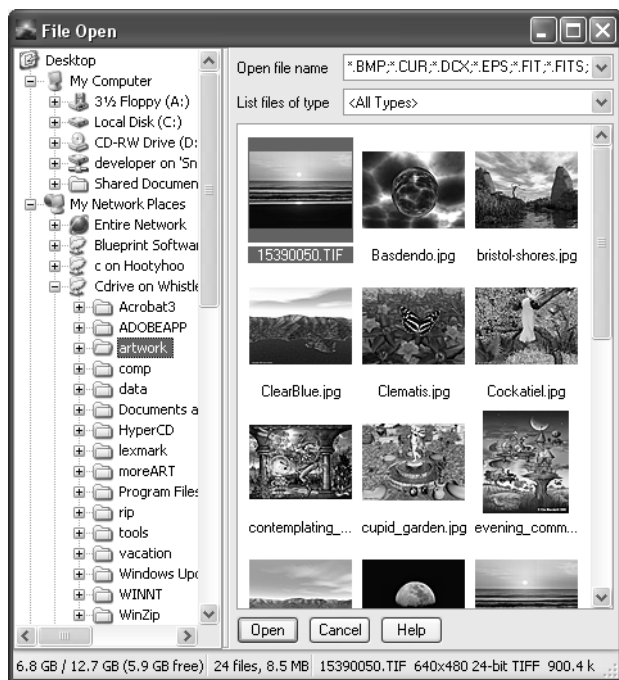
When you start PMView, the main window is displayed:



The main window displays images and provides access to all of the program's functions.

The File Open Window

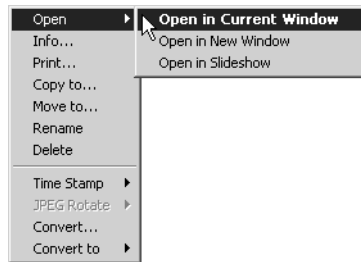
The File Open window is displayed when you choose the Open item from the File menu or when you press the Ctrl + O hotkey sequence. It has a variety of features that make it easy to find and open graphics files.



The lefthand side of the window shows the various folders on your system and provides for easy browsing when searching for files.

The right-hand side contains the File Open Container (FOC). The FOC shows thumbnail views of all the image files in the currently

selected directory. By default PMView shows all valid image types. If you want to display only a particular type of image file, say JPEG images, then select the file type from the dropdown box labeled “List Files of Type:.” To open a file, you can select it in the FOC and then click the Open button, you can double-click the thumbnail, or you can right-click on it and select Open from the popup menu:

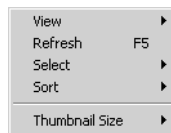


The other functions available for the file popup menu are

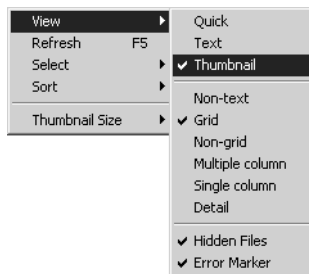
- **Info** - displays information about the image such as size and type
- **Copy/Move to** - simple shortcuts that help you to get your files organized.
- **Rename** - allows you to rename a file
- **Delete** - deletes the image file from your computer
- **Timestamp** - allows you to set the *Creation Time* and *Last Modified* time of the file
- **JPEG Lossless Rotate** - gives several options to quickly rotate the image by 90 or 180 degrees. Only works with JPEG images
- **Convert** - displays a dialog for converting the selected image to another file format
- **Convert to** - displays the various formats available for immediate conversion

- **Quick Script** - This menu will list all scripts that have been marked as Quick Scripts in the Script Editor

If you right-click on a blank part of the FOC (*i.e.* not on a file thumbnail), you will see the popup menu that controls the properties of the FOC:



The View menu controls the appearance of the FOC:



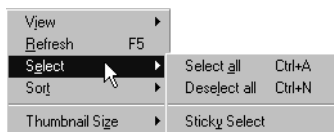
The various options are

- **Quick** - In quick mode, PMView does not scan the file for information. Only the information returned by the operating system is used. This is fast, but only filenames, sizes, dates, and times can be loaded in this way.
- **Text** - displays filenames only
- **Thumbnail** - displays thumbnails for each file.

- **Non-text** - Images are shown as thumbnails without any text (filename) displayed.
- **Non-grid** - Images are displayed with filenames under their icons (or thumbnails). Images are "packed" as closely as their file name texts allow. (File names are displayed in full).
- **Grid** - Images are displayed with filenames under their thumbnails and are aligned in a fixed grid pattern. Only the first line of a file name is displayed and if the file name is wider than the thumbnail, it is truncated. The truncation is shown with an ellipsis mark (...).
- **Multiple column** Files are displayed in a list layout with multiple columns.
- **Single column** Files are displayed in a list layout with only one column.
- **Detail** - All available information is displayed for each image, including file size, color depth, and date.
- **Hidden Files** - If set, PMView will show files that have the Hidden system attribute set. If not set, PMView will not show files that are hidden.
- **Error Marker** - If set, PMView will color the background of a thumbnail red for potentially corrupt files. Potentially corrupt files are files for which the decoding was not free from warnings or errors. For instance only the last line or pixel (!) of the image may be corrupt. Such a defect is hard or impossible to notice just by looking at the thumbnail. The red background helps you spot corrupt files more easily. Any file with a red frame will also cause an error message in PMView's status bar when loaded.

The Refresh menu item in the FOC popup menu causes PMView to refresh the list of image files in the current directory. This is useful when files are created with another program (like a scanning program) while the File Open window is displayed. The F5 hotkey also activates this function.

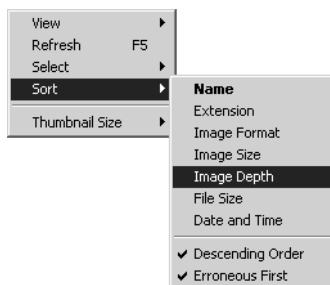
The Select menu item is used to select multiple images at a time:



The sub-menu items are:

- **Select All** - selects all of the images currently displayed in the FOC. Also accessible by the Ctrl + A hotkey sequence.
- **Deselect All** - cancels the current selection of files. The Ctrl + N hotkey sequence also performs this function.
- **Sticky Selection** - when set, left-clicking on images in the FOC will cause the image to be added to the current selection set. If you left-click a selected image, it will be deselected.

The Sort menu allows you to sort the images in the FOC by various criteria:

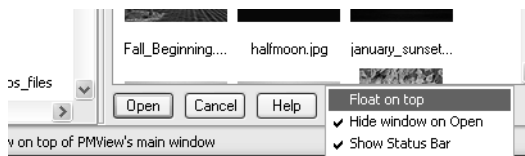


- **Name** - sorts by the name of the file
- **Extension** - sorts by the extension of the filename

- **Image Format** - sorts by the type of image, such as GIF, JPEG, *etc.*
- **Image Size** - sorts by the pixel sizes of the images
- **Image Depth** - sorts by the color depths of the images
- **File Size** - sorts by the sizes of the image files
- **Date and Time** - sorts the images by their date and time
- **Descending Order** - toggles the direction of the sorting (*e.g.* from largest to smallest to smallest to largest when sorting by file size)
- **Erroneous first** - sorts the images based on any detectable errors first

The final menu item in the FOC settings popup is Thumbnail Size. You can set the size (in pixels) to use when displaying thumbnails of the images.

Another popup menu is accessed by right-clicking on an area outside of the FOC, for example on the gray area to the right of the Open/Cancel/Help buttons:



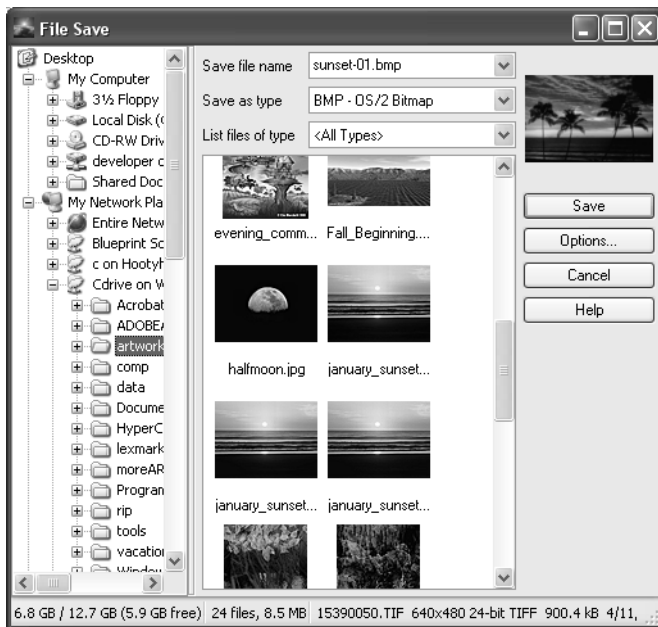
This popup menu controls the following settings:

- **Float On Top** - when selected, the File Open window always remains on top of other windows.
- **Hide Window on Open** - when selected, the File Open window will minimize when a file is opened.

- **Show Status Bar** - toggles the display of the status area at the bottom of the File Open window.

The File Save Window

The File Save window is used to save an image to a file on your computer. It provides access to the directories on your disk drive as well as the various file types and settings:

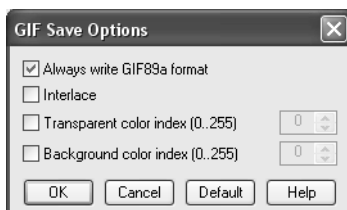


Like the File Open window, the lefthand side of the File Save window shows the disk drive(s) on your computer and operates like the Windows Explorer.

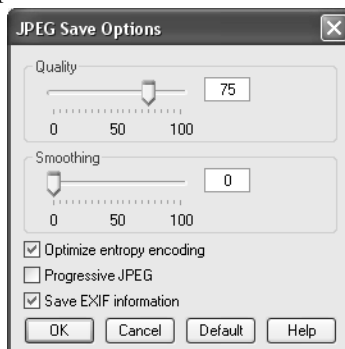
On the right-hand side at the top you can set the following:

- **Save File Name** - the name of the file when the image is saved.
- **Save As Type** - the file format of the saved image such as GIF or JPEG.
- **List Files of Type** - shows files of the specified type in the container below.

When you have set the file name and type, you can set any type-specific options by clicking the Options button. The Options window that appears will have a different appearance depending on the file type. The Options window for the GIF format, for example, looks like this:



And the JPEG Options window looks like this:



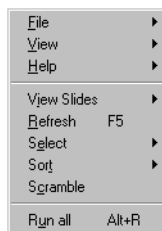
Clicking on the Help button will give you information on the various settings for a given file type. Once you are satisfied with the settings, click the Ok button. The Cancel button will close the Options window without making any changes. The Default button will set the options to default values.

Once you have the various settings the way you want them, click on the Save button in the File Save window to save the file to disk. If you wish to cancel without saving anything, click the Cancel button.

The Slideshow Window

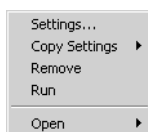
If you drag multiple files from the File Open window to the main PMView window, PMView creates a slideshow and shows the files sequentially. The main window takes on an appearance similar to the File Open Container (FOC) discussed on page 42.

If you right-click on an empty part of the Slideshow Container (SSC), you will see a popup menu almost identical to the popup menu of the FOC except for the addition of the Scramble and Run All menu items:



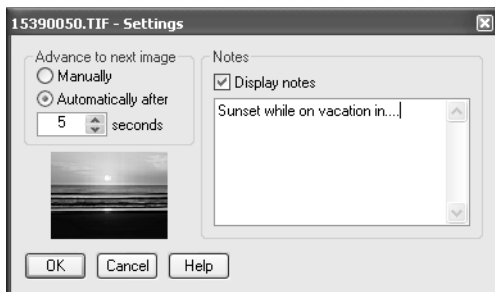
Scramble, as you might guess, scrambles the order of the files in the SSC. Run All starts the slideshow. Alt + R will also start the slideshow.

If you right-click on an image in the SSC, you will see this popup menu:



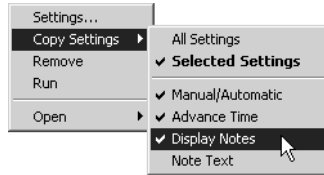
- **Settings** - displays the slideshow settings for that image:

Here you can set the advance to the next image to be manual or



to automatic after the specified time. On the right, you can type notes to be displayed when the image is displayed in the slideshow.

- **Copy Settings** - copies the settings from the current image to the selected images:

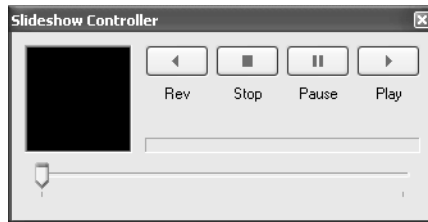


All Settings copies all of the settings.

Selected Settings copies only the settings that are checked.

