

Paint Shop Pro Help Index

The Index lists all Help topics available for Paint Shop Pro. Use the scroll bar to see entries not currently visible in the Help window.

To learn how to use Help choose Using Help from the Help menu.

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File Menu Commands

Use the scroll bar to see more commands.

Open

Use this selection to open a file and displays the image. This selection can also be used to obtain general information about an image file.

Related Topic - [**Opening An Image File**](#)

Related Topic - [**Getting File Information**](#)

Related Topic - [**The File Open Dialog Box**](#)

Close

Use this selection to remove the currently displayed image from memory and the screen.

Related Topic - [**Closing An Image File**](#)

Save As

Use this selection to save the current image to a file.

Related Topic - [**Saving An Image**](#)

Related Topic - [**The File Save As Dialog Box**](#)

Delete

Use this selection to delete an image file from the disk. The file that will be deleted is the file associated with the current image.

Related Topic - [**Deleting An Image File**](#)

Print

Use this selection to print the current image.

Related Topic - [**Printing An Image**](#)

Printer Setup

Use this selection to change the active printer, and/or to set up the way the active printer is configured.

Related Topic - [**Printer Setup**](#)

Related Topic - [**The Printer Setup Dialog Box**](#)

Preferences - JAS

When Paint Shop Pro saves an image using the JAS file format, a variable rate of compression is used. This selection allows you to set the variable rate of compression.

Related Topic - [**JAS Setup**](#)

Related Topic - [**The JAS Setup Dialog Box**](#)

Preferences - Undo

A copy of the current image can be saved before making changes to the image. After changes are made, you can then "undo" the changes with the "Edit", "Undo" option. This selection allows you to select where the "undo" image should be saved.

Related Topics - [**Undo Setup**](#)

Exit

Use this selection to close Paint Shop Pro.

Related Topic - [**Exiting Paint Shop Pro**](#)

Opening An Image File

To open an image file:

1. From the Paint Shop Pro Menu Bar, select "File".
2. Then select "Open" from the pulled-down menu. This opens the "File Open" dialog box.
3. Select the file format of the image you want to open. The file formats are listed in the "Format:" list box, aligned along the right side of the "File Open" dialog box. The files that are displayed in the "Files:" list box are the files in the current directory that match the filename extension of the file format you select.
4. You can change to a different drive or directory by double clicking the drive or directory of your choice in the "Directories:" list box.
5. Highlight the file you want to open by clicking on the filename in the "Files:" list box.
6. Click the "OK" command button to open the highlighted file.

Note:

An image file may be opened by specifying the filename on the command line when starting Paint Shop Pro.

Getting File Information

To obtain information about an image file:

1. From the Paint Shop Pro Menu Bar, select "File".
2. Then select "Open" from the pulled-down menu. This opens the "File Open" dialog box.
3. Select the file format of the image you want information on. The file formats are listed in the "Format:" list box, aligned along the right side of the "File Open" dialog box. The files that are displayed in the "Files:" list box are the files in the current directory that match the filename extension of the file format you select.
4. You can change to a different drive or directory by double clicking the drive or directory of your choice in the "Directories:" list box.
5. Highlight the file you want information on by clicking on the filename in the "Files:" list box.
6. Click the "Info" command button to obtain general information about the highlighted file.

Closing An Image File

To close an image file:

1. From the Paint Shop Pro Menu Bar, select "File".
2. Then select "Close" from the pulled-down menu.

Note:

If the image has changed in any way, Paint Shop Pro will ask if the changes should be saved.

Click the "Yes" command button if you want to save the changes to the image. This will activate the "File Save As" dialog box where you can enter the information needed to save the image.

Click the "No" command button if you do *not* want to save the changes to the image.

Click the "Cancel" command button if you change your mind and you do not want to close the image file.

Saving An Image

To save an image to a file:

1. From the Paint Shop Pro Menu Bar, select "File".
2. Then select "Save As" from the pulled-down menu. This opens the "File Save As" dialog box.
3. Select the format in which you want to save the image. The file formats are listed in the "Format:" list box, aligned along the right side of the "File Save As" dialog box. Only the file formats that are capable of holding the current image will be available in the "Format:" list box.
4. You can change to a different drive or directory by double clicking the drive or directory of your choice in the "Directories:" list box.
5. Alter the filename if you desire. You can do this by highlighting the filename in the "Filename:" edit box, then type in the new name. No matter what filename extension you give the file, the name of the file will automatically be changed to the proper filename extension.
6. Click the "OK" command button to save the file.

Note

If the filename you select is already in use by another file, you will be asked if you would like to overwrite the existing file.

Click the "Yes" command button if you want to overwrite the existing image file with the current image.

Click the "No" command button to abort the "Save As" process.

Deleting An Image File

To delete an image file:

1. From the Paint Shop Pro Menu Bar, select "File".
2. Then select "Delete" from the pulled-down menu. This opens the "Delete File" message box.

Click the "Yes" command button to proceed with the deletion.

Click the "No" command button if you change your mind and want to cancel the deletion before it begins.

Printing An Image

To print an image:

1. From the Paint Shop Pro Menu Bar, select "File".
2. Then select "Print" from the pulled-down menu. Paint Shop Pro displays the printing status.

Printer Setup

To change the active printer:

1. From the Paint Shop Pro Menu Bar, select "File".
2. Then select "Printer Setup" from the pulled-down menu. This opens the "Printer Setup" dialog box. It will display the printers that are installed for *Windows*.
3. Highlight the printer that you want active.
4. Click the "OK" command button.

To change the configuration of a printer:

1. From the Paint Shop Pro Menu Bar, select "File".
2. Then select "Printer Setup" from the pulled-down menu. This opens the "Printer Setup" dialog box. It will display the printers that are installed for *Windows*.
3. Highlight the printer that you want to configure.
4. Click the "Setup" command button to display a configuration box applicable to your selected printer. This configuration box will be arranged differently depending upon which printer type you have selected. Refer to your printer's manual for information about the various configuration selections.
5. You can change the configuration of the printer as you desire. When finished, return to the "Printer Setup" dialog box and click the "OK" command button.

Note:

If the printer that you have selected is using a *Windows* 3.0 (or later) printer driver, the changes you make to your printer's setup will only be effective for Paint Shop Pro.

JAS Setup

To set the JAS file compression level:

1. From the Paint Shop Pro Menu Bar, select "File".
2. Then select "Preferences" from the pulled-down menu. This opens another pull-down menu.
3. Select "JAS". This opens the "JAS Setup" dialog box.
4. Set the JAS compression level that you desire.
5. Click the "OK" command button.

Undo Setup

To set the undo image storage location:

1. From the Paint Shop Pro Menu Bar, select "File".
2. Then select "Preferences" from the pulled-down menu. This opens another pull-down menu.
3. Select "Undo". An additional pulled-down menu appears.
4. Make the selection you desire.
 - "Disabled"** - Select this option to disable the "undo" function. The previous image, before the last operation, will not be available.
 - "In Memory"** - Select this option to allow the previous image, before the last operation, to be stored in memory. If your computer does not have a lot of memory, it may be better to select the "To Disk" option.
 - "To Disk"** - Select this option to allow the previous image, before the last operation, to be stored on disk. If your hard disk does not have a lot of available free disk space, it may be better to select the "Disabled" option.

Related Topic - [Memory Requirements](#)

Exiting Paint Shop Pro

To close Paint Shop Pro:

1. From the Paint Shop Pro Menu Bar, select "File".
2. Then select "Exit", from the pulled-down menu. This will close this session of Paint Shop Pro.

Note:

If the image has changed in any way, Paint Shop Pro will ask if you would like to save the changes.

Select "Yes" if you want to save the changes to the image. This will activate the "File", "Save As" dialog box so you can save the image.

Select "No" if you do *not* want to save the changes to the image. Paint Shop Pro will be closed without saving the image.

Select "Cancel" if you change your mind about closing Paint Shop Pro. You will be returned back to the Paint Shop Pro window.

Edit Menu Commands

Use the scroll bar to see more commands.

Undo

Use this selection to restore the current image to the way it was before the last operation.

Related Topic - **Undoing The Last Operation**

Copy

Use this selection to copy the currently marked area to the *Windows* clipboard. If there is no marked area, the *entire image* will be copied to the clipboard.

Related Topic - **Copy An Image To The Clipboard**

Paste

Use this selection to paste the image residing on the clipboard to the Paint Shop Pro window.

Related Topic - **Pasting An Image From The Clipboard**

Empty Clipboard

Use this selection to empty the contents of the clipboard without having to activate the clipboard. This option is available if a standard *Windows* image clipboard format is residing on the clipboard.

Related Topic - **Emptying the Clipboard**

Undoing The Last Operation

To retrieve the prior image:

1. From the Paint Shop Pro Menu Bar, select "Edit".
2. Then select "Undo" from the pulled-down menu.

Copy An Image To The Clipboard

To copy an image to the clipboard:

1. Display the image you want to copy as the current image.

If you want to copy the entire image displayed, don't mark an area, just go to the next step.

If you want to copy only a specific area, mark the area you want:

- a. Move the cursor to the upper left point of the area to be marked off.
 - b. Hold down the left mouse button.
 - c. Move the cursor to the lower right corner of the area to be marked off.
 - d. Release the left mouse button.
2. From the Paint Shop Pro Menu Bar, select "Edit".
 3. Then select "Copy" from the pulled-down menu.

Pasting An Image From The Clipboard

To paste an image onto the clipboard:

1. From the Paint Shop Pro Menu Bar, select "Edit".
2. Then select "Paste" from the pulled-down menu.

Emptying The Clipboard

To empty the clipboard:

1. From the Paint Shop Pro Menu Bar, select "Edit".
2. Then select "Empty Clipboard" from the pulled-down menu.

View Menu Commands

Use the scroll bar to see more commands.

Fit to Window

Use this selection to display the entire image in the current window. If the image is larger than the window, the image will be shrunk to the window's size. If the image is smaller than the current window, the image will be stretched to the window's size.

Related Topic - [**Fit Image To Window**](#)

Normal

Use this selection to return Paint Shop Pro to normal image viewing.

Related Topic - [**Normal Viewing Mode**](#)

Zoom In

Use this selection to zoom in on the image. You may select a "Zoom In" factor between 2 and 10.

Related Topic - [**Zooming In**](#)

Zoom Out

Use this selection to zoom out from the image. You may select a "Zoom Out" factor between 2 and 10.

Related Topic - [**Zooming Out**](#)

Fit To Full Screen

Use this selection to display the image using the full screen. If the image is larger than the screen, the image will be shrunk to the screen's size. If the image is smaller than the screen, the image will be stretched to the screen's size.

Related Topic - [**Fit Image To The Full Screen**](#)

Full Screen

Use this selection to display the image in normal viewing mode outside of *Windows*.

Related Topic - [**Use The Full Screen**](#)

Fit Image To Window

To fit the image to the window:

1. From the Paint Shop Pro Menu Bar, select "View".
2. Then select "Fit To Window" from the pulled-down menu.

Normal Viewing Mode

To view the image in normal viewing mode:

1. From the Paint Shop Pro Menu Bar, select "View".
2. Then select "Normal" from the pulled-down menu.

Zooming In

To zoom in on the image:

1. From the Paint Shop Pro Menu Bar, select "View".
2. Then select "Zoom In" from the pulled-down menu. This opens another pulled-down menu of Zoom In factors.
3. Select the Zoom In factor by clicking on the one you want.

Note:

Once you have the zoomed-in image displayed:
The left mouse button will make the zoomed image larger.
The right mouse button will make the zoomed image smaller.

Zooming Out

To zoom out from the image:

1. From the Paint Shop Pro Menu Bar, select "View".
2. Then select "Zoom Out" from the pulled-down menu. This opens another pulled-down menu of Zoom Out factors.
3. Select the Zoom Out factor by clicking on the one you want.

Note:

Once you have the zoomed-out image displayed:

The left mouse button will make the zoomed image larger.

The right mouse button will make the zoomed image smaller.

Fit Image To The Full Screen

To fit the image to the screen:

1. From the Paint Shop Pro Menu Bar, select "View".
2. Then select "Fit To Full Screen" from the pulled-down menu.
3. Press any key or button to return to *Windows*.

Use The Full Screen

To view the image using the entire screen:

1. From the Paint Shop Pro Menu Bar, select "View".
2. Then select "Full Screen" from the pulled-down menu.
3. Pressing a key, one that is not used for scrolling, will return you to *Windows*.

Image Menu Commands

Use the scroll bar to see more commands.

Flip

This selection turns the current image upside down.

Related Topic - [Flipping The Image](#)

Mirror

This selection creates a mirror image of the current image.

Related Topic - [Mirroring The Image](#)

Rotate Right

This selection rotates the current image 90 degrees to the right (clockwise).

Related Topic - [Rotating The Image To The Right](#)

Rotate Left

This selection rotates the current image 90 degrees to the left (counterclockwise).

Related Topic - [Rotating The Image To The Left](#)

Apply Standard Filter

This selection is available for 24 bits-per-pixel (16 million colors) images only. If your image is not a 24 bits-per-pixel image you can use the "Colors"->"Increase Color Depth" to convert your image. This selection applies a two dimensional convolution filter, supplied with Paint Shop Pro, to the image. Applying filters to an image can accomplish tasks that cannot be accomplished by any other means.

Related Topic - [Applying A Standard Filter](#)

Related Topic - [The Apply Standard Filter Dialog Box](#)

Apply User Defined Filter

This selection is available for 24 bits-per-pixel (16 million colors) images only. If your image is not a 24 bits-per-pixel image you can use the "Colors"->"Increase Color Depth" to convert your image. This selection allows you to apply, create, edit, and delete your own convolution filters. Applying filters to an image can accomplish tasks that cannot be accomplished by any other means. With experimentation, you can create special effects with user-defined filters that may not be available using the standard filters.

Related Topic - [Applying A User Defined Filter](#)

Related Topic - [Defining New Filters](#)

Related Topic - [Editing An Existing Filter](#)

Related Topic - [Deleting An Existing Filter](#)

Related Topic - [The Apply User Defined Filter Dialog Box](#)

Related Topic - [The Define New Filter Dialog Box](#)

Related Topic - [The Edit User Defined Filter Dialog Box](#)

Resample

This option is available to be applied *only* to 8 bits-per-pixel grey scale images and 24 bits-per-pixel color images. If your image is colored but not a 24 bits-per-pixel image you can use the "Colors"->"Increase Color Depth" to convert your image. Resampling will resize an image without causing the jagged edges normally associated with resizing. It uses a method called interpolation.

Related Topic - [Resampling An Image](#)

Related Topic - [The Resample Dialog Box](#)

Resize

This selection allows you to resize an image using pixel replication or deletion.

Related Topic - [**Resizing An Image**](#)

Related Topic - [**The Resize Dialog Box**](#)

Trim

This selection is available *only if your image has been marked*. It allows you to trim unwanted portions of your image from outside your marked frame. *The resulting image will be only the area inside the marked frame.*

Related Topic - [**Trimming An Image**](#)

Prep for MAC

This selection takes care of all the work necessary to *prepare* an image for saving in the MAC file format.

Related Topic - [**Preparing An Image For The MAC File Format**](#)

Flipping The Image

To flip the image:

1. From the Paint Shop Pro Menu Bar, select "Image".
2. Then select "Flip" from the pulled-down menu.

Mirroring The Image

To mirror the image:

1. From the Paint Shop Pro Menu Bar, select "Image".
2. Then select "Mirror" from the pulled-down menu.

Rotating The Image To The Right

To rotate the image to the right:

1. From the Paint Shop Pro Menu Bar, select "Image".
2. Then select "Rotate Right" from the pulled-down menu.

Rotating The Image To The Left

To rotate the image to the left:

1. From the Paint Shop Pro Menu Bar, select "Image".
2. Then select "Rotate Left" from the pulled-down menu.

Applying A Standard Filter

To apply a standard filter:

1. From the Paint Shop Pro Menu Bar, select "Image".
2. Then select "Apply Standard Filter" from the pulled-down menu. This opens the "Apply Standard Filter" dialog box. The dialog box will display the names of the various filters that may be applied to the image.
3. Select, from the "Apply To" group box, the color components that will be applied to the filter. Valid options are "Grey Values" or "Color Component(s)". If you select "Color Component(s)", you can select one or more of Red, Green, or Blue, but at least *one* must be selected.
4. In the "Filter Type" list box, highlight the filter you want to apply.
5. Click the "OK" command button.

Applying A User Defined Filter

To apply a user defined filter:

1. From the Paint Shop Pro Menu Bar, select "Image".
2. Then select "Apply User Defined Filter" from the pulled-down menu. This opens the "Apply User Defined Filter" dialog box.
3. Select, from the "Apply To" group box, the color components that will be applied to the filter. Valid options are: "Grey Values", or "Color Component(s)". if you select "Color Component(s)", you can select one or more of Red, Green, or Blue, but at least *one* must be selected.
4. In the "Filter Type" list box, highlight the filter name you want to be applied.
5. Click the "OK" command button to apply the highlighted filter to the current image.

Defining New Filters

To define a new filter:

1. From the Paint Shop Pro Menu Bar, select "Image".
2. Then select "Apply User Defined Filter" from the pulled-down menu. This opens the "Apply User Defined Filter" dialog box. The dialog box allows you to create new user-defined filters.
3. Click the "New" command button. This opens the "Define New Filter" dialog box.
4. Enter a name for this new filter in the "Filter Name" edit box.
5. Enter the filter values that you desire in the "Filter Matrix", "Division Factor", and "Bias" edit boxes.
6. Click the "OK" command button. Your new user-defined filter will be saved and listed in the "Filter Type" list box of the "Apply User Defined Filter" dialog box.