- **Remove** - removes the file from the slideshow.
- **Run** - starts the slideshow with the selected image(s).
- **Open** - allows you to open the selected image(s) in a new PMView window

Creating a slideshow opens the Slideshow Controller window:



The buttons of this window behave like the buttons on a VCR:

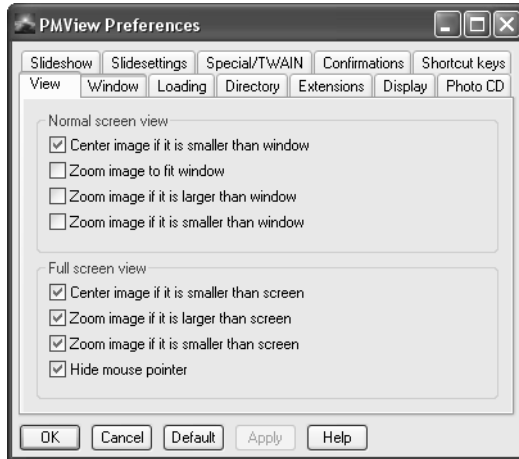
- **Rev** - plays the slideshow in reverse order.
- **Stop** - stops the slideshow if it is playing.
- **Pause** - pauses the slideshow at the current image.
- **Play** - plays the slideshow in forward order.

The slider bar shows the current image position in the slideshow and can be manipulated with the mouse to set the current position in

the slideshow. As files are loading, the progress bar above the slider bar will indicate the status of the file's loading.

The Preferences Notebook Window

The Preferences Notebook window controls the many settings for PMView:



The View page of the Preferences Notebook controls the following settings.

For normal (windowed) screen view:

- **Center image if it is smaller than window**
When set, PMView draws the image in the center of the window if the window is larger than the image. Otherwise, the image is drawn in the upper left corner.

- **Zoom image to fit window**

When set, the image is zoomed proportionally to fit the size of the PMView window, so that the larger of the horizontal or vertical dimension of the image matches that of the window.

- **Zoom image if it is larger than window** Enabling this setting will make PMView automatically zoom out (shrink) an image that is too large to fit the window. This setting is also accessible in the Zoom menu under the name Automatic Zoom Out to Fit.

- **Zoom image if it is smaller than window** Enabling this setting will make PMView automatically zoom in (enlarge) an image that is too small to fit the window. If the Window Size options on the Window page in PMView's Options Notebook are set to allow window resizing, the window will be enlarged to fit the desktop. This setting is also accessible in the Zoom menu under the name Automatic Zoom In to Fit.

For full screen view:

- **Center image if it is smaller than screen**

If the image is smaller than the screen, PMView will center it on the screen. When this setting is unchecked, PMView draws the image in the upper left corner of the screen.

- **Zoom image if it is larger than screen**

If the image is larger than the screen, PMView will zoom out so that the image will fit on the screen. As always with zooming in PMView, it is done proportionally so that there is not distortion in the image.

- **Zoom image if it is smaller than screen**

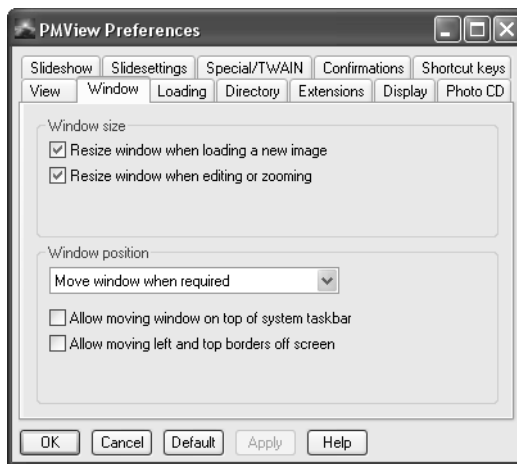
If the image is smaller than the screen, PMView will expand the image proportionally so that its larger side fits the screen.

- **Hide mouse pointer**

Hides the mouse pointer when you enter full screen mode. Note that the “Zoom image if it is larger than screen” and “Zoom image if it is smaller than screen” settings may interfere with this one. If you disable one of these settings, or both, you will

get scrollbars depending on the size of the loaded image. If this is the case, and you have a scrollbar visible, the mouse pointer will not be hidden.

The Window page of the Preferences Notebook has the following settings.



For the window size:

- **Resize window when loading a new image**

This setting causes PMView to automatically resize the window when loading a new image so that it matches the size of the image.

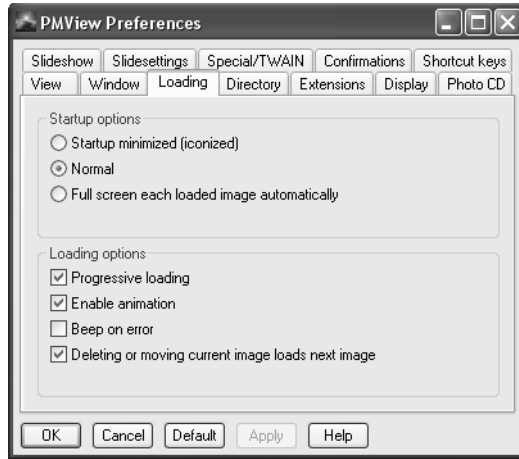
- **When editing or zooming**

If you are editing or zooming an image, PMView will automatically resize the window as appropriate. For example, if you rotate a rectangular image by 90°, the window will resize to fit the new dimensions.

For the window position:

- **Never move window**
Disables any automatic movement of the PMView window, meaning that the upper left corner of the window always remains in the same place.
- **Move window when required**
Allows PMView to change the position of the window if doing so will enable you to see more of the image.
- **Always center window on screen**
The PMView window will always be centered on the screen when it is positioned (*e.g.* by pressing F4).
- **Always move window to upper left corner**
This option will move the window to the upper left corner of the screen every time the window is positioned.
- **Always move window to upper right corner**
This option will move the window to the upper right corner of the screen every time the window is positioned.
- **Always move window to lower left corner**
This option will move the window to the upper left corner of the screen every time the window is positioned.
- **Always move window to lower right corner**
This option will move the window to the lower right corner of the screen every time the window is positioned.
- **Allow moving window on top of system taskbar**
Enables the PMView window to cover the taskbar.
- **Allow moving left and top borders off screen**
If set, PMView is free to move its top and left window borders outside the visible area of the screen. If not set, PMView will keep all borders within the screen limits.

The Loading page of the Preferences Notebook deals with PMView's actions when loading images.



For the startup options:

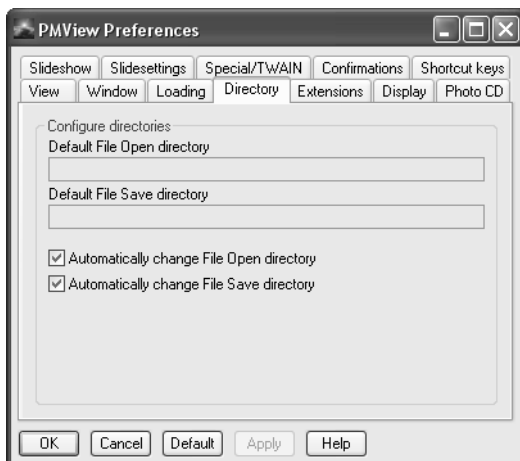
- **Startup minimized (iconized)**
Causes PMView to start up minimized.
- **Normal**
PMView starts with the size of the image that was last loaded or, if you specify an image on the command line, starts it with the size of the specified image.
- **Full screen each loaded image automatically**
PMView goes into full screen mode for each loaded image.

For the loading options:

- **Progressive loading**
With this setting PMView will clear any current image and show the new image progressively as it loads. For large format Photo-CD images (1536x1024 and above), however, the progressive display will not occur immediately since the first half of the image must be read before any display can be done.

- **Enable animation** If set, PMView will load animated files (e.g. GIF files) and display the image frames (pages) according to the scheme stored in the file. If not set, PMView will only load the first frame of the file.
- **Beep on error**
If an error is encountered when reading a file, PMView will beep and display a message in the status bar.
- **Deleting current image loads next image**
If set, PMView will automatically load the next image when the currently viewed image is deleted. Note that the Ctrl + Del shortcut key performs the same function. Thus, you may want to use Ctrl + Del instead of enabling this option.

The Directory page of the Preferences Notebook deals with settings involving default directories for PMView.



- **Default file open directory**
Set this to the directory that you would like the File Open window to start at. If you leave this blank, the most recently used directory will be the default.

- **Default file save directory**

If you would like the File Save window to open to a particular directory, specify it here. If left blank, the File Save window will open to the most recently used directory.

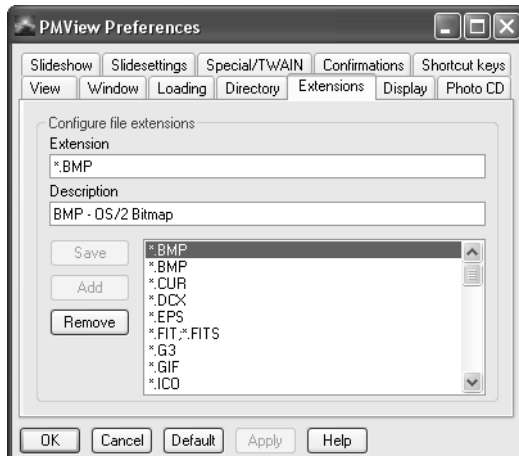
- **Automatically change File Open directory and selection**

If set, PMView will automatically change the directory in the File Open window to the directory of the currently loaded file. The selection (cursor) will be moved to the loaded file if it is present in the File Open container. If not set, PMView will use the most recently used directory, or the Default File Open directory.

- **Automatically change File Save directory and selection**

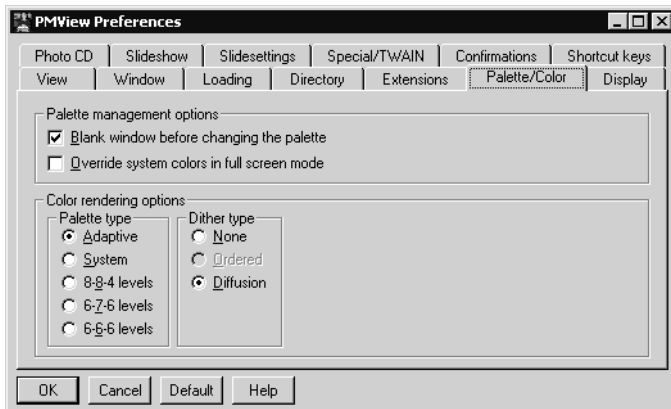
If set, PMView will automatically change the directory in the File Save window to the directory of the currently loaded file. The selection (cursor) will be moved to the loaded file if it is present in the File Open container. If not set, PMView will use the most recently used directory, or the Default File Save directory when specified.

The Extensions page of the Preferences Notebook allows you to set the file extensions and descriptions of file formats.



You can add new file extensions as well as edit or delete existing ones.

The Palette page of the Preferences Notebook is only active if you are running your display in 8-bit (256 color) mode.



- **Blank window before changing the palette**

Because successive images may require different palettes, setting this option causes PMView to blank the window before loading a new image to avoid problems with color noise. If you have a slideshow with images that all use the same palette, you will probably want to turn this option off to avoid unnecessary blanking.

- **Override system colors in Full Screen mode**

The operating system usually reserves 20 colors for itself. If you set this option, PMView will use all 256 colors in full screen mode.

Consult the online help for a detailed description of the Color Rendering settings depending on your display type.

The Display page of the Preferences Notebook has settings that can have significant impact on PMView's performance.



- **Use interpolation when scaling**

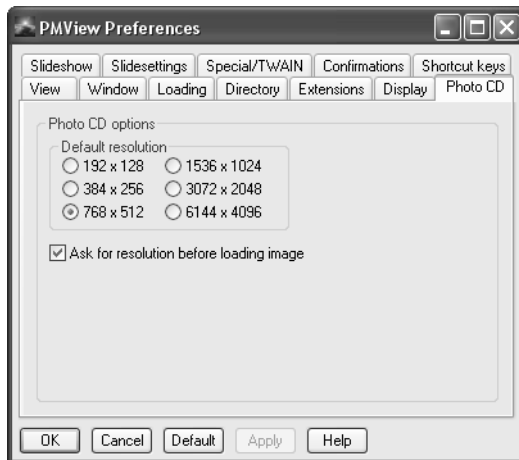
When zooming, PMView can merely replicate the pixels or it

can resample them. Replication is faster but will probably result in a blocky appearance. Resampling results in much smoother images at the expense of speed since many calculations must be made.

- **Adjust gamma**

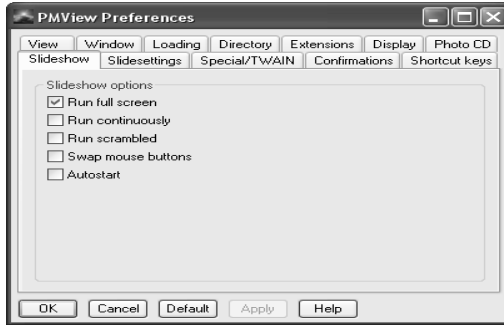
Enable this control if you need to adjust the gamma factor used when PMView draws the image to the screen. Enabling this option will make the painting to screen slower. Whether this is noticeable or not depends on your hardware. Note that you need to restart PMView before changes to this setting become effective.

The Photo CD page of the Preferences Notebook controls the resolution of Photo CD images when they are loaded.



Select the default resolution that you want. If you want to select the resolution when an image is loaded, check the “Ask for resolution before loading” box.