Editing An Existing Filter

To edit an existing user defined filter:

1. From the Paint Shop Pro Menu Bar, select "Image".
2. Then select "Apply User Defined Filter" from the pulled-down menu. This opens the "Apply User Defined Filter" dialog box.
3. In the "Filter Type" list box, highlight the filter name you want to edit.
4. Click the "Edit" command button to open the "Edit User Defined Filter" dialog box.
5. Change or add any values to edit the filter.
6. Click the "OK" command button to save your changes.

Deleting An Existing Filter

To delete an existing user defined filter:

1. From the Paint Shop Pro Menu Bar, select "Image".
2. Then select "Apply User Defined Filter" from the pulled-down menu. This opens the "Apply User Defined Filter" dialog box.
3. In the "Filter Type" list box, highlight the filter name you want to delete.
4. Click the "Delete" command button to delete the highlighted filter.

CAUTION:

Once you click "Delete", *you will not have a chance to change your mind*. The filter will be deleted, and you cannot get it back with an "undo" option.

Resampling An Image

To resample an image:

1. From the Paint Shop Pro Menu Bar, select "Image".
2. Then select "Resample" from the pulled-down menu. This opens the "Resample" dialog box. The dialog box allows you to select the way you want the resample operation to be applied.
3. Select one of the "Standard Size" options or the "Custom Size" option.

If you select the "Custom Size:" option button, enter the new width and height in the "Custom Size:" edit boxes.
4. Click the "OK" command button.

Resizing An Image

To resize an image:

1. From the Paint Shop Pro Menu Bar, select "Image".
2. Then select "Resize" from the pulled-down menu. This opens the "Resize" dialog box. The dialog box allows you to select the way you want the resize operation to be applied.
3. Select one of the "Standard Size" options or the "Custom Size" option.

If you select the "Custom Size:" option button, enter the new width and height in the "Custom Size:" edit boxes.

4. Click the "OK" command button.

Note:

"Resizing" is a method of duplicating or removing pixels as required to alter the size of the image. *This will not yield results as good as you get with "Resampling"*. You may find it advantageous to increase the color depth of the image to 24 bits before resizing the image. You can do this by using the "Colors", "Increase Color Depth" menu option. By increasing the color depth to 24 bits, the image may be resampled instead of resized. Once the image is resampled, it may be reduced back to the original number of colors by use of the "Colors", "Decrease Color Depth" menu option.

Trimming An Image

To trim an image:

1. Mark the area of the image you want to keep.
 - a. Move the cursor to the upper left point of the area to be marked off.
 - b. Hold down the left mouse button.
 - c. Move the cursor to the lower right corner of the area to be marked off.
 - d. Release the left mouse button.
2. From the Paint Shop Pro Menu Bar, select "Image".
3. Then select "Trim" from the pulled-down menu. The trimmed image will replace the existing image.

Preparing An Image For The MAC File Format

To prepare an image to be saved using the MAC file format:

1. From the Paint Shop Pro Menu Bar, select "Image".
2. Then select "Prep for MAC" from the pulled-down menu. This opens a message box asking if you would like to invert the colors.

Click the "Yes" command button if you want to invert the colors.

Click the "No" command button if you do not want to invert the colors.

Note:

This preparation process performs four steps:

1. It reduces the image so that neither the width nor height exceed the maximum allowed by MAC images. If Paint Shop Pro reduces the size of your image, the aspect ratio will be maintained.
2. It reduces the image's color depth, if necessary, to black and white. This step will use a weighted palette, grey color and Floyd-Steinberg error diffusion. If you wish different options for the color reduction, then reduce the colors of the image with "Colors", "Decrease Color Depth" before using "Prep for MAC".
3. It inverts the image's colors if you selected this option. *MAC files should have a white background.* "Prep for MAC" gives you the option to invert the image colors during the preparation operation. Refer to the section on "Colors", "Negative Image" for more information on inverting the image colors.
4. It pads any area outside of the image with a white background to bring the image to the proper size of a MAC image.

Colors Menu Commands

Use the scroll bar to see more commands.

Adjust RGB

This selection allows you to alter the values of your image's red, green, and blue color components. The changes you select will be applied to all colors within the image.

Related Topic - [Adjusting RGB](#)

Related Topic - [The Adjust RGB Dialog Box](#)

Brightness/Contrast

This selection allows you to alter the brightness and/or contrast of an image.

Related Topic - [Adjusting Brightness/Contrast](#)

Related Topic - [The Brightness/Contrast Dialog Box](#)

Gamma Correct

This selection allows you to apply a gamma correction value to the colors of the image. This will correct the difference in gamma levels between the computer's monitor and the equipment that originally produced the image.

Related Topic - [Gamma Correcting](#)

Related Topic - [The Gamma Correction Dialog Box](#)

Grey Scale

This selection will change the image's colors to the grey scale values of the original colors.

Related Topic - [Grey Scale An Image](#)

Negative Image

This selection creates a photographic negative of the original image.

Related Topic - [Creating A Photographic Negative](#)

Count Colors Used

This selection counts the number of unique colors that are used in the image.

Related Topic - [Count The Colors Used](#)

Decrease Color Depth

This selection allows you to decrease the maximum number of colors that the image is capable of containing.

Related Topic - [Decrease The Color Depth](#)

Related Topic - [The Decrease Color Depth - 2 Colors Dialog Box](#)

Related Topic - [The Decrease Color Depth - 16 Colors Dialog Box](#)

Related Topic - [The Decrease Color Depth - 256 Colors Dialog Box](#)

Related Topic - [The Decrease Color Depth - 32k Colors Dialog Box](#)

Increase Color Depth

This selection allows you to increase the color depth of an image by increasing the number of bits per pixel that the image uses to hold its colors. Increasing the bits per pixel will allow the image to contain more colors.

Related Topic - [Increase The Color Depth](#)

Adjusting RGB

To adjust the RGB color components:

1. From the Paint Shop Pro Menu Bar, select "Colors".
2. Then select "Adjust RGB" from the pulled-down menu. This opens the "Adjust RGB" dialog box. This allows you to enter the way you want the operation to be applied.
3. Enter the adjustments for the Red, Green, and/or Blue components.
4. Click the "OK" command button to start the process.

Adjusting Brightness/Contrast

To adjust Brightness/Contrast:

1. From the Paint Shop Pro Menu Bar, select "Colors".
2. Then select "Brightness/Contrast" from the pulled-down menu. This opens the "Brightness/Contrast" dialog box. This allows you to enter the way you want the operation to be applied.
3. Enter the adjustments for the Brightness and/or the Contrast.
4. Click the "OK" command button to start the process.

Gamma Correcting

Your images may come from many different sources. Some of these sources do not use the same gamma values as your computer's monitor. As a result, your image's colors may not be correct.

An example of an image that may need a gamma correction would be an image that was scanned by a scanner. Scanners use different gamma values than computer monitors.

An example of an image that should not need gamma correction would be an image that was produced with a painting program. Since the colors of the image were selected on a computer monitor, your monitor should be able to represent the original colors.

To correct the gamma values of the image:

1. From the Paint Shop Pro Menu Bar, select "Colors".
2. Then select "Gamma Correct" from the pulled-down menu. This opens the "Gamma Correction" dialog box.
3. Enter the gamma correction value of your choice in the edit box, or accept the suggested correction value. The value must be greater than zero and less than five.
4. Click the "OK" command button to start the process.

Grey Scaling An Image

To change a color image to grey scale:

1. From the Paint Shop Pro Menu Bar, select "Colors".
2. Then select "Grey Scale" from the pulled-down menu.

Creating A Photographic Negative

To create a photographic negative of the image:

1. From the Paint Shop Pro Menu Bar, select "Colors".
2. Then select "Negative Image" from the pulled-down menu.

Count The Colors Used

To count the number of unique colors in the image:

1. From the Paint Shop Pro Menu Bar, select "Colors".
2. Then select "Count Colors Used" from the pulled-down menu.
3. A message box will display the number of unique colors used.
4. Click the "OK" command button in the message box.

Decrease The Color Depth

To decrease color depth of the image:

1. From the Paint Shop Pro Menu Bar, select "Colors".
2. Then select "Decrease Color Depth" from the pulled-down menu. This opens another pulled-down menu of color depth selections.
3. Select the menu option corresponding to the number of colors you want the color depth to be.
 - 2 Colors (1 Bit) Selection - This selection decreases the image's colors to black and white.
 - 16 Colors (4 Bit) Selection - This selection decreases the number of colors to 16 or less.
 - 256 Colors (8 bit) Selection - This selection decreases the number of colors to 256 or less.
 - 32K Colors (16 Bit) Selection - This selection decreases the number of colors to 32,768 or less.

This will open a dialog box corresponding to the selected color depth.

[The Decrease Color Depth - 2 Colors Dialog Box](#)

[The Decrease Color Depth - 16 Colors Dialog Box](#)

[The Decrease Color Depth - 256 Colors Dialog Box](#)

[The Decrease Color Depth - 32k Colors Dialog Box](#)

4. Select the option buttons you want from the associated dialog box.
5. Click the "OK" command button in the associated dialog box.

Increase The Color Depth

To increase the color depth of an image:

1. From the Paint Shop Pro Menu Bar, select "Colors".
2. Then select "Increase Color Depth" from the pulled-down menu. This opens another pulled-down menu of color depth selections.
3. Select the menu option corresponding to the number of colors you want the color depth to be.

Capture Menu Commands

Use the scroll bar to see more commands.

Area

This option allows you to capture a rectangular area of the screen.

Related Topic - [**Area Capturing**](#)

Related Topic - [**Window Capturing**](#)

Related Topic - [**The Capturing Options Dialog Box**](#)

Full Screen

This option allows you to capture the entire screen.

Related Topic - [**Full Screen Capturing**](#)

Related Topic - [**The Capturing Options Dialog Box**](#)

Area Capturing

To capture an area of the screen:

1. From the Paint Shop Pro Menu Bar, select "Capture".
2. Select "Area" to capture a part of the screen.
3. From **the "Capturing Options" dialog box**, select what you want to happen to Paint Shop Pro during the capture.
4. Move the cursor to the upper left corner of the area to be captured.
5. Hold down the left mouse button.
6. Move the cursor to the lower right corner of the area to be selected.

During the framing of the area to be captured, the size of the area in pixels will be displayed in the center of the framed area.

7. Release the left mouse button. The marked area will be displayed in the Paint Shop Pro window.

Window Capturing

An individual window may be captured without having to use the Capture-Area option.

To capture just a window:

1. Select the window you want to capture by making it the active application.
2. Hold down the "Alt" key and press the "Print Screen" key. This captures the active window to the Clipboard.
3. Start Paint Shop Pro, if it is not already running, and make it the active window.
4. Select "Edit-Paste" from the Paint Shop Pro menu. This will paste the contents of the clipboard into the Paint Shop Pro screen. Save the image for further use.

To capture a window - with a menu pulled-down:

1. Select the window you want to capture by making it the active application.
2. Hold down the "Alt" key and press the underlined letter of the menu to be pulled-down. Do not release the "Alt" key, continue holding it down. (The pulled-down menu remains down.) While you're still holding down the "Alt" key, press the "Print Screen" key. This captures the active window to the clipboard. Now you can release the keys.
3. Start Paint Shop Pro, if it is not already running, and make it the active window.
4. Select "Edit-Paste" from the Paint Shop Pro menu. This will paste the contents of the clipboard into the *Paint Shop Pro* screen. Save the image for further use.

Full Screen Capturing

To capture the full screen:

1. From the Paint Shop Pro Menu Bar, select "Capture".
2. Select "Full Screen" to capture the entire screen.
3. From **the "Capturing Options" dialog box**, select what you want to happen to Paint Shop Pro during the capture.
4. The full screen will be displayed in the Paint Shop Pro window. You can use the scroll bars to move portions of the image outside the window into view.

Help Menu Commands

Index

Use this selection to display a list of topics for using Paint Shop Pro. Click the topic of your choice for helpful information.

Related Topic - [**The Help Index**](#)

Keyboard

Use this selection to display helpful information about the "hot-keys" available for Paint Shop Pro.

Related Topic - [**How To See Paint Shop Pro Hot Keys**](#)

Using Help

If you are new to *Windows*, use this selection to display helpful information about using the help screens. This is the help information that is built in to the operation of *Windows*. It will show you various ways you can access the help information, as well as tips about using *Windows*.

Related Topic - [**Help With Help**](#)

About

Use this selection to display the version of Paint Shop Pro that you are using.

Related Topic - [**About Paint Shop Pro**](#)

The Help Index

To see the index of help topics:

1. From the Paint Shop Pro Menu Bar, select "Help".
2. Then select "Index" from the pulled-down menu. This opens the "Paint Shop Pro Help" window containing an index of topics you can select for viewing.
3. Close the help window when you are through. You will be returned to the Paint Shop Pro window.

How To See Paint Shop Pro Hot Keys

To see the available "hot keys":

1. From the Paint Shop Pro Menu Bar, select "Help".
2. Then select "Keyboard" from the pulled-down menu. This opens the "Paint Shop Pro Help" window listing "Hot-Keys" you may use.
3. Close the help window when you are through. You will be returned to the Paint Shop Pro window.

Help With Help

To get help using help:

1. From the Paint Shop Pro Menu Bar, select "Help".
2. Then select "Using Help" from the pulled-down menu. This opens the "Using Windows Help" window.
3. Close the help window when you are through. You will be returned to the Paint Shop Pro window.

About Paint Shop Pro

To see the copyright and version number of Paint Shop Pro:

1. From the Paint Shop Pro Menu Bar, select "Help".
2. Then select "About" from the pulled-down menu. This opens the "About Paint Shop Pro" dialog box describing the copyright and the version of Paint Shop Pro that you are using.
3. Click the "OK" command button in the dialog box. You will be returned to the Paint Shop Pro window.

Paint Shop Pro Keys

Use the following keys in Paint Shop Pro:

The following keys are "hot keys" and may be used instead of making the selection through the menu.

Function	Key(s)
File-Open	Ctrl + O
File-Save As	Ctrl + S
File-Print	Ctrl + P
File-Delete	Del
Edit-Undo	Alt + Backspace
Edit-Copy	Ctrl + Ins
Edit-Paste	Shift + Ins
View-Full Screen	Ctrl + V
Image-Flip	Ctrl + F
Image-Mirror	Ctrl + M
Image-Rotate Right	Ctrl + R
Image-Rotate Left	Ctrl + L
Help	F1

Scrolling Keys:

The cursor keys may be used for scrolling an image in small increments. Scrolling an image may be done in either windowed mode or full screen mode. You can hold the cursor key down for continuous movement.

Right Arrow - Moves toward the right side of the image.

Left Arrow - Moves toward the left side of the image.

Up Arrow - Moves toward the top of the image.

Down Arrow - Moves toward the bottom of the image.

To scroll an image in larger increments use the following keys:

Page Up - Moves toward the right in larger increments.

Page Down - Moves toward the left in larger increments.

Home - Moves toward the top in larger increments.

End - Moves toward the bottom in larger increments.

Image File Formats

General Information:

Images that may be used by PC computers are saved in many different formats. Paint Shop Pro supports a number of these formats.

Different image file formats are capable of holding different quantities of colors. Each file format will have a reference to the number of bits per pixel that the format is capable of supporting.

1 bit per pixel refers to a image with up to 2 colors.

4 bits per pixel refers to a image with up to 16 colors.

8 bits per pixel refers to a image with up to 256 colors.

16 bits per pixel refers to a image with up to 32,768 colors.

24 bits per pixel refers to a image with up to 16,777,216 colors.

Select a Image file format for specific information:

BMP/DIB/RLE

GIF

IMG

JAS

MAC

MSP

PCX

PIC

RAS

TGA

TIFF

WPG

BMP/DIB/RLE File Formats

Overview:

The BMP, DIB, and RLE files are known as "Device Independent Bitmap" files, or "DIB's". These files exist in two different formats:

OS/2 Format

The *OS/2* formats were the first of the two different formats designed. Images saved using this format may be used with *OS/2's* Presentation Manager.

Windows Format

An enhanced "DIB" file format was released with Microsoft *Windows*.

These files commonly use different extensions for their file names: BMP, DIB, and RLE, according to where they are used. Although their file name *extensions* are different, the files themselves are the same (within either *OS/2* or *Windows*).

BMP Files

BMP files can be created with *Windows' Paintbrush* and used as "wallpaper" for the background when running *Windows*. See your *Windows* manual about using BMP files as wallpaper.

DIB Files

DIB files can be used as image files in the *Windows* environment. They can also be applied to computer multimedia systems that are emerging in the marketplace.

RLE Files

RLE files are *Windows* "DIB" files that use one of the RLE compression routines. Thus, saving an image as a "DIB" using one of the RLE compressions would produce an identical file as saving the image as an RLE file. The only difference would be the file name extension.

An RLE image file may be used as a replacement opening screen for *Windows*. (*It must be a 4 bits-per-pixel RLE file.*) Refer to Appendix B of the User's Manual, "Questions & Answers", for the procedure.

Format Characteristics

The BMP-*OS/2*-RGB format supports bits-per-pixel: 1, 4, 8, 24.

The BMP-*Windows*-RGB format supports bits-per-pixel: 1, 4, 8, 24.

The BMP-*Windows*-RLE format supports bits-per-pixel: 4, 8.

The DIB-*OS/2*-RGB format supports bits-per-pixel: 1, 4, 8, 24.

The DIB-*Windows*-RGB format supports bits-per-pixel: 1, 4, 8, 24.

The DIB-*Windows*-RLE format supports bits-per-pixel: 4, 8.

The RLE format will support bits-per-pixel: 4, 8.

OS/2 BMP and DIB files are not compressed (RGB).