The Slideshow page of the Preferences Notebook is used to configure the behavior of PMView in slideshow mode.



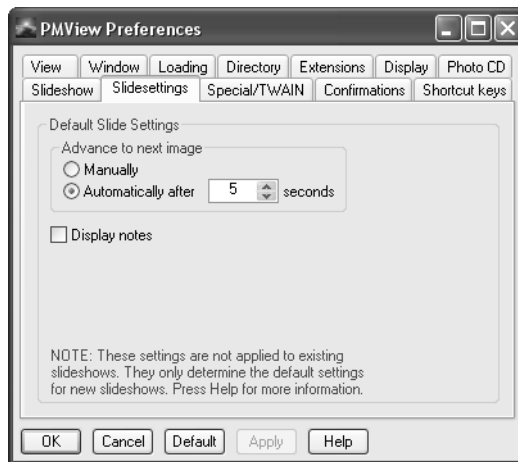
The following options can be set:

- **Run Full Screen**
Slides will be displayed in full screen mode when this option is checked. If not checked, slides will be shown in the PMView window according to the settings on the Window page of the Preferences Notebook. See page 55 for those options.
- **Run Continuously**
When set, the slideshow will loop around to the beginning when the last slide is shown. Otherwise, the slideshow ends after the last slide.
- **Run Scrambled**
This setting randomly rearranges the order of the slides before it is played. Once the slideshow is finished, the original order of the slides is restored, leaving the slideshow unmodified.
- **Swap Mouse Buttons**
Reverses the function of the mouse buttons so that the left mouse button advances the slideshow by one frame while the right button goes back one frame.

- **Autostart**

Causes a slideshow to start automatically when loaded.

The Slidesettings page of the Preferences Notebook is used to set the default settings for *new* slideshows. Existing slideshows are unaffected by this page.



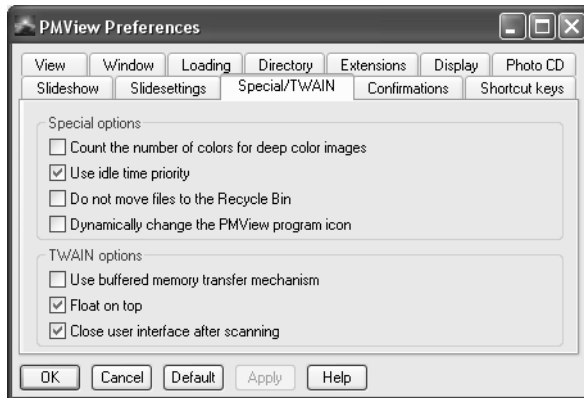
- **Advance to Next Image**

You can set the advance to be done manually or automatically after a specified amount of time.

- **Display Notes**

When set, the notes for each frame will be displayed in a small window with the slide image.

The Special/TWAIN page of the Preferences Notebook controls some special color options and TWAIN scanning options.



Under Special Options is “Count the number of colors for deep color images.” When this option is set, PMView will calculate the number of distinct color hues in a loaded image. The color count is recalculated whenever you update an image in a way that changes its color information (*e.g.* resizing with interpolation). Note that enabling this option makes PMView somewhat slower. How noticeable the slowdown is depends greatly on the way you use PMView. If you load images one at a time and you have a reasonably fast CPU, you can use this option without noticing a difference. If, on the other hand, you prefer to start a dozen simultaneous PMView sessions from the OS shell, the slowdown may be significant (up to 30%) and thus you may opt not to use this option.

Other special options include:

- **Use idle time priority** If set, PMView will use below-normal priority when it loads thumbnails and when you run batch conversions. Generally this gives smoother overall performance since PMView will easily give up CPU time to other programs that need it. However, this could potentially be a problem if you are running “CPU hogging” programs that require lots of CPU power to run. (Potential CPU hogging programs are for instance

DOS programs and older games). In this case PMView may seem to get "stuck" or process files very slowly since it is giving away all its CPU time to the hogs. If this is the case, you may want to disable idle-time loading. Otherwise, we recommend that you leave it on.

Note: This option is off by default if PMView is installed on the Windows 95/98/ME family of operating systems. It is on by default in the Windows NT/2000/XP family of operating systems.

- **Do not move files to the Recycle Bin** If set, PMView will remove files from your disk as soon as you delete them. If not set, the items you delete are moved to the Recycle Bin.

Under TWAIN Options you can control these settings for scanning:

- **Use Buffered Memory Transfer**

If set, PMView will use the more efficient TWSX_MEMORY transfer method that transfers the image in chunks in buffered memory. If not set, PMView will use the TWSX_NATIVE transfer method that transfer the complete image via a device independent bitmap (DIB). We recommend you not to disable this option unless you have a problem with the image transfer from TWAIN to PMView.

- **Float On Top**

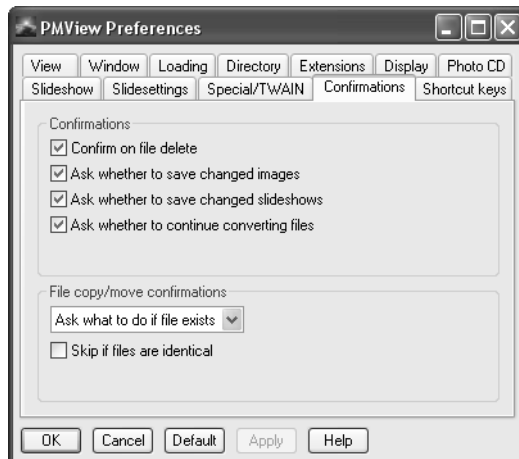
If set, the TWAIN dialog will always stay on top of PMView's main window. Note that it is up to the TWAIN driver if it respects this setting or not. The setting only specifies what parent window handle PMView passes on to the TWAIN driver. Consequently some TWAIN drivers will never stay on top of PMView's window even if this option is enabled. Other drivers may do the opposite and always stay on top. This is not a bug, it is just depends on how your TWAIN vendor decided to implement their driver.

- **Close User Interface After Scanning**

If set, the TWAIN dialog will be closed when scanning is complete. If not set, the dialog will be left open. Note that it is up to

the TWAIN driver if it respects this setting or not. Some TWAIN drivers may require that the interface is closed after scanning and will close the interface regardless of this setting. Other drivers may do the opposite and always keep the interface displayed until the user explicitly dismisses it.

The Confirmations page of the Preferences Notebook controls how PMView prompts you in various situations.



- **Confirm On File Delete**

If set, PMView will always ask you to confirm the deletion of a file. If not set, PMView will delete files without asking for confirmation.

- **Ask Whether To Save Changed Images**

If set, PMView will ask you whether you would like to save changed images before exiting or not. If not set, PMView will discard your changes to an image without asking when exiting.

- **Ask Whether To Save Changed Slideshows**

If set, PMView will ask you whether you would like to save slideshows before exiting or not. If not set, PMView will discard unsaved slideshows without asking when exiting.

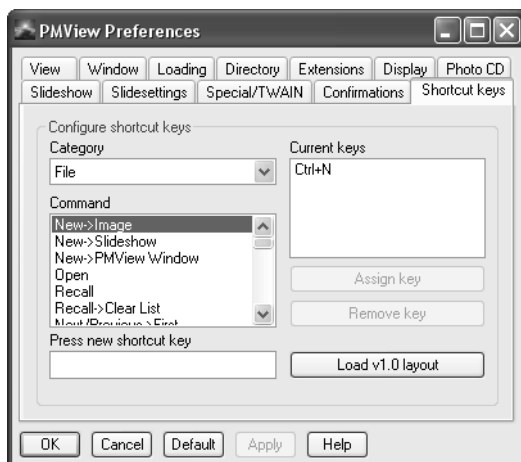
- **Ask Whether To Continue Converting Files**

If set, PMView will prompt you to abort the conversion of files. If not set, PMView will stop the conversion of files without asking when quitting PMView or closing the file open or file save window.

File Copy/Move confirmations

Here you can adjust how PMView notifies you of existing files and the actions to take when copying or moving files into the same location.

The final page of the Preferences Notebook, Shortcut Keys, allows you to set hotkey combinations for various functions.



- **Category**
Use this to select the subgroup of the command for which you would like to modify the shortcut key. All the main menu options are listed here. Note that in addition to the menu options it is also possible to configure slideshow and scrolling keys.
- **Command**
This lets you select the command for which you would like to modify the shortcut key.
- **Press New Shortcut Key**
This field lets you enter the shortcut key. First press any modifiers you want (a combination of Ctrl, Alt, and Shift), if any. Then press the key.
- **Current Keys**
Lists the current key assignments for the command currently selected in the Command list. Note that the first key listed is the one that is shown in the menus.
- **Assign Key**
Adds the key definition in the Press new shortcut key field to the list of shortcut keys. The new key is always added last in the list. If you wish to rearrange the keys in order to get a specific key first (so that it is displayed in the menus) you need to first remove any preceding keys and add them again.
- **Remove Key**
Removes the key that is currently selected in the Current keys list. If no key is selected, this button is disabled.
- **Load v1.0 Layout**
Pressing this key loads the PMView version 1.0 keyboard layout. (Use the Default button to load the PMView Pro default layout).

The Print Window

The Print window allows you to set various properties for printing an image:

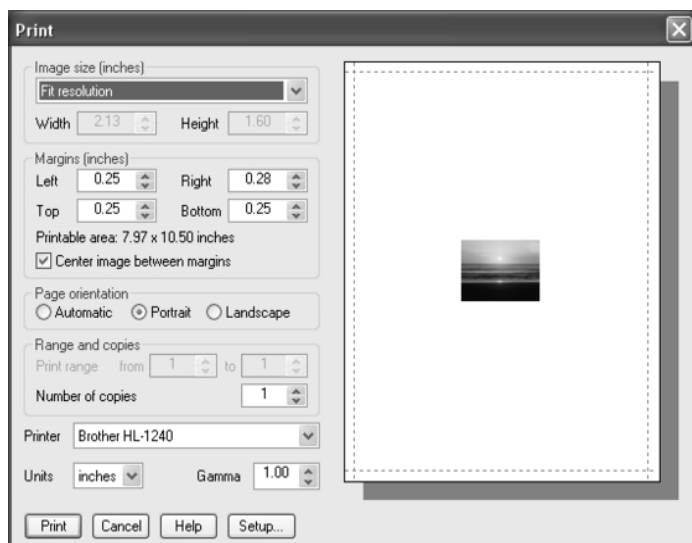


Image Size

Use the Width or Height control to set the desired size of the image. Note that PMView is able to split the image on several pages if the selected size is too large to fit on one sheet of paper. This allows you to create a large poster by gluing the pages together.

Pressing the Fit Pixels button will adjust the print size so that one picture element (pixel) on the printer corresponds to one pixel of image data. Note that this may result in incorrect image size if the resolution of the image is not the same as the resolution of the printer. (For instance, if you scanned the image with 150 dpi and

print it on a 300 dpi printer, the printed image will be only half the height and width of the original scanned image).

Pressing the Fit Resolution button will adjust the print size so that a previously scanned image will get the same size when printed as the original was. Note that this requires that a correct resolution figure is available for the image.

Pressing the Fit Page button will adjust the print size so that it fills the printable area of the page. (Note that the margins affect the size of the printable area).

Margins

Use the Left, Right, Top, and Bottom controls to set the desired margins. Note that it is possible to drag the margins in the preview window.

Printable area tells the maximum printable size. (The space between the left and right margin, and the top and bottom margin respectively).

Use Center image between margins to select whether the image should be centered or not. Note that the image is not centered on the page. It is centered between the margins. Consequently, if you want the image centered on the page, you need to make sure that the left and right margins are the same and that the top and bottom margins are the same.

Page orientation

The Page orientation controls lets you set the paper orientation. When Automatic is selected, PMView will automatically select the orientation according to the image dimensions. If the image width exceeds its height, landscape will be selected and vice versa.

Other options

Printer lets you select which printer you want to use.

The Unit selector lets you set the desired unit of measurement; pixels, millimeters, or inches.

The Gamma control lets you adjust the printer gamma. You may need this if your image printout is too bright or dark. Values below one (1) makes the image darker, values above one makes it brighter.

Use the Page control to select which page should be displayed in the preview window. Note that this control is only visible if the desired print size requires multiple pages.

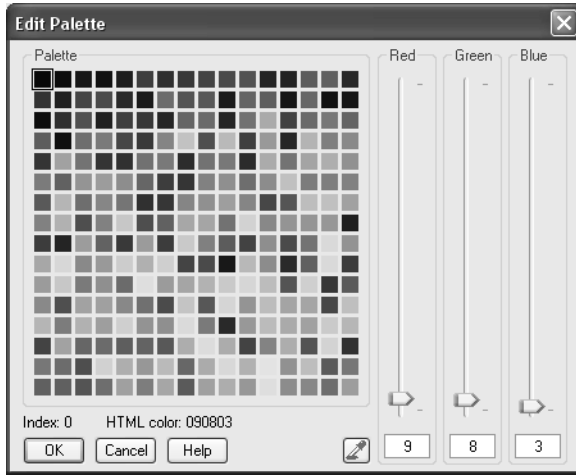
Press Print to print the file.

Press Setup... to bring up the Job Properties dialog. This lets you set paper size and other printer specific options.

Note: If you wish to print several subsequent images with a specific size you may consider adjusting the margins to the size you want and then use the Fit Page option. For example if you want your images 4" wide and 2" tall, then adjust the margins so that the Printable area indicator reads "4.00 x 2.00 inches". Then press Fit Page.

The Palette Editor

This window lets you edit each palette slot in the palette associated with the current image. Deep color images don't have a palette and the Edit Palette option on the main menu is thus disabled. In this case you can use the Convert option to convert the image to 256 colors or fewer.

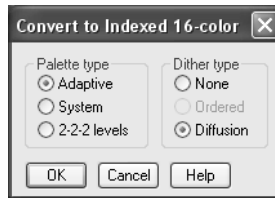


Select the color you would like to edit by clicking on the desired color slot. The slots are ordered from left to right, top to bottom with the first slot at the top left corner. The palette slots are arranged in order of frequency. The first slot contain the color that has the highest frequency (is most used) in the image. The last slot (bottom right) has the lowest frequency.

If the image has fewer than 256 colors the empty palette slots are disabled (indicated by a diagonal line pattern). These empty slots cannot be edited.

The Convert to 16 Colors Window

This window opens when you select “Indexed 16-color” from the “Convert To” sub-menu of the Color menu:



The settings are

Palette

Adaptive This will select the 16 best colors for the image. The palette generated for the image is optimized and unique for this image.

System This will only use the 16 fixed colors in the system palette. The palette for the image is fixed. Images converted to system palette will all have the same palette.

2-2-2 levels This will use a standard 2-2-2 level palette, that is, a palette with 2 intensity levels for each color component (Red,Green,Blue), thus the image will be reduced to a maximum of 8 colors.

Dither

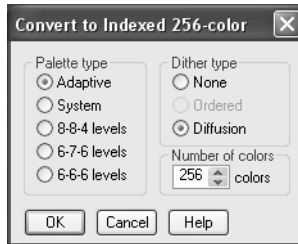
None The colors will be selected on best match basis. The color error is not compensated.

Ordered Ordered dithering is used to compensate the error. Ordered dithering can only be used with the 2-2-2 level palette.

Diffusion Floyd-Steinberg error diffusion dithering is used to compensate the color error.

The Convert to 256 Colors Window

This window opens when you select “Indexed 256-color” from the “Convert To” sub-menu of the Color menu:



The settings are

Palette

Adaptive This will select the 256 best colors for the image. The palette generated for the image is optimized and unique for this image.

System This will use the 256 fixed colors in the system palette. The palette for the image is fixed. Images converted to system palette will all have the same palette.

8-8-4 levels This will use the vaunted 3-3-2 bits fixed palette, that is, a palette with 8 intensity levels for the Red and Green components and 4 levels for Blue. This palette was used in the 2.x versions of Microsoft Windows.

6-7-6 levels This will use a 6-7-6 level fixed palette, that is, a palette with 6 intensity levels for the Red and Blue component and 7

levels for Green, thus the image will be reduced to a maximum of 252 colors.

6-6-6 levels This will use a 6-6-6 level fixed palette, that is, a palette with 6 intensity levels for each color component (Red,Green,Blue), thus the image will be reduced to a maximum of 216 colors. This palette is well suited for systems with palette manager since the Palette Manager works best if the palette contains no more than 236 color entries.

Dither

None The colors will be selected on best match basis. The color error is not compensated.

Ordered Ordered dithering is used to compensate the error. Ordered dithering can only be used with R-G-B level palettes.

Diffusion Floyd-Steinberg error diffusion dithering is used to compensate the color error.

Number of colors

If you have selected Adaptive Palette this will let you select the maximum number of distinct colors in the image.

All code for handling the file formats supported in PMView has been written completely from scratch. Therefore, we are proud to be able to provide full technical support on all of the formats below and enhance support for a specific format when needed (for instance, the TIFF format). If PMView fails to load a file that you need, please contact us so we can try to support your file's format in our next release.

OS/2 Bitmap (BMP)

General Description

The bitmap format was introduced in the early 1.1 version of OS/2. Later, Microsoft Corp. enhanced the format and included it in its best selling operating environment: Microsoft Windows 3.0. In OS/2 2.0 IBM further extended the format by adding some fields and by defining a structure for storing multiple bitmaps in the same file (this type of file is often referred to as a bitmap array). Although we have put much effort into making PMView save files with all the possible bitmap compression schemes, we discourage you from using them since many applications cannot deal with compressed OS/2 bitmaps.

BMP is the default extension for bitmap files under OS/2.

Supporting Platforms and Applications

Intel machines running OS/2.

PMView Support

PMView will read all types of OS/2 and Windows bitmaps.

The following bitmap types, bitcounts and compressions are supported:

Type	Bitcount	Compressions
IBM OS/2 1.x bitmaps	1, 2, 4, 8, 24	
IBM OS/2 1.x bitmap arrays	1, 2, 4, 8, 24	
IBM OS/2 2.x bitmaps	1, 2, 4, 8, 24	HUFFMAN_1D, RLE_4, RLE_8, RLE_24
IBM OS/2 2.x bitmap arrays	1, 2, 4, 8, 24	HUFFMAN_1D, RLE_4, RLE_8, RLE_24
Windows 3.x bitmaps	1, 2, 4, 8, 24	RLE_4, RLE_8

- HUFFMAN_1D: Modified Huffman 1D encoding. Applicable only to black & white images.
- RLE_4: Run length encoding. Applicable to images with 4 bits per pixel (16 colors or fewer)
- RLE_8: Run length encoding, 8 bits per pixel (256 colors or fewer)
- RLE_24: Run length encoding, 24 bits per pixel (deep color images)

Windows Bitmap (BMP)

General Description

The bitmap format was introduced in the early 1.1 version of OS/2. Later, Microsoft Corp. enhanced the format and included it in its best selling operating environment: Microsoft Windows 3.0. In OS/2 2.0 IBM further extended the format by adding some fields and by defining a structure for storing multiple bitmaps in the same file (this type of file is often referred to as a bitmap array). Although we have put much effort into making PMView save files with all the possible bitmap compression schemes, we discourage you from using them since many applications cannot deal with compressed Windows bitmaps.

The extension RLE is sometimes used for run length encoded bitmap files under Windows. Another common extension under Windows is DIB. BMP is the default extension for bitmap files.

Supporting Platforms and Applications

Intel machines running Microsoft Windows, MS-DOS, Windows NT.

PMView Support

PMView will read all types of OS/2 and Windows bitmaps.

The following bitmap types, bitcounts and compressions are supported:

Type	Bitcount	Compressions
IBM OS/2 1.x bitmaps	1, 2, 4, 8, 24	
IBM OS/2 1.x bitmap arrays	1, 2, 4, 8, 24	
IBM OS/2 2.x bitmaps	1, 2, 4, 8, 24	HUFFMAN_1D, RLE_4, RLE_8, RLE_24
IBM OS/2 2.x bitmap arrays	1, 2, 4, 8, 24	HUFFMAN_1D, RLE_4, RLE_8, RLE_24
Windows 3.x bitmaps	1, 2, 4, 8, 24	RLE_4, RLE_8

- HUFFMAN_1D: Modified Huffman 1D encoding. Applicable only to black & white images.
- RLE_4: Run length encoding. Applicable to images with 4 bits per pixel (16 colors or fewer)
- RLE_8: Run length encoding, 8 bits per pixel (256 colors or fewer)
- RLE_24: Run length encoding, 24 bits per pixel (deep color images)

Windows Cursor (CUR)

General Description

The CUR format is the native cursor (pointer) format under Windows. Note that the Windows cursor format is significantly different from OS/2's pointer format. Thus it is very important that you choose the right format when you save cursors.

The default extension is CUR.

Supporting Platforms and Applications

Intel machines running Microsoft Windows, MS-DOS, Windows NT.

PMView Support

PMView will read all types of Windows cursors.

DCA/Intel DCX Format (DCX)

General Description

Digital Communications Associates (DCA) and Intel have designed the DCA/Intel Communicating Applications Specification (CAS). It defines a standard, high-level programming interface for data communications applications. The DCX format is the standard file format for storing FAX images in CAS.

The default extension is DCX.

Supporting Platforms and Applications

Intel based PCs running applications supporting the DCA/Intel Communicating Applications Specification (CAS).

PMView Support

PMView supports DCX in compliance with the DCA/Intel Communicating Applications Specification Version 1.2.

Technical Information

DCX files are a series of one or more PCX files. However, since DCX is designed to store FAX data only, the following restrictions apply to DCX files:

- The image must be black and white. Shades of gray or color are not allowed.
- The width of an image must not be greater than 1,728 pixels
- The recommended maximum height of an image is 2,200 pixels

Encapsulated Postscript (EPS)

General Description

The Encapsulated PostScript format is a general-purpose format for storing text and graphics in vector or raster form.

The default extension for Encapsulated PostScript files is EPS

Supporting Platforms and Applications

This format is supported by numerous applications on a wide range of platforms.

PMView Support

PMView can only write EPS files, it cannot read them. Note that by using a program called GhostView (freely available on Internet) you can view EPS files and convert them to PBMPlus files (PBM, PPM, etc.) that are readable by PMView.

Flexible Image Transport System (FITS)

General Description

The FITS format is a general-purpose data storage format used primarily for the interchange of data between hardware platforms and software applications. FITS is the standard image data storage format for many astronomical organizations, including the astrophysics branch of NASA.

The default extension for FITS files is FIT.

Supporting Platforms and Applications

This format is supported by numerous applications on a wide range of platforms.

PMView Support

PMView reads FITS files that contain an image with a BITPIX value of 8, 16, 32, -32, or -64. The value of NAXIS must be two (2) or greater.

CCITT Group 3 Facsimile (G3)

General Description

The CCITT Group 3 Facsimile is a data file containing Group 3 FAX data in "raw" form (i.e. no header).

The default extension for CCITT Group 3 files is G3

Supporting Platforms and Applications

This format is used by numerous FAX applications on a wide range of platforms.

PMView Support

The FAX data is assumed to have a data row width of max 1728 pixels and a height of minimum 10 pixels.

Graphics Interchange Format (GIF)

General Description

The GIF format was designed by Compuserve in 1987. Since then it has become very popular for general image exchange. There are two types of GIF files; GIF87a, the original standard of 1987 and GIF89a, the revised standard of 1989 that adds features for including comments, animation and text.

The GIF format is a lossless format and is good for saving any type of image that has 256 colors (or shades of gray), or fewer.

This format is suitable as a generalized format for image exchange, though the color information limit in the format may require you to choose PNG, TIFF or JPEG instead. In general this is the best format for images with a limited number of colors, since the compression ratio is good (regarding that the format is lossless) and GIF files can be decompressed very quickly.

The default extension for GIF files is GIF

Supporting Platforms and Applications

This format is supported by numerous applications on a wide range of platforms. However, please note that due to legal restrictions recent applications may not support the GIF format. (The LZW compression used in GIF is patented by Unisys and software makers may decide not to provide GIF support in their application.)

PMView Support

PMView supports the original GIF87a specification in full. GIF89a files can also be read, but GIF89a specific information will be ignored.

Versions: 87a, 89a

Bitcount: 1..8

The GIF compression/decompression included in this software is licensed under U.S. Patent No. 4,558,302 and foreign counterparts.

The Graphics Interchange Format(c) is the copyright property of CompuServe Incorporated. GIF(sm) is a service mark property of CompuServe Incorporated.

OS/2 Icon (ICO)

General Description

The ICO format is the native icon format under OS/2 and Windows. Note that the Windows icon format is significantly different from OS/2's icon format. Thus it is very important that you choose the right format when you save icons.

The default extension is ICO.

Supporting Platforms and Applications

Intel machines running OS/2

PMView Support

PMView is able to read all types of OS/2 icons; The old "Icon" and the new "Color Icon" format can be read.

Windows Icon (ICO)

General Description

The ICO format is the native icon format under OS/2 and Windows. Note that the Windows icon format is significantly different from OS/2's icon format. Thus it is very important that you choose the right format when you save icons.

The default extension is ICO.

Supporting Platforms and Applications

Intel machines running Windows

PMView Support

PMView will read all types of Windows icons.

Electronic Arts IFF (IFF)

General Description

The IFF format was defined by Electronic Arts back in 1985. The IFF format is quick and easy to read and uncompress. However, it lacks a good compression scheme, making it unsuitable for storage of deep color images. Note that the IFF format can be used to hold a wide variety of information. An IFF file does not necessarily contain an image; it can contain sound clips, animations, text or whatever else.

The default extension is IFF, though you are likely to encounter a lot of other extensions like MP, HAM, ILBM, LBM, etc.

Supporting Platforms and Applications

This format is commonly used on Commodore Amiga computers. However, it is supported by numerous applications on a wide range of platforms.

PMView Support

PMView only supports FORM type IFF files that holds an image. The following two sub-types are supported:

- ILBM: 1..n planes
- PBM: 8 bits chunky format

The following special types of ILBM files are supported:

- HAM: 3..16 planes
- Dynamic HAM (DHAM)
- Sliced HAM (SHAM)
- Palette change (PCHG)

PMView uses information from the following chunks (if available) when reading an IFF file:

- BMHD
- CAMG
- CMAP
- SHAM
- CTBL
- PCHG
- BODY

Digital Research GEM (IMG)

General Description

The GEM format is used by applications such as Ventura Publisher, GEM Draw, GEM Scan, and GEM Paint. On the Atari ST where GEM is the standard operating environment, most graphical applications support this format.