Windows BMP and DIB files may be saved using no compression (RGB) or using run length encoded compression (RLE). RLE may only be used on 4 and 8 bits-per-pixel images.

Paint Shop Pro Capability

Paint Shop Pro reads and saves:

BMP-*OS/2*-RGB format bits-per-pixel: 1, 4, 8, 24.

BMP-*Windows*-RGB format bits-per-pixel: 1, 4, 8, 24.
BMP-*Windows*-RLE format bits-per-pixel: 4, 8.

DIB-OS/2-RGB format bits-per-pixel: 1, 4, 8, 24.
DIB-*Windows*-RGB format bits-per-pixel: 1, 4, 8, 24.
DIB-*Windows*-RLE format bits-per-pixel: 4, 8.

RLE format bits-per-pixel: 4, 8.

Opening BMP, DIB, or RLE Format Files

Select the BMP, DIB, or RLE file format from the "Formats" list box on the "File", "Open" dialog box. Paint Shop Pro will decide what type of "DIB" file that it is opening and process the file accordingly.

Saving Images As BMP, DIB, or RLE Format Files

To save an image as a "DIB" file, select one of the BMP, DIB, or RLE options from the "Format" list box on the "File", "Save As" dialog box. Only the versions that are capable of holding the quantities of colors in the current image will be displayed in the "Format" selection list. The possible BMP/DIB/RLE formats are:

BMP - *OS/2*

BMP - *Windows* - RGB Encoded (no compression)

BMP - *Windows* - RLE Encoded (run length encoded)

DIB - *OS/2*

DIB - *Windows* - RGB Encoded (no compression)

DIB - *Windows* - RLE Encoded (run length encoded)

RLE

GIF File Formats

Overview:

GIF files were designed to create the smallest possible image files for uploading and downloading from electronic Bulletin Board Systems (BBS).

There are two GIF file versions; 87a and 89a. Version 87a was the first of the two versions to appear. Version 89a added new features to the 87a format.

Both versions may use an encoding method referred to as interlacing. When an image is saved by using four passes instead of just one, it is called interlacing. On each pass, certain lines of the image are saved to the file. If the program decoding a GIF file displays the image as it is decoded, the user will be able to see the four passes of the decoding cycle. This will allow the user to get a good idea of what the image will look like before even half of the image is decoded.

Some communication programs allow the user to download GIF files and view them as they are downloaded. If the image is interlaced, the user will be able to decide if the image is one they like before half of the download is complete. If the user does not like the image, the download can be aborted. This results in the saving of time and money for the person downloading the image.

Format Characteristics

All the GIF formats support bits-per-pixel: 1, 4, 8.
Both versions 87a and 89a may be interlaced.
GIF files may contain more than one image.

Paint Shop Pro Capability

Paint Shop Pro reads and saves:
GIF Version 87a-Non interlaced bits-per-pixel: 1, 4, 8.
GIF Version 87a-Interlaced bits-per-pixel: 1, 4, 8.
GIF Version 89a-Non interlaced bits-per-pixel: 1, 4, 8.
GIF Version 89a-Interlaced bits-per-pixel: 1, 4, 8.

If the GIF file contains multiple images, Paint Shop Pro will only process the first image in the file.

If a version 89a contains some of the enhanced file information, Paint Shop Pro will ignore the information and just retrieve the image.

Opening GIF Format Files

Select the GIF file format from the "Formats" list box on the "File", "Open" dialog box. Paint Shop Pro will decide what type of GIF file that it is opening and process the file accordingly.

Saving Images As GIF Format Files

To save an image as a GIF, select one of the GIF options from the "Format" list box on the "File", "Save As" dialog box. The GIF formats are:

GIF - Ver. 87a Non-Interlaced
GIF - Ver. 87a Interlaced
GIF - Ver. 89a Non-Interlaced
GIF - Ver. 89a Interlaced

Notes:

Paint Shop Pro does not use any of the new features of the 89a version. So, saving an image as an 89a may cause some older GIF readers to refuse to read your GIF files.

Interlacing is beneficial if you will be uploading the image to an electronic Bulletin Board Service. Saving as an interlaced file will not slow down the reading or saving of the file.

IMG File Formats

Overview:

IMG files were designed to work with the GEM environment. The files were originally the result of the GEM Paint program. Since the application *Ventura Publisher* worked in the GEM environment, it also supported the IMG file format. In order to maintain compatibility, various other desktop publishing applications have added support for importing and exporting this format.

Format Characteristics

The IMG-Old Style format supports bits-per-pixel: 1, 4, 8.

The IMG-New Style format supports bits-per-pixel: 1, 4, 8.

Paint Shop Pro Capability

Paint Shop Pro reads:

IMG-Old Style format bits-per-pixel: 1.

IMG-New Style format bits-per-pixel: 1.

Paint Shop Pro saves:

IMG-Old Style format bits-per-pixel: 1.

(This will allow applications that have not added support for the "New style" to use images saved by Paint Shop Pro.)

Opening IMG Format Files

Select the IMG file format from the "Format" list box on the "File", "Open" dialog box. Paint Shop Pro will decide which style IMG file that it is opening and process the file accordingly.

Saving Images As IMG Format Files

To save an image as an IMG, select the IMG format from the "Format" list box on the "File", "Save As" dialog box. The IMG format is:

IMG

JAS File Formats

Overview:

The JAS format files were designed to create the smallest possible image files for 24 bits-per-pixel color images and 8 bits-per-pixel grey scaled images. JAS uses a discrete cosine transformation to alter the image data and then compresses that data. This process results in a substantial reduction of the file size when the image is saved to the disk. Saving and retrieving an image using the JAS file format will result in some loss of image data. The amount of loss is dependent on the compression level that you have selected with the "File" - "Preferences" - "JAS" selection. By using the lowest possible value for the file compression you will have the least amount of loss.

There are two versions of the JAS format:

JAS (without color palette)

JAS (grey scale)

Format Characteristics

The JAS (without color palette) format supports bits-per-pixel: 24

The JAS (grey scale) format supports bits-per-pixel: 8

Paint Shop Pro Capability

Paint Shop Pro reads and saves:

JAS (without palette) format bits-per-pixel: 24

JAS (grey scale) format bits-per-pixel: 8

Opening JAS Format Files

Select the JAS file format from the "Format" list box on the "File", "Open" dialog box. Paint Shop Pro will decide which style JAS file that it is opening and process the file accordingly.

Saving Images As JAS Format Files

To save an image as a JAS, select the JAS format from the "Format" list box on the "File", "Save As" dialog box. The JAS format is:

JAS

Note:

Whenever you save an image as a JAS file, you should immediately load the image that was just saved. Check to make sure the amount of data loss is acceptable before deleting your original image.

MAC File Formats

Overview:

MAC files come from the *Macintosh* program *MacPaint*. Large libraries of clip art exist in the MAC format. When the MAC files started migrating from the *Macintosh* to the PC world, a header was added to the file format.

Format Characteristics

The MAC- No header format supports bits-per-pixel: 1.

The MAC- Header format supports bits-per-pixel: 1.

The MAC format requires an image width of 576 pixels and a height of 720 lines.

Paint Shop Pro Capability

Paint Shop Pro reads and saves:

MAC- No header format bits-per-pixel: 1.

MAC- Header format bits-per-pixel: 1.

Opening MAC Format Files

Select the MAC file format from the "Format" list box on the "File", "Open" dialog box. Paint Shop Pro will decide if the MAC file contains a header and process the file accordingly.

Saving Images As MAC Format Files

To save an image as a MAC, select one of the MAC options from the "Format" list box on the "File", "Save As" dialog box. The possible MAC formats are:

MAC - No Header

MAC - With Header

Notes:

Since converting an image to fit all of the MAC requirements can be tedious, Paint Shop Pro provides a one step process for preparing an image to be saved as a MAC file. The **Image Menu** has a command Prep for MAC that will take care of all the steps for you.

You can transfer an image file from PC to *Macintosh*. Refer to Appendix B of the User's Manual, Questions and Answers, for the procedure.

Unless you have a PC application that requires no header, you should save your MAC files with a header.

MSP File Formats

Overview:

MSP files come from the Microsoft Paint program (that came with *Windows* versions prior to version 3.0). There are two versions of the MSP file format.

Old Version

New Version

Format Characteristics

The MSP-Old Version format supports bits-per-pixel: 1.

The MSP-New Version format supports bits-per-pixel: 1.

Paint Shop Pro Capability

Paint Shop Pro reads:

MSP-Old Version format bits-per-pixel: 1.

MSP-New Version format bits-per-pixel: 1.

Paint Shop Pro saves:

MSP-New Version format bits-per-pixel: 1.

Opening MSP Format Files

Select the MSP file format from the "Format" list box on the "File", "Open" dialog box. Paint Shop Pro will determine which MSP version the file is and process the file accordingly.

Saving Images As MSP Format Files

To save an image as an MSP, select the MSP option from the "Format" list box on the "File", "Save As" dialog box. The MSP format is:

MSP

PCX File Formats

Overview:

PCX files were originally created for use with the Zsoft *Paintbrush* program. With no standard to the industry, this format became the standard by default. This format is supported by more applications than any other format.

Format Characteristics

The PCX Version 0 format supports bits-per-pixel: 1.

The PCX Version 2 format supports bits-per-pixel: 1, 4.

The PCX Version 3 format supports bits-per-pixel: 1, 4.

The PCX Version 5 format supports bits-per-pixel: 1, 4, 8, 24.

Paint Shop Pro Capability

Paint Shop Pro reads:

PCX Version 0 bits-per-pixel: 1.

PCX Version 2 bits-per-pixel: 1, 4.

PCX Version 3 bits-per-pixel: 1, 4.

PCX Version 5 bits-per-pixel: 1, 4, 8, 24.

Paint Shop Pro saves:

PCX Version 0 bits-per-pixel: 1.

PCX Version 2 bits-per-pixel: 1, 4.

PCX Version 5 bits-per-pixel: 1, 4, 8, 24.

Opening PCX Format Files

Select the PCX file format from the "Format" list box on the "File", "Open" dialog box. Paint Shop Pro will determine which PCX version the file is and process the file accordingly.

Version 3 files do not contain palette information. If the file is a version 3, Paint Shop Pro will use the default VGA colors used by *Windows* as the palette. This may result in a different looking image than you would see when using some other image viewer.

Saving Images As PCX Format Files

To save an image as a PCX, select one of the PCX options from the "Format" list box on the "File", "Save As" dialog box. Only the versions that are capable of holding the quantities of colors in the current image will be displayed in the "Format" list. The possible PCX formats are:

PCX - Version 0

PCX - Version 2

PCX - Version 5

Notes:

In order to allow older applications the ability to read the PCX files created by Paint Shop Pro, use the lowest number version possible.

Some applications did not add support for the older versions. If you find an application that does not like one of the older versions save the image as a PCX - Version 5.

PIC File Formats

Overview:

The PIC files that are supported come from *Pictor* or *PC Paint*. *This PIC file format is not compatible with the Lotus PIC files.*

Format Characteristics

The PIC-Pictor format supports bits-per-pixel: 1, 8.

The PIC-PC Paint format supports bits-per-pixel: 4.

Paint Shop Pro Capability

Paint Shop Pro reads and saves:

PIC-Pictor format bits-per-pixel: 1, 8.

PIC-PC Paint format bits-per-pixel: 4.

Opening PIC Format Files

Select the PIC file format from the "Format" list box on the "File", "Open" dialog box. Paint Shop Pro will determine what type of PIC it is and process the file accordingly.

Saving Images As PIC Format Files

To save an image as a PIC, select the PIC option from the "Format" list box on the "File", "Save As" dialog box. The PIC file format is:

PIC

Notes:

When saving an image as a PIC file, Paint Shop Pro will decide which type of PIC to use.

1 bit images will be saved as a *Pictor* PIC.

4 bit images will be saved as a *PC Paint* PIC.

8 bit images will be saved as a *Pictor* PIC.

RAS File Formats

Overview:

RAS files are Sun Microsystems raster file format files. There are three types of RAS files:

Type 0 - Old style.

Type 1 - Modern style.

Type 2 - Experimental.

Only the "Type 1 - Modern Style" is explained here.

Format Characteristics

The RAS-Type 1-Modern Style format supports bits-per-pixel: 1, 8, 24, 32.

Paint Shop Pro Capability

Paint Shop Pro reads:

RAS-Type 1-Modern Style format bits-per-pixel: 1, 8, 24, 32.

Paint Shop Pro saves:

RAS-Type 1-Modern Style format bits-per-pixel: 1, 8, 24.

Opening RAS Format Files

Select the RAS file format from the "Format" list box on the "File", "Open" dialog box.

Saving Images As RAS Format Files

To save an image as an RAS, select the RAS option from the "Format" list box on the "File", "Save As" dialog box. The RAS file format is:

RAS

TGA File Formats

Overview:

The *Targa* TGA format was developed by Truevision for their *Targa* and *Vista* products. It is an industry standard although not as widely supported as PCX or TIFF formats. TGA files may be saved as non-compressed or compressed (run-length encoded).

Format Characteristics

The TGA - No Compression format supports bits-per-pixel: 8, 16, 24, 32.

The TGA - Compressed format supports bits-per-pixel: 8, 16, 24, 32.

Paint Shop Pro Capability

Paint Shop Pro reads:

TGA - No Compression format bits-per-pixel: 8, 16, 24, 32.

TGA - Compressed format bits-per-pixel: 8, 16, 24, 32.

Paint Shop Pro saves:

TGA - No Compression format bits-per-pixel: 8, 16, 24.

TGA - Compressed format bits-per-pixel: 8, 16, 24.

Opening TGA Format Files

Select the TGA file format from the "Format" list box on the "File", "Open" dialog box. Paint Shop Pro will determine what type of TGA it is and process the file accordingly.

Since *Windows* does not recognize 16 and 32 bits-per-pixel, Paint Shop Pro will treat them as 24 bits-per-pixel. A 16 bits-per-pixel image will be promoted to 24 bits-per-pixel. A 32 bits-per-pixel image will be demoted to a 24 bits-per-pixel image. This should not make any difference to your image since the 8 extra bits of a TGA 32 bits-per-pixel file are used to store Alpha or transparency information.

Saving Images As TGA Format Files

To save an image as a TGA, select one of the TGA options from the "Format" list box on the "File", "Save As" dialog box. Only the versions that are capable of holding the quantities of colors in the current image will be displayed in the "Format" list. The possible TGA formats are:

TGA - 8 Bits No Compression

TGA - 8 Bits Compressed

TGA - 16 Bits No Compression

TGA - 16 Bits Compressed

TGA - 24 Bits No Compression

TGA - 24 Bits Compressed

TIFF File Formats

Overview:

The Tagged Image File Format (TIFF) was designed to become the standard format. In order to become the standard, the format was designed to handle just about any possibility. The result of this design provided the flexibility of an infinite number of possibilities of how a TIFF image is saved. Therefore, no application, including Paint Shop Pro, can claim to support all TIFF variations. The best that an application can do is to support as many TIFF variations as possible, but there will always be an obscure variation that will cause a problem for some application, including Paint Shop Pro.

The TIFF format differentiates between types of images. These categories are: black and white, grey scaled and colored. Paint Shop Pro supports all of these categories.

Format Characteristics

The TIFF format can use one of six encoding routines. These encoding routines are: No-compression, Huffman, Pack Bits, LZW, Fax Group 3, and Fax Group 4.

The TIFF-No Compression format supports bits-per-pixel: 1, 4, 8, 24.

The TIFF-Huffman format supports bits-per-pixel: 1.

The TIFF-Pack Bits format supports bits-per-pixel: 1.

The TIFF-LZW format supports bits-per-pixel: 4, 8, 24.

The TIFF-Fax Group 3 format supports bits-per-pixel: 1.

The TIFF-Fax Group 4 format supports bits-per-pixel: 1.

Paint Shop Pro Capability

Paint Shop Pro reads and saves:

TIFF-No compression format bits-per-pixel: 1, 4, 8, 24.

TIFF-Huffman format bits-per-pixel: 1.

TIFF-Pack Bits format bits-per-pixel: 1.

TIFF-LZW format bits-per-pixel: 4, 8, 24.

Opening TIFF Format Files

Select the TIF file format from the "Format" list box on the "File", "Open" dialog box. Paint Shop Pro will determine which encoding method is used and process the file accordingly.

Saving Images As TIFF Format Files

To save an image as a TIFF, select one of the TIF options from the "Format" list box on the "File", "Save As" dialog box. Only the versions that are capable of holding the quantities of colors in the current image will be displayed in the "Format" list. The possible options are:

TIF - No Compression

TIF - Huffman Compressed

TIF - Pack Bits Compressed

TIF - LZW Compressed

Notes:

The Pack Bits and Huffman options are available if the image is a 1 bit-per pixel image.

The LZW Compressed option will be available if the image is a 4, 8, or 24 bits-per-pixel image.

If an application is having a problem reading compressed TIFF files created by Paint Shop Pro, try re-saving the file without compression.

WPG File Formats

Overview:

The WPG format is the format used by *WordPerfect*. It first appeared with the release of *WordPerfect* 5.0. With the release of version 5.1, the format was changed.

Format Characteristics

The WPG Version 5.0 format supports bits-per-pixel: 1, 4, 8.

The WPG Version 5.1 format supports bits-per-pixel: 1, 4, 8.

Paint Shop Pro Capability

Paint Shop Pro reads and saves:

The WPG Version 5.0 format bits-per-pixel: 1, 4, 8.

The WPG Version 5.1 format bits-per-pixel: 1, 4, 8.

Opening WPG Format Files

Select the WPG file format from the "Format" list box on the "File", "Open" dialog box. Paint Shop Pro will decide which version WPG file the image is, and process the file accordingly.