The default extension for GEM files is IMG

Supporting Platforms and Applications

GEM, MS-DOS, Atari ST.

PMView Support

PMView supports both new and old type GEM files. Old type files supported are either 1 bit/pixel black & white, 2..4 bit/pixel color (EGA color map), or 8 bit grayscale. New type files can be 1..8 bit/pixel grayscale or 24-bit color. Note that 24-bit color images require Ventura 4.0. If you're going to import the image into an ear-

lier version of Ventura you must convert the image to black & white or grayscale before saving it.

JPEG File Interchange Format (JPG)

General Description

The JPEG format is a "lossy" format, meaning that the image you get out of decompression isn't quite identical to what you originally put in. The algorithm achieves much of its compression by exploiting known limitations of the human eye, notably the fact that small color details aren't perceived as well as small details of light-and-dark. Thus, JPEG is intended for storing images that will be looked at by humans. If you plan to machine-analyze your images, the small errors introduced by JPEG may be a problem for you, even though they are invisible to the eye. This format is excellent for general image exchange.

The extension recommended by the Joint Photographic Experts Group is JIF. Another commonly used extension is JPG, which is the default.

Supporting Platforms and Applications

This format is supported by numerous applications on a wide range of platforms.

PMView Support

Support in accordance with the Independent JPEG Group's revision 6a.

The JPEG codec included in this software is based in part on the work of the Independent JPEG Group.

OS/2 Boot Logo (LGO)

General Description

The OS/2 Boot Logo format is used under OS/2 Warp versions 3 and 4 for storing the boot logo. The boot logo is the image that is shown at first when OS/2 starts up after a re-boot.

Under Warp 3, the size of the boot logo image is 640x400 pixels. The VGA resolution used at boot time is 640x480. Warp 3 reserves 80 lines at the bottom of the screen for showing copyright information. This space cannot be used and thus the size of the boot logo must be 640x400. (Using a 640x480 boot logo under Warp 3 will result in an OS/2 TRAP at system startup.) Warp 4 does not reserve this space and a full-screen 640x480 boot logo may be used under Warp 4.

The boot logo file is located on the root of the OS/2 boot drive. The name of the file is OS2LOGO and by default the file has the system attributes hidden, system, and read-only set.

The default extension is LGO.

Supporting Platforms and Applications

Intel machines running OS/2 version 3.x and above

PMView Support

PMView support the boot logo format of Warp 3.x and Warp 4.x. When saving files in the OS/2 Boot Logo format, PMView will automatically resize the image to the correct size; 640x400 or 640x480 depending on the selected format). Interpolation is used when resizing and the aspect ratio is maintained. The colors will be reduced to the set of 16 fixed colors of the EGA palette.

MacPaint (MAC)

General Description

MacPaint is the native format for MacPaint, a drawing program for the Apple MacIntosh.

The default extension is MAC.

Supporting Platforms and Applications

MacIntosh. This format is supported by many applications on various formats. However, the format is monochrome only and requires the image to be of fixed size.

PMView Support

PMView supports MacPaint versions 0 and 2. However, PMView does not use the version number when checking if the file is a MacPaint file or not, so as long as the image data in the MacPaint file is the same as in versions 0 and 2, the image can be read. When saving files in the MacPaint format, PMView will automatically resize the image to the correct size (576x720). Interpolation is used when resizing and the aspect ratio is maintained.

Note that PMView separately reads and handles the information in a MacBinary header, if available. The MacBinary header is not part of the MacPaint format and PMView will not write MacBinary headers when saving files. (A MacBinary header is a structure that allows MacIntosh programs and data to be transferred outside the MacIntosh environment and back.)

Technical Information

MacPaint is a monochrome, black & white format that uses pack-bits

encoding. The size of MacPaint images is fixed: 576 x 720 pixels.

Microsoft Paint (MSP)

General Description

MSP is the native format for Windows Paint, a drawing program found in the early 1.0 and 2.0 versions of Microsoft Windows. In Windows 3.0 this program was replaced by Windows Paintbrush which writes Windows Bitmaps (BMP) by default, thus rendering MSP obsolete.

The default extension is MSP.

Supporting Platforms and Applications

MS-DOS, Microsoft Paint. The format is a simple monochrome format that was in wider use in the early days of Microsoft Windows. Today the MSP format is obsolete.

PMView Support

PMView supports MSP versions 1 and 2.

Technical Information

MSP is a monochrome, black/white format that uses a variant of run-length encoding.

Kodak Photo CD (PCD)

General Description

Kodak Photo-CD allows you to have conventional photographs converted to Kodak's proprietary CD-ROM format. Not all CD-ROM drives can access Photo-CDs. You might want to contact Kodak for a full list of those that can. Each PCD file contains five scans of the same image at the resolutions listed below. Photo-CD files reside in the \PHOTO_CD\IMAGES\ directory on the CD-ROM and are named IMGxxxx.PCD, where xxxx is a four digit number ranging from 0001 to the number of images on the disk.

A sixth resolution (6144x4096) may be available on Photo-CD PRO disks. This is an extension to the standard, and resides in a different directory on the disk. PMView will use the information in \PHOTO_CD\IPE\IMGxxxx\64BASE\INFO.IC when reading this resolution.

PMView Support

All five standard image resolutions and orientations are supported. When needed, the images will automatically be rotated without any extra memory overhead during decoding. The Photo-CD PRO extension (64 Base) is also supported.

PMView will prompt you for the desired resolution before loading an image. A default resolution can also be specified in the options notebook.

Thumbnails will be loaded from \PHOTO_CD\OVERVIEW.PCD if it is available. An option for automatically loading/showing the startup file \PHOTO_CD\STARTUP.PCD is not available. However, if required, it can be viewed simply by changing the directory.

Technical Information

Standard Photo CD image resolutions and memory needed for decoding:

Resolution	Memory Needed
192 x 128	73,728 bytes
384 x 256	294,912 bytes
768 x 512	1,179,648 byte
1536 x 1024	4,784,128 bytes
3072 x 2048	19,070,976 bytes
6144 x 4096	75,694,080 bytes

The specified amount of memory needed for decoding includes the size needed for the huffman tables and may therefore differ from the size reported by other programs.

ZSoft Paintbrush Format (PCX)

General Description

PCX files are created by ZSoft's PC Paintbrush, one of the most popular PC drawing tools.

The default extension is PCX.

Supporting Platforms and Applications

This format is supported by numerous applications on a wide range of platforms.

PMView Support

The following PCX revisions are supported:

- Version 2.5 of PC Paintbrush
- Version 2.8 with or w/o palette
- Version 3.0
- Version 5.0 including 24-bit PCX

PMView is not dependent of the version number tag, so in practice PMView should be able to display any PCX file conforming to the technical specs below. The version list above is provided as a guideline only.

Technical Information

Images up to 8-bit color depth [bits*planes <= 8]:

1, 2, 4 or 8 bits
1, 2 or 4 planes

Support for 24-bit images (PCX rev 5.0):

3 planes
8 bits

PCX files created for an EGA screen may lack a color map. When reading such files PMView will use a default EGA palette. (If the image shows up as totally black in another application, one possible problem is that the image does not have a color map and the application is not able to provide a default color map.)

PC Paint/Pictor (PIC)

General Description

PIC files are created by PC Paint/Pictor (not PC Paintbrush) and are used by Grasp, among others.

The default extension is PIC. Note! This extension is used by a number of applications to mean widely different things. If PMView cannot read your file with PIC extension, you can assume that it isn't a PC Paint/Pictor file. For instance, PMView will not read Lotus 1-2-3 PIC files (these are vector graphics, not bitmaps).

Supporting Platforms and Applications

MS-DOS. PC Paint/Pictor, Grasp, and many others.

PMView Support

In conformance with the PIC file specifications PMView will be able to display any PIC file complying to the plane- and bitcounts below.

1..8 planes, 1..8 bits per pixel (2..256 colors)
3 planes, 8 bits per pixel (16M colors)

Currently PMView does not support the following new modes, however they will be supported in a later version of PMView:

1 plane, 16 bits per pixel (65k colors)
1 plane, 24 bits per pixel (16M colors)

PIC files created for an EGA screen may lack a color map. When reading such files PMView will use a default EGA palette. (If the image shows up as totally black in another application, one possible

problem is that the image does not have a color map and the application is not able to provide a default color map.)

Bio-Rad PIC (PIC)

General Description

The Bio-Rad file format is used by software from Bio-Rad Microscience Ltd.

The default extension for Bio-Rad files is PIC.

PMView Support

This version of PMView only reads grayscale Bio-Rad PIC files that have eight bits per pixel.

Softimage Picture (PIC)

General Description

The Softimage picture file format (PIC) was designed by Softimage Co. for use with its line of 3-D animation software. A Softimage PIC file is capable of storing true color data and alpha channel for a frame of an animation. (Note that this format is not capable of holding a complete animation, it is only intended to hold one single frame of an animation).

The default extension is PIC.

PMView Support

This version of PMView reads and writes standard Softimage picture files with eight bits per channel.

PBMPlus Portable Bitmap (PBM)

General Description

PBMPlus files are created by Jef Poskanzer's PBMPlus Portable Bitmap Utilities. PBMPlus uses three different file types. These are the Portable Bitmap (PBM), Portable Graymap (PGM), and Portable Pixmap (PPM) formats. PBM can store monochrome (black & white) bitmaps only. PGM additionally stores grayscale bitmaps, and PPM can store color bitmaps. There is also a fourth format; Portable Anymap (PNM). PNM is not a different file format in itself, but a file of type PNM can hold any of the three PBMPlus file types listed above.

The default extension is PBM.

Supporting Platforms and Applications

PBMPlus files are common under UNIX and on Intel-based PCs.

PMView Support

In conformance with Jef Poskanzer's specifications of 1990. The full specification is included below.

Technical Information

The portable bitmap format is a lowest common denominator monochrome file format. It was originally designed to make it reasonable to mail bitmaps between different types of machines using

the typical stupid network mailers we have today. Now it serves as the common language of a large family of bitmap conversion filters. The definition is as follows:

- A "magic number" for identifying the file type. A pbm file's magic number is the two characters "P1".
- Whitespace (blanks, TABs, CRs, LFs).
- A width, formatted as ASCII characters in decimal.
- Whitespace.
- A height, again in ASCII decimal.
- Whitespace.
- Width * height bits, each either '1' or '0', starting at the top-left corner of the bitmap, proceeding in normal English reading order.
- The character '1' means black, '0' means white.
- Whitespace in the bits section is ignored.
- Characters from a "#" to the next end-of-line are ignored (comments).
- No line should be longer than 70 characters.

Here is an example of a small bitmap in this format:

```
P1
# feep.pbm
24 7
00000000000000000000000000
011110011110011110011110
010000010000010000010010
011100011100011100011110
010000010000010000010000
010000011110011110010000
00000000000000000000000000
```

Programs that read this format should be as lenient as possible, accepting anything that looks remotely like a bitmap.

There is also a variant on the format, available by saving the image with the RAWBITS option. This variant is different in the following ways:

- The "magic number" is "P4" instead of "P1".
- The bits are stored eight per byte, high bit first low bit last.
- No whitespace is allowed in the bits section, and only a single character of whitespace (typically a newline) is allowed after the height.
- The files are eight times smaller and many times faster to read and write.

PBMPlus Portable Graymap (PGM)

General Description

PBMPlus files are created by Jef Poskanzer's PBMPlus Portable Bitmap Utilities. PBMPlus uses three different file types. These are the Portable Bitmap (PBM), Portable Graymap (PGM), and Portable Pixmap (PPM) formats. PBM can store monochrome (black & white) bitmaps only. PGM additionally stores grayscale bitmaps, and PPM can store color bitmaps. There is also a fourth format; Portable Anymap (PNM). PNM is not a different file format in itself, but a file of type PNM can hold any of the three PBMPlus file types listed above.

The default extension is PGM.

Supporting Platforms and Applications

PBMPlus files are common under UNIX and on Intel-based PCs.

PMView Support

In conformance with Jef Poskanzer's specifications of 1990. The full specification is included below.

Technical Information

The portable graymap format is a lowest common denominator grayscale file format. The definition is as follows:

- A "magic number" for identifying the file type. A pgm file's magic number is the two characters "P2".
- Whitespace (blanks, TABs, CRs, LFs).
- A width, formatted as ASCII characters in decimal.
- Whitespace.
- A height, again in ASCII decimal.
- Whitespace.
- The maximum gray value, again in ASCII decimal.
- Whitespace.
- Width * height gray values, each in ASCII decimal, between 0 and the specified maximum value, separated by whitespace, starting at the top- left corner of the graymap, proceeding in normal English reading order. A value of 0 means black, and the maximum value means white.
- Characters from a "#" to the next end-of-line are ignored (comments).
- No line should be longer than 70 characters.