A WPG file may contain an image made up of vector data or raster data. Paint Shop Pro *will only process the raster data of the file*. If there is no raster data to a WPG file, then Paint Shop Pro will indicate this with a message box. Since there is no raster data, Paint Shop Pro will not have an image to display, and therefore will not process the file.

Saving Images As WPG Format Files

To save an image as a WPG, select one of the WPG options from the "Format" list box on the "File", "Save As" dialog box. The WPG options are:

WPG - Version 5.0

WPG - Version 5.1

Note:

Use the format option that is the same as the version of *WordPerfect* in which you will use the image.

Memory Requirements

Paint Shop Pro keeps the current image in memory. This makes Paint Shop Pro run faster than if it stored your current image on the disk and then accessed the disk each time some part of the image data was needed. Keeping the image in memory may require substantial amounts of memory, depending on the size and resolution of the image.

Windows 3.0, in 386 Enhanced Mode, can simulate additional computer memory by use of a "swap file". If your computer has only 2 megabytes of actual memory, Paint Shop Pro could have access to 6 megabytes of *Windows* memory if your swap file is large enough. (Refer to your *Windows* manual for the procedure to make a swap file.) This allows systems with large amounts of memory to operate Paint Shop Pro very quickly, while systems with less memory cause Paint Shop Pro to become a disk based application.

To help you understand how much memory is required, here are some memory requirement examples:

An image with a height of 800, a width of 600, and a bits per pixel of 1 would require 58K of memory. $(800 \times 600 / 8 / 1024)$

An image with a height of 800, a width of 600, and a bits per pixel of 8 would require 468K of memory. $(800 \times 600 / 1024)$

An image with a height of 800, a width of 600, and a bits per pixel of 24 would require 1.4Meg of memory. $(800 \times 600 \times 3 / 1024)$

As you can see from these examples, *the amount of required memory increases dramatically as the number of colors are increased.*

When Paint Shop Pro is asked to do some operation, the operation may require additional memory. For example, if you want to rotate the image to the right, then a copy of the existing image is created and the rotation operation is performed on the copy. Consequently, this *doubles* the required memory.

Additionally, Paint Shop Pro allows you to save the "undo image" in memory. If you are storing the "undo image" in memory and you select rotate twice, then you would have one copy of the image in memory for the "undo", one copy of the current image, and then the rotate operation would try to obtain *another* copy for the rotation. This would result in the worst case where *three copies of the image are in memory at the same time*, and a maximum load is put on your memory needs. To avoid this situation, you should set up the "undo" to save the "undo image" to disk instead of in memory.

If you do not have enough memory to handle an operation, Paint Shop Pro will display a message to inform you of that. There are two different types of error message that Paint Shop Pro may display.

The first type is a "Not enough contiguous memory available" and the other is "Not enough system memory available". When either of these errors occurs, the original image will be restored and you will be able to save the image at that point. Below are the procedures to follow if you get one of these error messages.

Not enough CONTIGUOUS memory available:

This message indicates that *Windows* has enough computer *system* memory available to complete the operation, *but there are memory blocks allocated which are dividing this area into smaller pieces.* This is usually due to an application running in the background. Make

sure that all other applications have been closed down. Even if an application only takes a tiny amount of memory, it can divide 8 megabytes down to four 2 megabyte blocks. If all other applications have been closed, save your image and restart *Windows*.

Not enough SYSTEM memory available:

This message indicates that there is *not enough computer system memory to complete the operation*. Again, you should make sure that all other applications have been shut down. Also, any *Windows* wallpaper backgrounds should be removed. A 24 bit BMP wallpaper at 800x600 uses over 1.4 megabytes of memory. If all else fails you should exit *Windows* and increase the size of its swap file. See your *Windows* manual for information on increasing the size of a swap file.

Video Systems

In order for *Windows* to run on your computer, *Windows* must communicate with your computer hardware by way of drivers. The driver that is used for your video system is called a video driver. This driver has the responsibility of being the middle man between *Windows* and your video system. This results in some limitations being placed on your video system. *Windows* places some limitations on the video driver in order that it may work properly with numerous applications all running at the same time. The video driver places limitations on your video system if you are using a video driver that is capable of fewer colors than your video system is capable of.

Some examples of a *Windows*' limitation are:

Windows requires a 16 color driver to use a set palette. If you display a 16 color image but all of the colors of the image are outside of the *Windows* set palette then none of the colors can be displayed properly. *Windows* will map the colors of the image to the closest colors from the set palette. This will result in the image being displayed with the wrong colors.

Windows requires a 256 color driver to reserve 20 colors for *Windows*' use. Thus you do not truly have 256 colors, but rather 236 plus 20 set colors. If you try to display a 256 color image that does not use any of the 20 set colors, then only 236 colors can be used. *Windows* will map the extra 20 colors, of the image, to the closest of the other 236 colors or the 20 set colors.

An example of a driver's limitation is:

If you are using a video card that is capable of 256 colors but you are using a video driver that will only display 16 colors then your images with more than 16 colors will be displayed using only 16 colors. It is not uncommon to have a card capable of 256 colors and be using a driver that will only display 16 colors. The standard VGA card is capable of 256 colors in only one of its video modes. This 256 color mode is not used by *Windows*. The mode that is used by *Windows* uses only 16 colors. Thus a standard VGA card under *Windows* will use *Windows*' standard VGA driver and only be displaying 16 colors.

Paint Shop Pro watches for the condition where the image has more colors than your video driver is capable of displaying. If this condition exists Paint Shop Pro will dither the image down to the number of colors that your video driver is capable of displaying. The resulting dithered image will be a close approximation of what the image looks like. Paint Shop Pro still maintains the original image in memory. If you decide to change the image in any way that change will be applied to the original image and a new dithered image will be created to display your changes. In this way, you can work with images that are beyond the limits of your video driver.

The "File Open" Dialog Box

"Filename:" Edit Box

When you first open this dialog box, the "Filename:" edit box displays only the filename *extension* which corresponds to the image file format that is highlighted in the "Format:" list box.

You can type in the filename you want to open (if you know what it is) in this box. You will have to include the complete path with the filename if the "Directory:" display is not the one containing the file.

You can select a file displayed in the "Files:" list box by clicking the mouse pointer on its filename to highlight it. The highlighted filename will become displayed, preceding the extension, in the "Filename:" edit box.

"Directory:" Display

This displays the current directory. If you change the drive and/or the directory (either by using the "Filename:" edit box or the "Directories:" list box), the "Directory:" display changes accordingly.

"Files:" List Box

Image files listed in the "Files:" list box are those that are located in the directory currently displayed and have the format extension currently highlighted in the "Format:" list box.

If you want to list image files other than those currently listed, you can do this by either:
Selecting a different drive or directory (in the "Directories:" list box),
or
Selecting a different image format (in the "Format:" list box),
or
Both of the above.

Use the scroll buttons to display any files that are scrolled off the list.

You can open a file displayed in the "Files:" list box by clicking the mouse pointer on its filename and then clicking the "OK" command button. (Short cut: you can rapidly *double click* on the filename to open it without having to click the "OK" command button.)

"Directories:" List Box

The "Directories:" list box displays the drives and directories available. If you want to change to a different drive or directory, double click on the drive, or directory, of your choice.

"Format:" List Box

All the image file formats that Paint Shop Pro is capable of reading are displayed in the "Format:" list box on the right. You can click the mouse pointer on the type of format you want to open. Use the scroll buttons to display any that are scrolled off the list.

"Info" Command Button

Click the "Info" command button to display information about the properties of the highlighted file. You do not have to open the file, but it must be highlighted in the "Files:" list box. You can display the properties of all files in the list, in turn, without having to open them.

"Cancel" Command Button

If you change your mind and want to back out without opening any file listed, you can click

the "Cancel" command button. All selections you may have made will be disregarded, and you will be returned to the Paint Shop Pro window.

"OK" Command Button

Click the "OK" command button to open the highlighted file.

The "File Save As" Dialog Box

"Filename:" Edit Box

When you first open this dialog box, the "Filename:" edit box displays the filename of the current image, but changes the filename extension to match your last "File Save As" operation.

If you want the image saved with a different filename, type a new filename in this box. No matter what filename you type in, the filename *extension* will be changed to match the image format you have chosen.

"Directory:" Display

This displays the current directory. If you change the drive and/or the directory (either by using the "Filename:" edit box or the "Directories:" list box), the "Directory:" display changes accordingly.

"Files:" List Box

Image files listed in the "Files:" list box are those that are located in the directory currently displayed and have the format extension currently highlighted in the "Format:" list box.

"Directories:" List Box

The "Directories:" list box displays the drives and directories available. If you want to change to a different drive or directory, double click on the drive, or directory, of your choice.

"Format:" List Box

The formats listed in the "Format:" list box are the *only* formats that are capable of containing the properties of the current image. For example, if you were to save an image that is a 4 bits-per-pixel image the formats listed would not include certain formats such as: IMG, MAC, and MSP, since these are 1 bit-per-pixel formats only.