Here is an example of a small graymap in this format:

```
P2
# feep.pgm
24 7
15
```

```
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 3 3 3 3 0 0 7 7 7 7 0 0 11 11 11 11 0 0 15 15 15 0
0 3 0 0 0 0 0 7 0 0 0 0 0 0 11 0 0 0 0 0 15 0 0 15 0
0 3 3 3 0 0 0 7 7 7 0 0 0 11 11 11 0 0 0 15 15 15 15 0
0 3 0 0 0 0 0 7 0 0 0 0 0 0 11 0 0 0 0 0 15 0 0 0 0
0 3 0 0 0 0 0 7 7 7 7 0 0 11 11 11 11 0 0 15 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

Programs that read this format should be as lenient as possible, accepting anything that looks remotely like a graymap.

There is also a variant on the format, available by saving the image with the RAWBITS option. This variant is different in the following ways:

- The "magic number" is "P5" instead of "P2".
- The gray values are stored as plain bytes, instead of ASCII decimal.
- No whitespace is allowed in the grays section, and only a single character of whitespace (typically a newline) is allowed after the maxval.
- The files are smaller and many times faster to read and write.

Note that this raw format can only be used for maxvals smaller than or equal to 255.

PBMPlus Portable Pixmap (PPM)

General Description

PBMPlus files are created by Jef Poskanzer's PBMPlus Portable Bitmap Utilities. PBMPlus uses three different file types. These are the Portable Bitmap (PBM), Portable Graymap (PGM), and Porta-

ble Pixmap (PPM) formats. PBM can store monochrome (black & white) bitmaps only. PGM additionally stores grayscale bitmaps, and PPM can store color bitmaps. There is also a fourth format; Portable Anymap (PNM). PNM is not a different file format in itself, but a file of type PNM can hold any of the three PBMPlus file types listed above.

The default extension is PPM.

Supporting Platforms and Applications

PBMPlus files are common under UNIX and on Intel-based PCs.

PMView Support

In conformance with Jef Poskanzer's specifications of 1990. The full specification is included below.

Technical Information

The portable pixmap format is a lowest common denominator color image file format. The definition is as follows:

- A "magic number" for identifying the file type. A ppm file's magic number is the two characters "P3".
- Whitespace (blanks, TABs, CRs, LFs).
- A width, formatted as ASCII characters in decimal.
- Whitespace.
- A height, again in ASCII decimal.
- Whitespace.
- The maximum color-component value, again in ASCII decimal.
- Whitespace.
- Width * height pixels, each three ASCII decimal values between 0 and the specified maximum value, starting at the top-

left corner of the pixmap, proceeding in normal English reading order. The three values for each pixel represent red, green, and blue, respectively; a value of 0 means that color is off, and the maximum value means that color is maxed out.

- Characters from a "#" to the next end-of-line are ignored (comments).
- No line should be longer than 70 characters.

Here is an example of a small pixmap in this format:

```
P3
# feep.ppm
4 4
15
0 0 0  0 0 0  0 0 0  15 0 15
0 0 0  0 15 7  0 0 0  0 0 0
0 0 0  0 0 0  0 15 7  0 0 0
15 0 15  0 0 0  0 0 0  0 0 0
```

Programs that read this format should be as lenient as possible, accepting anything that looks remotely like a pixmap.

There is also a variant on the format, available by saving the image with the RAWBITS option. This variant is different in the following ways:

- The "magic number" is "P6" instead of "P3".
- The pixel values are stored as plain bytes, instead of ASCII decimal.
- Whitespace is not allowed in the pixels area, and only a single character of whitespace (typically a newline) is allowed after the maxval.
- The files are smaller and many times faster to read and write.

Note that this raw format can only be used for maxvals smaller than or equal to 255.

PBMPLus Portable Anymap (PNM)

General Description

PBMPlus files are created by Jef Poskanzer's PBMPlus Portable Bitmap Utilities. PBMPlus uses three different file types. These are the Portable Bitmap (PBM), Portable Graymap (PGM), and Portable Pixmap (PPM) formats. PBM can store monochrome (black & white) bitmaps only. PGM additionally stores grayscale bitmaps, and PPM can store color bitmaps. There is also a fourth format; Portable Anymap (PNM). PNM is not a different file format in itself, but a file of type PNM can hold any of the three PBMPlus file types listed above.

The default extension is PNM.

Supporting Platforms and Applications

PBMPlus files are common under UNIX and on Intel-based PCs.

PMView Support

In conformance with Jef Poskanzer's specifications of 1990. The full specification is included below.

Technical Information

A PNM file can hold one of the three PBMPlus formats below.

- Portable Bitmap (PBM)
- Portable Graymap (PGM)

- Portable Pixmap (PPM)

Portable Network Graphics (PNG)

General Description

The PNG format is intended to provide a portable, legally unencumbered, well-compressed, well-specified standard for lossless bitmapped image files.

PNG is highly recommended as a generalized format for image exchange.

The default extension is PNG.

Supporting Platforms and Applications

This format is supported by numerous applications on a wide range of platforms.

PMView Support

PMView supports the PNG format in full, according to PNG Specification Version 0.96 (11 Mar, 1996). We have coded all the routines from scratch and optimized the code for speed under OS/2, thus PMView does not use the public PNG-library.

Color Type and Bit Depth

Bit Depth	Interpretation
0 1,2,4,8,16	Grayscale images
2 8,16	RGB deep color images
3 1,2,4,8	Colormapped images
4 8,16	RGB deep color images with alpha channel
6 8,16	Grayscale images with alpha channel

Compression Type

0 Deflate/inflate compression with 32K sliding window

Filter Type

0 Adaptive filtering with five basic filter types

Interlace Type

0 No interlace

1 Adam7 interlace

Adobe Photoshop Document (PSD)

General Description

The PSD format is the native file format of Adobe Photoshop.

The default extension is PSD.

Supporting Platforms and Applications

Adobe Photoshop and numerous applications on the Windows and MacIntosh platforms.

PMView Support

Supported bit counts are 1, 8, and 16. If the bit count is 1, the image is assumed to be monochrome (Color mode = 0).

Compression Type

- 0 No compression
- 1 MacIntosh PackBits encoding

Color modes

0	Monochrome
1	Grayscale
2	Indexed color
3	RGB color
4	CMYK color
7	Multichannel
8	Duotone
9	L*a*b* color

OS/2 Pointer (PTR)

General Description

The PTR format is the native pointer format under OS/2. Note that the Windows cursor format is significantly different from OS/2's pointer format. Thus it is very important that you choose the right format when you save pointers.

The default extension is PTR.

Supporting Platforms and Applications

Intel machines running OS/2

PMView Support

PMView is able to read all types of OS/2 pointers; The old "Pointer" and the new "Color Pointer" format can be read.

Sun Raster (RAS)

General Description

The Sun Raster format is the native bitmap format on the Sun UNIX platforms. It is a simple bitmap format with wide distribution, particularly in the UNIX world.

The default extension for Sun Raster files is RAS

Supporting Platforms and Applications

Sun OS and many UNIX based applications.

PMView Support

PMView can read Sun Raster files with 1..32 bits. Supported file types are Old (00h), Standard (01h), Byte-encoded (RLE) (02h), and RGB format (03h).

Compuserve RLE (RLE)

General Description

The Run Length Encoded (RLE) graphics file format is a simple ASCII based monochrome format that is used on Compuserve.

The default extension for Compuserve RLE files is RLE.

Supporting Platforms and Applications

Run Length Encoded graphics files are used on Compuserve.

PMView Support

PMView supports Medium (128x96) and High (256x192) resolution RLE files.

Utah RLE (RLE)

General Description

The Utah RLE format was developed by Spencer Thomas at the University of Utah Department of Computer Science. The first version appeared around 1983. The Utah RLE format was developed

mainly to support the Utah Raster Toolkit, which is widely distributed in source form on the Internet.

The default extension for Utah RLE files is RLE.

Supporting Platforms and Applications

Utah Raster Toolkit and many other graphics utilities, mainly under UNIX.

PMView Support

PMView supports the following types of Utah RLE files:

- GRAYSCALE 8 bits, no colormap
- MAPPEDGRAY 8 bits, 1 channel colormap
- PSEUDOCOLOR 8 bits, 3 channel colormap
- TRUECOLOR 24 bits, 3 channel colormap
- DIRECTCOLOR 24 bits, no colormap

Structured Fax Format (SFF)

General Description

The Structured Fax File format is the normative file format for storing Group 3 fax documents in an environment based on the COMMON-ISDN-API (CAPI) standard.

Supporting Platforms and Applications

This format is mainly used for transfer of fax documents in Microsoft Windows applications.

PMView Support

PMView will read and write SFF files in accordance with the COMMON-ISDN-API (CAPI) version 2.0 specification (4th edition).

Seattle Film Works (SFW)

General Description

The Seattle FilmWorks file format is used for images created by Seattle FilmWorks Inc., a film processing company located in Seattle, WA.

The default extension for Seattle FilmWorks files is SFW.

Supporting Platforms and Applications

Seattle FilmWorks' PhotoWorks software on Microsoft Windows and Apple MacIntosh platforms.

PMView Support

PMView reads Seattle FilmWorks files using modified JPEG data (SFW94a). The older undocumented SFW93a format is not supported.

SGI Image File (SGI)

General Description

The SGI image file format is part of the SGI image library found on all Silicon Graphics machines. SGI image files may store black & white (.BW extension), color RGB (.RGB extension), or color RGB with alpha channel (.RGBA extension) images. SGI image files may have the generic extension.SGI as well.

The default extension for SGI Image files is SGI.

Supporting Platforms and Applications

SGI graphics software.

PMView Support

PMView supports the following types of SGI files:

Method of Storage	Verbatim (00h), RLE (01h)
Bytes per color channel	1 or 2
Number of planes	1 or 3 (any number of planes >= 1 is accepted)
Color map type	Normal (00h), Dithered (01h), or Screen (02h)

PMView Slideshow File (SHW)

General Description

This is the format of PMView slideshows.

The default extension is SHW.

Supporting Platforms and Applications

This format is native to PMView.

PMView Support

PMView will read files that have been generated by PMView (saved by PMView) or files that have been edited with a standard ASCII editor.

Technical Information

A PMView slideshow file consists of a file header and one or more image headers.

File Header

```
PMView SlideShow
BeginShow
.
[Image Header(s)]
.
EndShow
```

Image Header

BeginImage

.

[Image Statement(s)]

.

EndImage

Image Statements

FileName	Full filename + path
UseTimer	[Yes No]
Display- Time	Time to display (in seconds)
ShowInfo	[Yes No]
Information	Notes text

Example of a slideshow file:

PMView SlideShow

BeginShow

BeginImage

FileName D:\ss\image1.jif

ShowInfo Yes

Information 'Demo slideshow

EndImage

BeginImage

FileName D:\ss\image2.jif

UseTimer Yes

DisplayTime 2

EndImage

BeginImage

FileName D:\ss\image3.jif

UseTimer Yes

EndImage
EndShow

In this example the note "Demo slideshow" will be displayed with the first image (image1.jif). The timer is not used for the first image, the user must manually continue. The second image (image2.jif) uses the timer and will display for 2 seconds. The third image also uses the timer and will display the default time; 5 seconds.

Truevision Targa File (TGA)

General Description

In addition to developing the famous Truevision Targa boards, Truevision Inc. also have come up with a specification for a high-end file format that will support images suitable for display on Targa hardware. The Targa format, or TGA, supports images of any dimensions with between 1 and 32 bits of color. While the Targa format originated with Truevision's hardware, it has migrated to many other applications. It's probably the most universally supported 24-bit file format for PC applications. Unlike TIFF, for example, it's subject to relatively few variations. Software that reads Targa files should be able to read all Targa files.

The default extension is TGA.

Supporting Platforms and Applications

This format is supported by numerous applications on a wide range of platforms.

PMView Support

The Targa file format recognizes over a dozen subfile formats, some of which are more widely used than others. We have chosen to only support the formats that are actually used for general image exchange, that is the formats specified in the official Truevision TGA File Format Specification, available from Truevision Inc. on request. PMView supports the following most popular versions of the Targa format: 1, 2, 3, 9, 10, and 11. Again, if PMView fails to load a file that you need, please contact us so we can try to support your file's format in our next release.

Supported Targa file subformats:

1 is uncompressed, color-mapped images with 16, 24, or 32-bit palette entries

- 2 is uncompressed RGB images with 15, 16, and 24-bit support
- 3 is uncompressed grayscale 8-bit (256 shades) support
- 9 is RLE color-mapped images with 16, 24, or 32-bit palette entries
- 10 is RLE RGB with 15, 16, and 24-bit support
- 11 is compressed grayscale 8-bit (256 shades) support

Supported Targa file descriptors:

- Image orientation: Top, Bottom, Left, Right
- Raster format: Non-interlaced, 2-pass interlaced, 4-pass interlaced

Targa and TGA are registered trademarks of Truevision Inc.

Tagged Interchange File Format (TIF)

General Description

This format is suitable as a generalized format for cross platform image exchange since applications for processing TIFF images are available on most platforms. Beware! Many applications only handle a small subset of the formats specified in the TIFF specs. Don't take for granted that an application will be able to read the files you save!

The default extension is TIF.

Supporting Platforms and Applications

This format is supported by numerous applications on a wide range of platforms.

PMView Support

PMView provides full Baseline support conforming with the TIFF 6.0 specification and supports the following TIFF Extensions:

- CCITT bilevel encodings (RLE, FAX3, FAX4)
- LZW compression and differencing predictor
- New JPEG compression (JPEG-in-TIFF)
- Deflate compression (ZIP-in-TIFF)
- Tiled images
- CMYK images
- RGB image colorimetry
- YCbCr color
- L*A*B* color
- Orientation

WAP Bitmap (WBMP)

The TIFF LZW compression/decompression included in this software is licensed under U.S. Patent No. 4,558,302 and foreign counterparts.

TIFF(tm) is a trademark of Aldus Corporation.

WAP Bitmap (WBMP)

General Description

The Wireless Application Protocol Bitmap Format (WBMP) is designed for use with applications that operate over wireless communication networks. The WBMP format is commonly used in mobile phones (WAP phones) and enables graphical information to be sent to the handset..

The default extension is WBMP.

PMView Support

PMView supports reading and writing of Type 0 WBMP files in accordance with the Wireless Application Environment Specification Version 1.2 (November 1999).

Wordperfect Graphics (WPG)

General Description

The WordPerfect Graphics (WPG) file format is a creation of WordPerfect Corporation specifically for use with its line of software. WPG files are capable of storing both bitmap and vector data

and may have up to 256 colors. It is also possible to store Encapsulated Postscript code in a WPG file.

The default extension is WPG.

Supporting Platforms and Applications

WordPerfect and other word-processing programs under MS-DOS, Microsoft Windows, MacIntosh, and UNIX

PMView Support

PMView supports WPG versions 5.x. This version of PMView only reads files that contain raster graphics. WPG files with vector graphics or PostScript cannot be read in this version of PMView.

X Bitmap (XBM)

General Description

XBM is a simple monochrome text based bitmap format that is primarily intended for storage of cursor and icon bitmaps for use in the X graphics user interface. The data is formatted and stored as a C language file and can directly be compiled into a software program.

Supporting Platforms and Applications

This format is popular under UNIX for storage of icons.

PMView Support

PMView reads X10 and X11 X Window Bitmaps. The X10 format is obsolete and consequently PMView will only save XBM files in the X11 format.

When reading XBM files, PMView scans the first 20 rows and seeks for the width, height, and image data. PMView tries to find the following definitions:

```
#define FOO_width  
#define FOO_height  
static char FOO_bits[] = {
```

where FOO is the name of the bitmap.

If PMView cannot find these definitions within the 20 first rows of the file, it will stop searching and not accept the file as a valid XBM file (though it is still possible that it is valid). The file may, for instance, have more than 20 lines of C language source code before the definitions and bitmap data. If this is the case you can edit the file with a standard text editor and move the bitmap definition to the beginning of the file in order to make PMView recognize it as an XBM file.

X Pixmap (XPM)

General Description

XPM is a text based bitmap format that is primarily intended for storage of color cursor and icon bitmaps for use in the X graphics user interface. The data is formatted and stored as a C language file and can directly be compiled into a software program.

Supporting Platforms and Applications

This format is popular under UNIX for storage of color icon bitmaps.

PMView Support

PMView supports XPM versions 1, 2, and 3. Colors may be defined by name or by RGB value (4, 8, or 12-bit/component). HSV is currently not supported. XPM version 2 and 3 files begin with a comment (usually `/* XPM2 C */` for version 2 files and `/* XPM */` for version 3 files).

XPM1 notes

When reading XPM1 (version 1) files, PMView scans the first 20 rows and seeks for the width, height, color count, and characters per pixel definitions. PMView uses the following definitions when reading XPM1 files:

```
#define FOO_width
#define FOO_height
#define FOO_ncolors
#define FOO_chars_per_pixel
static char * FOO_colors[] = { ... }
static char * FOO_pixels[] = { ... }
```

where FOO is the name of the pixmap.

If PMView cannot find the first four definitions within the 20 first rows of the file, it will stop searching and not accept the file as a valid XPM1 file (though it is still possible that it is valid). The file may, for instance, have more than 20 lines of C language source code before the definitions and bitmap data. If this is the case you can edit the file with a standard text editor and move the bitmap definition to the beginning of the file in order to make PMView recognize it as an XPM1 file.

X Window Dump (XWD)

General Description

The XWD (X Window Dump) format is used specifically to store screen dumps created by the X Window System.

The default extension is XWD.

Supporting Platforms and Applications

UNIX X Window.

PMView Support

There are currently 6 different image classes; StaticGray, Gray-Scale, StaticColor, PseudoColor, TrueColor, and DirectColor. PMView is able to read all these types. Supported pixmap formats are XYBitmap, XYPixmap and ZPixmap. For XYPixmaps and ZPixmaps PMView accepts a depth of 1 to 16 pixels for grayscale and colormapped XWDs, and 1..32 pixels for color XWDs. PMView handles both chunky (ZPixmap) and planar data (XYPixmap). PMView reads X10 and X11 X Window dump files.

Field	PMView Support
File Version	X10 (06h), X11 (07h)
PixmapFormat	XYBitmap (00h), XYPixmap (01h), and ZPixmap (02h)
PixmapDepth	1..32 bits
BitsPerPixel	1..32 bits

Field	PMView Support
BitmapUnit	8..256 bits
VisualClass	StaticGray (00h), Gray-Scale (01h), StaticColor (02h),PseudoColor (03h), TrueColor (04h), and DirectColor (05h)

UU-encoded and XX-encoded Files (UUE and XxE)

If PMView detects a file that has been UUEncoded or XXEncoded it will automatically decode the file. The decoding will be done transparently, thus it does not require a separate reading or processing step. This means that encoded files can also be displayed progressively if the graphic format in the file allows it (e.g. GIF, JFIF, PNG, etc.).

Base64-encoded Files (MIME)

If PMView detects a file that has been Base64-encoded it will automatically decode the file. The decoding will be done transparently, thus it does not require a separate reading or processing step. This means that encoded files can also be displayed progressively if the graphic format in the file allows it (e.g. GIF, JFIF, PNG, etc.).

The Base64 encoding scheme is used by MIME aware software. A MIME message can contain multiple files. However, PMView only reads the first Base64 encoded image in the file. If the file contains several images you need to use a text editor and split the file into several files if you want PMView to read the files. In this case it is

probably more convenient to use a MIME reader that is able to automatically extract all the parts of the message for you.

Multi-page File Formats

PMView can read multi-page files. Multi-page files are files that can hold two or more images in the same file. Among the formats that can be handled by PMView, the following can hold multiple images:

- OS/2 Bitmap (BMP)...
- Windows Cursor (CUR)...
- DCA/Intel DCX (DCX)...
- Graphics Interchange Format (GIF)...
- OS/2 Icon (ICO)...
- Windows Icon (ICO)...
- OS/2 Pointer (PTR)...
- Tagged Interchange File Format (TIF)...

Please note that this version of PMView is not able to save files with multiple pages. Only the currently viewed page will be saved. However, we are planning to add support for writing multiple pages. If you have any suggestions for this feature, please let us know.

Automatic File Recovery

Files that have been electronically transferred (e.g. via Internet) may have an unknown header that was added by one of the pro-

grams that the sender used when he created and/or transferred the file. The extra bytes at the beginning of the file makes the file unusable because applications cannot recognize the file as an image file. For instance, a GIF file should begin with the letters "GIF87a" or "GIF89a". If this isn't true, the file isn't a valid GIF and cannot be read.

If PMView cannot recognize a file as one of the readable file formats it will automatically scan the file for any of the formats below. Thus PMView will be able to read a GIF or JFIF file with an unknown header (*e.g.* 3,733 bytes of trash at the beginning of the file).

The following formats can be recovered from files with an unknown header:

- Graphics Interchange Format (GIF)
- JPEG File Interchange Format (JPG)
- Adobe Photoshop Document (PSD)
- Portable Network Graphics (PNG)
- Tagged Interchange File Format (TIF)

File Conversion & Scripts

This chapter will explain, in detail, the features and functionality of PMView Pro's file conversion and script utilities using examples and step-by-step instructions.

Thumbnail Creation (Using Scripts)

We will begin with a step-by-step tutorial on creating thumbnails. Detailed information about the dialogs follows later in this chapter.

Choosing images

The first step is to locate the images that need thumbnailing. Using the PMView File Open dialog, you can select the images using Ctrl+left click or access the Popup menu to turn on "sticky select". Once you have selected your images, right click on any one of the images and select 'Convert...'

The Convert dialog

The first step of the convert dialog is to choose a script that should be used. If you are only converting from one format to another, you can select *<None>*. Otherwise, choose **New** to activate the **Script Editor** dialog. From the Script Editor, you can set all possible

options for this conversion. The first option is to give your script a name. In this case, the script will be named 'vacation thumbnails' because I will use it frequently to create thumbnails of my vacation photos.

Now I am ready to choose the **Operations** from the selection area on the right. I will begin by selecting '*Set Output Format*', '*Set Output Directory*' and '*Resize*' all at once by using Ctrl + left-click. Once they are all selected, simply click the '*Add*' button to move them into the script box on the left.

Once you have added the operations to your script, you now need to set the parameters for those operations. From the **Scripts** box, select Set Output Format. In the **Parameters** field below, you will see another dialog appear that allows you to select a image format. This is the format that the files will be converted to during the script process. Remember that you can set the '*Options*' of certain file formats if the Options button is active.

The next selection, Select Output Directory, will allow you to set the directory images converted using this script will be saved to. Input the full path to your save directory, or select the checkbox to use the directory of the original image as the target save location of the new converted images.

The final operation is the Resize option. Highlight this option and you will be presented with the basic PMView size options. You can specify the resolution of the image in pixels. For this tutorial, I have selected 100x100 sizing and checked the '*Resample Pixels*' option only.

If the script is one that you will use frequently, be sure to check the box in the lower right to include this script on the **Quick Script** menu!

Click OK to save your script. Now you should see the Convert dialog again, only now the output format and directory options are

disabled since they will be set by the active script. Switch between *<None>* and *vacation thumbnails* to see the difference.

The only option left on that menu should be to choose how PMView should react to files that already exist. Set the appropriate options and press Convert to begin the script. PMView will immediately begin converting the images in the background and you can begin or continue other operations within PMView.

The next time you need to make 100x100 pixel images, simply select the images from the File Open dialog and right click. You will then be able to select '*vacation thumbnails*' from the Quick Script menu and instantly have thumbnails for your images.

File Conversion

PMView Pro's built in file conversion utility makes it simple to convert your files from one format to another. PMView Pro supports over 40 different file formats as discussed in the previous chapter, and can convert to and from those formats. Many of the formats provide options for what information should be preserved from one format to another just the same as when saving files. The ability to convert multiple files at once and the addition of pre-defined *scripts* to the process make this utility one of the most powerful features of PMView Pro.

How to convert file(s)

Files can be converted individually or in batches; from within PMView Pro or from the command line.

- **Single File Conversion**

From the main window...

To convert a single file that is already open inside the PMView Pro window, simply select *Convert...* from the File menu. This will open the File Convert dialog window with the various options.

From the File Open Container...

If the file has not been opened, you can access the conversion menu from the File Open Container as well. Simply select the file that you wish to convert and right click to access the pop-up menu. From the menu, select the *Convert...* option.

From the command-line...

In order to use the command-line for file conversion, you will need to have a script that defines the options that should be used. Scripts can be accessed, created and edited from the File Convert dialog window. Once you have created your script, save it to the Scripts directory of your PMView directory and type in the following at the command-line:

```
path_to_PMVIEW.EXE /scr=myscript file.jpg
```

Assuming the script was saved to PMView Pro's Script directory, the filename (myscript) is sufficient. If you have saved the scripts in another directory, you will need to specify the correct path to the script

.

- **Multiple/Batch File Conversion**

From the File Open Container...

To convert multiple files from the FOC, simply select more than one file using Ctrl + click or the *Sticky Select* option from the FOC Popup Menu. Once you have selected all of the images to be converted, right click on any of the selected images and select *Convert...* from the FOC Object Menu.

If you wanted to use a previously created script, simply choose Quick Scripts from the FOC Popup Menu and select your script.

From the command-line...

Using the command-line option, you can specify entire directories and use wildcards to determine the files that should be converted. This does require that you have created a Script file with PMView prior to conversion. To convert all JPG files in a directory, you would input the following at the command-line:

```
path_to_PMVIEW.EXE /scr=myscript C:\photos\*.jpg
```


Frequently Asked Questions

This chapter answers some common questions we get and helps you solve problems that you may encounter while using PMView.

General Questions

How do I convert files from one format to another?

Choose "File->Open" from PMView's menu bar. This will open up the File Open dialog. Right click on the file you want to convert and choose, for instance, "Convert to->GIF"

PMView's menu bar has disappeared. How do I get it back?

Right click on PMView's main window. Choose "View->Show->Menu Bar" from the resulting pop-up menu.

How do I get rid of the annoying About dialog that always pops up when I start PMView?

If you haven't registered PMView yet, register! In the unregistered version of PMView you cannot dismiss the dialog until 5 seconds has elapsed. Visit the PMView website for registration information.

Why do desktop colors change/flash whenever I load an image?

This is caused by the palette manager when it remaps system colors. If you're willing to sacrifice color quality, you can fix this problem by turning off the palette manager; Uncheck Use Palette Manager on the Palette page in PMView's options notebook. Alternatively, you may consider setting your display to a mode that provides more than 256 colors, if possible.

Why does/doesn't PMView ask for confirmation before deleting a file?

PMView will ask for file delete confirmation in accordance with the setting on the Confirmations page in PMView's Options Notebook.

File Open Container (FOC) Questions

What is the File Open Container (FOC)?

The FOC is the large, initially white, rectangular area in the lower-right corner of PMView's File Open window. To see the File Open window, either select "File->Open" or type Ctrl+O.

The FOC is a standard container, which means that you change its view, drag and drop things to and from it, and resize it. (To do the last, resize the window and the FOC will also be resized.) You can also display a popup menu for the FOC and for each image inside it. Finally, you can rename an image by clicking on the filename.

How do I bring up the FOC pop-up menu?

The usual way: Right-click inside the container but not on one of the images. A menu will pop up. If the top item on the menu is

"Open", then you have the menu for one of the images; try again in another location.

If you are in Flowed view, try right-clicking under the bottom row of icons. If you are in Detail view, right-click on one of the column headings, e.g., on top of the word "Name." Again, this is all as usual.

How do I select more than one image?

The usual ways: You can drag a rectangular area, and all the images that touch the rectangle will be selected. (If you try to drag the rectangle "outside" the FOC, the FOC will automatically scroll.) You can click on the first image you want and Ctrl+click on the second and subsequent ones. If you want to select a bunch of images in order, you can click on the first one, then shift-click on the last one, and all the images between them will be selected. You can also type Ctrl+/ to select all the images in the current directory.

There's also one other "unusual" way: If you don't like having to hold down Ctrl, then bring up the FOC popup, click "Select", and click "Sticky Select". While Sticky Select is on, you don't need to hold down Ctrl to add images to the selection. (To deselect while you're in Sticky mode, click the image a second time.)

Why is PMView so slow at putting images into the FOC? How can I speed it up?

In Normal View mode, PMView has to load a lot of information for each image before it adds it to the FOC. It has to load the thumbnail and standard icon for each image. It also reads enough of the image to check its actual image format (as opposed to its filename extension) and its color depth (i.e., how many colors the image could possibly have). It loads all this information in case you change to Detail view, or want to sort based on this info.

If you don't need this info, try Quick view instead. In Quick view, you can only see (and sort on) file names, sizes, dates, and times. But if that's all you want, Quick view is the way to go, especially on slow drives (such as CD-ROMs).

Whew! What are all those View choices?

The best way to figure out the Views is to experiment, and to look at page 44.

How can I sort images?

Bring up the FOC popup menu and click "Sort". By default, PMView sorts by filenames. If you want to change this default, click the arrow to the right of "Sort" and pick the sort type you want. Note that some types of sorts are not available in Quick mode. For details on the sort options, see page 46.

Is there anything else on the FOC popup?

Yes -- the "Refresh" command. This re-reads the current directory and updates the FOC display. Images will be sorted using the currently selected method. Use "Refresh" if you're using another program (or session) to add (or change) images.

*Slideshow Questions***How do I create a slideshow?**

Select "File->New->Slideshow" to take you to slideshow mode. Select File Open, and drag the files you want to PMView's main window.

In fact, you can skip the "File->New->Slideshow". If you drag more than one file at once to PMView's main window, it will take you to slideshow mode (if you aren't there already) and add these files to the slideshow.

How can I change the order of the slides?

Drag them around. If you drop one slide on top of another, it will be inserted directly after that slide. (Moving a slide to the beginning of the slideshow takes two steps: First, drop it on the first slide. Second, drop the first slide on it.)

How do I run a slideshow?

Choose "Run All" from the slideshow's popup menu, or type Alt+R. (To get to the slideshow's popup menu, right-click in a blank area of the main window).

By default, the slideshow will run full screen, and the slideshow controller will be visible. You will have to move to the next slide manually, by either pressing the right arrow key, clicking the right mouse button, or pressing the PLAY button on the slideshow controller.

How can I hide or unhide the slideshow controller?

During the slideshow, type Alt+C to toggle the controller's visibility. Of course, you can also click the close button on the controller to make it invisible.

To start with a hidden slideshow controller, right click in the main window, then unselect "View->Show->Controller".

How can I quit the slideshow?

You can click your middle mouse button (if you don't have one, you can click both left and right buttons simultaneously), or you can hit

your Esc key. If the controller's visible, you can click the STOP button.

How can I save the slideshow?

Choose "File->Save" (or "File->Save as").

Slideshows are saved with an extension of *.SHW. Note that a slideshow is a plain ASCII text file, so you can edit it with your favorite editor. The only restriction is that you may not modify the first line; it has to be left exactly as is, or PMView won't recognize the slideshow properly.

What if I don't want to run the slideshow full screen?

Right-click in the main window, then select "View->Preferences". This takes you to the options notebook. Go to the slideshow page and turn off "Run full screen".

During the slideshow, you can toggle in and out of Fullscreen mode by typing F3, or left double-clicking on the image.

What if I don't want to have to move to the second slide manually?

Right-click on the first slide to bring up its popup menu. Click "Settings". In the group that says, "Advance to next image," choose "Automatically after" and specify a number of seconds. Then, when you run the slideshow, PMView will move to the second slide after that many seconds.

What if I don't want to have to move to the third slide manually?

Right-click on the second slide to bring up its popup menu, then follow the instructions above.

Hey! If I want each slide to stay on for 5 seconds, do I have to change every slide by hand?

You can, but there's an easier way. Set up the first slide for five seconds. Select all the other slides (you can type Ctrl+/ to do this). Right-click on the first slide, then choose "Copy Settings" (don't click on the arrow). Choose OK, and all the slides will now be automatic with a 5-second delay.

What if you only want a 5-second delay on the first, third, and fifth slide? Set up the first, select the third and fifth (via Ctrl+left click, as with any other container) and right-click the first slide's "Copy Settings" command.

What are the other settings for a slide?

The "Notes" option lets you type notes about the slide. These notes will be saved when you save the slideshow.

If you select "Display Notes", your note will be displayed in a window while that slide is shown.

You can copy any or all of these settings by selecting "Copy Settings", as explained in the previous question. To choose which settings get copied, click on the arrow to the right of "Settings", and select the settings you want to copy. (This is much easier to do than say.)

What are the other commands for a slide?

"Remove" will take the slide out of the slideshow. "Run" (on a slide, not on the main window background) will let you "run" just that slide (to check its note, for example).

PMView for Windows Questions

How Do I Register PMView?

The PMView Pro evaluation version cannot be converted to a licensed version without first purchasing a license and downloading the required files. Unlike previous versions, registration will not be done by license key but by full version download.

Why is printing not working?

Printer driver problems are common on Windows 95/98. If you have a problem printing from this version of PMView, we recommend that you uninstall and reinstall the printer driver. This usually solves the problem. You can also try the Reset option on the PMView Print dialog. Right-click the Setup button and select Reset... to reset the PMView print options.

How do I change the background color of PMView's main window?

1. Select "Start->Run" in Windows.
2. Type "REGEDIT" and press enter.
3. Open up "HKEY_CURRENT_USER->Software->Nielsen Software->PMView->3.0->Window".
4. Right click on "Window" and select "New->DWORD value".
5. Type "BackgroundColor" in the field and press enter. Then double click on "BackgroundColor".

Now type in the color value. It should be in 6 digit hexadecimal format RRGGBB. For instance FFFFFFFF is white, FF0000 is red and 00FF00 is green color. Click OK. Now PMView will use the color you specified.

PMView for OS/2 Questions

How Do I Register PMView?

The PMView Pro evaluation version cannot be converted to a licensed version without first purchasing a license and downloading the required files. Unlike previous versions, registration will not be done by license key but by full version download.

How Do I Make PMView The Default Viewer?

Assuming that you use the default installation settings when installing PMView, this is done automatically by the installer. A reboot may be required for the changes to become effective. If you haven't rebooted, do it. If you're using Object Desktop you also need to deselect the "Automatically view when identified" option on the "Data Files" page of the "Master Setup" notebook in Object Desktop.

Why am I getting screen corruption?

If you see screen corruption, the first thing you should try in most cases is to try upgrading or reinstalling your display drivers. Contact PMView support with your system information if problems continue.

I upgraded my Adaptec SCSI driver and now my system locks up. What can I do?

If you have upgraded your Adaptec SCSI driver and are having problems with lockups (especially during scanning), it is recommended that you revert to the drivers on the Warp 4 CD-ROM.

How can I fix printing problems?

Printer driver bugs are not uncommon. If you have a problem printing from this version of PMView, we recommend that you download the most recent printer driver from the IBM device driver repository at the following URL:

<http://service.software.ibm.com/os2ddpak/index.htm>

Note that the OS/2 FixPak upgrades usually DO NOT upgrade your printer driver to the latest fix level. Unless you know for sure that you are using the latest release, we recommend that you double-check it.

It is also possible that your printer driver installation is corrupted. If you know you are using a printer driver that is supposed to work, yet it does not work with PMView, then try to uninstall and reinstall the printer driver. We have encountered a couple of situations where a simple reinstall of the driver solved the problem.

Another possible solution would be to use the PMView application to Reset the selected printer. To reset the printer, open the PMView Pro print dialog and right click on the Setup button at the bottom of the window. Click the Reset option to reset the print options.

Why is PMView not working with a particular application?

The following applications need a special configuration with PMView Pro:

- X-it

If you select X-it's right mouse button to "edit popup menu"

(default), and add 'static' as a control for the edit menu to popup over (under xit->options->menu->popup menu over these areas) (not the default), then PMView's popup menu will not show in the main window.

Solution: Do NOT check the 'static' control in X-it's menu options dialog. Alternatively, you can add PMView to X-it's exception list. Future solution: Upgrade to X-it v2.6 that solves the problem.

- CandyBarZ

PMView's title bar is blank.

Solution: Make sure that the CandyBarZ option "Enable PMView fix" is NOT checked. This option is needed for older versions of PMView only.

- MSE

Using MSE to emulate a Button 1 double click does not work correctly if the "Mover" tool in PMView is used. The Mover tool invokes OS/2 for moving the window and MSE is unable to provide the correct double clicking emulation required by OS/2.

Solution: Change the tool in PMView to Scroller or Selection.

- DragText

Dragging locks up the WPS when using PMView+Drag-Text+Netscape. There is a problem with how Netscape handles drag & drop.

Solution: The recommended workaround for this is to take DT out of your Startup folder and run it from a Startup.cmd file (already supplied in your DT folder). This changes the loading sequence for DT, and gets around the problem.

- **STi TWAIN**

Version 1.6.5 or newer is required. Make sure that the PMView option "Use buffered memory transfer" is enabled (default) and that "Unload library" is disabled (not default). Note that there are a couple of problems in the current release of STi TWAIN:

1. TWAIN.DLL cannot be reloaded once unloaded. To work around this problem you need to disable the "Unload library" option. The side effect of this is that once you use TWAIN with PMView, no other application can use it until PMView is stopped (and TWAIN.DLL unloaded).
2. Using PMView with the "Use buffered memory transfer" option disabled will not work. STi's DLL uses a method that is incompatible with the TWAIN specifications.
3. DO NOT press the "Cancel" button in the scanning dialog. Doing this will cause problems like crashing PMView with a SYS3175 (This bug only appears in STi TWAIN 1.6.10)

STi Inc. is aware of the problems and will hopefully fix them in the next version.

- **CFM TWAIN**

There are two known bugs in the current version of CFM TWAIN:

1. Do NOT press the Escape key in the CFM "Overview" window. Doing this will result in a SYS3171 exception in PMMERGE.DLL. The problem applies to all and any program that uses CFM TWAIN. Even CFM's own ScanWorks (SWOS2.EXE) program will crash when pressing Escape in the "Overview" window.
2. There is a problem with using the PMView TWAIN option

"Close user interface after scanning". CFM TWAIN only saves its current settings when the TWAIN dialog is manually closed with the "Finish" button. New settings will not be saved if the interface is closed by pressing the "Cancel" or closed by ALT-F4. The same goes if the interface is automatically closed by PMView.

- Object Desktop

Occasionally parts of the control center of OD2 flicker through when loading the next file. This happens if PMView's main window is maximized.

This problem only occurs when using Object Desktop. It is caused by the fact that we need to workaround an OS/2 bug.

Here are the specifics:

Ever since the very first OS/2 Warp 3 beta, the OS/2 WinCalcFrameRect API has been broken. If this API is called when an application is minimized, the application will crash. If it is called when an application is maximized, weird things start happening to the application's menu bar.

The workaround for this problem is to disable window drawing, set the application's window to normal (non-minimized/maximized) state, call WinCalcFrameRect, restore the window's original minimized/maximized state and eventually enable window drawing.

On a basic OS/2 system this will work without flicker. Unfortunately Object Desktop ignores that PMView has disabled window painting and causes painting to be done anyway, hence the flicker.

We have no remedy to this problem. The problem can be fixed by Stardock if they optimize their window handling algorithm. Even if IBM fixes the OS/2 bug it will not help you (however

this will let us remove the workaround in a future version of PMView, which will of course solve the problem).

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