To change between the available formats, click the mouse pointer on the type of format you want to use. The selected format extension will be placed in the "Filename:" edit box.

"Cancel" Command Button

If you change your mind and want to back out without saving the current image, click the "Cancel" command button. You will be returned to the Paint Shop Pro window.

"OK" Command Button

Click the "OK" command button to save the image to the filename in the "Filename:" edit box.

The "Printer Setup" Dialog Box

"Printer:" List Box

The printers already installed to *Windows* will be listed here. If multiple printers are installed, you can select which printer will be active for this Paint Shop Pro session.

"Setup" Command Button

Click the "Setup" command button to produce additional dialog boxes containing various options for the selected type of printer. You can change the configuration of a printer's operation for this Paint Shop Pro session.

"Cancel" Command Button

If you change your mind and want to back out without changing the current printer selection, click the "Cancel" command button. You will be returned to the Paint Shop Pro window.

"OK" Command Button

Click the "OK" command button to activate selections you have made for this Paint Shop Pro session.

The "JAS Setup" Dialog Box

To change the rate of compression, use the scroll bar to change the value or enter the value you want in the edit box. Acceptable values are from 1 to 99. A lower rate will result in more of the image being maintained, but it will also result in a larger file. A high rate of compression will produce a smaller file, but more of the original image will be lost.

"JAS Compression Level" Scroll Bar

You can use the scroll bar to edit your value.

1. Position the pointer on a scroll arrow.
2. Hold the button down on your mouse to scroll the value in the edit box to your choice.

The right scroll arrow increases positive values in increments of "1". The left scroll arrow increases negative values in increments of "1".

The scroll bar changes values in increments of "10".

The scroll box makes changes in coarse increments corresponding to the distance it is moved.

"JAS Compression Level" Edit Box

You can use the edit box to enter your value.

1. Click the pointer in the edit box.
2. Type in the new value you want.

"Cancel" Command Button

If you change your mind and want to back out without changing the JAS compression level, click the "Cancel" command button.

"OK" Command Button

Click the "OK" command button to save the JAS compression setting.

The "Apply Standard Filter" Dialog Box

"Filter Type" List Box

Listed here are the filters that come with Paint Shop Pro. Some of the filters have different levels (light, medium and heavy). This indicates how aggressive the filter will be applied.

Enhance Detail - This enhances the details throughout an entire image.

Sharpen - This sharpens the image's edges by creating more contrast between the edges and the neighboring pixels.

Soften - This softens the image's edges by blending the edges with the neighboring pixels.

Blur - This softens the image by blending together neighboring pixels throughout the entire image.

Edge Detect - This locates the edges in an image. The image's edges will have their original color while the rest of the image is turned black.

Edge Enhance - This locates the edges in an image and enhances their detail.

Emboss - This causes the image to appear as a raised image.

"Apply To" Group Box

You can select either "Grey Values" or "Color Component(s)".

Color Component(s)

When you select the "Color Component(s)" option button, all three of the color components check boxes (Red, Green, Blue) automatically become selected. You can unselect color components you do not want applied in the filter by clicking the selection box to become blank. At least *one* of the color components *must* be selected. The filter will be applied *evenly* to each *color component* you select.

Grey Values

Alternatively, you can select the "Grey Values" option button. The "grey value" of any color is *not* equal portions of the "Red", "Green", and "Blue" color components. Thus, this option allows you to apply the filter *unequally* to the three color components.

"OK" Command Button

Click the "OK" command button to apply the highlighted filter.

"Cancel" Command Button

Click the "Cancel" command button to abort the process.

The "Apply User Defined Filter" Dialog Box

"Filter Type" List Box

This box will display a list of your user-defined filters. You can highlight the filter name of your choice to edit, delete, or apply to the current image.

"Apply To" Group Box

You can select either "Grey Values" or "Color Component(s)".

Color Component(s)

When you select the "Color Component(s)" option button, all three of the color components check boxes (Red, Green, Blue) automatically become selected. You can unselect color components you do not want applied in the filter by clicking the selection box to become blank. At least *one* of the color components *must* be selected. The filter will be applied *evenly* to each *color component* you select.

Grey Values

Alternatively, you can select the "Grey Values" option button. The "grey value" of any color is *not* equal portions of the "Red", "Green", and "Blue" color components. Thus, this option allows you to apply the filter *unequally* to the three color components.

"OK" Command Button

Click the "OK" command button to apply the highlighted filter type.

"Cancel" Command Button

Click the "Cancel" command button to abort the process.

"Edit" Command Button

Click the "Edit" command button to open the "Edit User Defined Filter" dialog box. This will allow you to edit your existing custom filters.

"Delete" Command Button

Click the "Delete" command button if you want to delete the highlighted filter.

If you delete a filter you will not be given the opportunity to change your mind, *and you cannot get it back*. We recommend that you keep records of all "User Defined Filters" you make. Then, if you accidentally delete one, you can refer to your configuration record and re-build it.

"New" Command Button

Click the "New" command button to open the "Define New Filter" dialog box, this will allow you to define and save a new custom filter.

The "Edit User Defined Filter" Dialog Box

This dialog box will allow you to change or add values to your existing custom filters. Paint Shop Pro has included one of the standard filters "Enhance Detail" here for your use as an example of the way a filter is structured.

When a filter is applied to an image, the matrix is placed over a neighborhood of pixels. Each pixel in the neighborhood will be multiplied by the value of the matrix entry. The resulting values are summed and divided by the division factor. The bias is then added in. The result is then placed in the pixel that lies under the center of the matrix.

As you can see, entering different values for the matrix, division factor, and bias can produce different results and can accomplish tasks that may not possible using the Standard Filters.

"Filter Name" Edit Box

This is the name of the user-defined filter. It will appear in the "Filter Type" list box of the "Apply User Defined Filter" dialog box.

"Filter Matrix" Edit Box

This is the area that defines the values to be applied. These values are multiplied by the value of the pixels under the matrix.

"Division Factor" Edit Box

This is the number that will be divided into the *sum* of the matrix's pixels.

"Bias" Edit Box

This is the number that will be added to the resulting value, after the matrix and division factors have been applied.

"OK" Command Button

Click the "OK" command button to save the changes.

"Cancel" Command Button

Click the "Cancel" command button to abort the process. *If you do, all the entries you made will be lost.*

The "Define New Filter" Dialog Box

This dialog box will allow you to create a new filter.

When a filter is applied to an image, the matrix is placed over a neighborhood of pixels. Each pixel in the neighborhood will be multiplied by the value of the matrix entry. The resulting values are summed and divided by the division factor. The bias is then added in. The result is then placed in the pixel that lies under the center of the matrix.

As you can see, entering different values for the matrix, division factor, and bias can produce different results and can accomplish tasks that may not possible using the Standard Filters.

"Filter Name" Edit Box

This is where you enter the name for your new user-defined filter. It will appear in the "Filter Type" list box of the "Apply User Defined Filter" dialog box for selection.

"Filter Matrix" Edit Box

This is the area that defines the values to be applied. These values are multiplied by the value of the pixels under the matrix.

"Division Factor" Edit Box

This is the number that will be divided into the *sum* of the matrix's pixels.

"Bias" Edit Box

This is the number that will be added to the resulting value, after the matrix and division factors have been applied.

"OK" Command Button

Click the "OK" command button to save the new filter.

"Cancel" Command Button

Click the "Cancel" command button to abort the process. *If you do, all the entries you made will be lost.*

The "Resample" Dialog Box

"Select the new size..." Options

You must select either a "Standard Size" option button or the "Custom Size" option button.

"Standard Size" Option Buttons

The box on the left side contains standard size option buttons. These standard sizes correspond to various video monitor resolutions. When you select one of these standard size option buttons, the "Custom Size:" option button becomes de-selected, along with all its "Custom Size" edit boxes and check box. Selecting a "Standard Size" option automatically sets the size and aspect ratio of the image.

"Custom Size:" Option Button

The box on the right side contains the "Custom Size:" option button. When you select it, you can manipulate the image size and aspect ratio to be *other* than one of the "Standard Size" options.

"Custom Size:" Edit Boxes

These edit boxes allow you to change the size of the image. The box on the left is the image's width, the box on the right is the image's height. If you enter a new size value in *one* of the "Custom Size:" edit boxes, Paint Shop Pro will automatically change the other box to a size that maintains the same aspect ratio, *if you have selected the "Maintain Aspect Ratio" check box.*

"Maintain Aspect Ratio" Check Box

The "Maintain Aspect Ratio" check box determines whether or not the displayed Aspect Ratio is to be in effect.

You have the option of maintaining or editing the aspect ratio of the image. Clicking the "Maintain Aspect Ratio" check box will toggle the selection off and on.

Selected = "X" in the check box. The displayed Aspect Ratio will be maintained.

Not selected = blank in the check box. The displayed Aspect Ratio will not be maintained.

If you have de-selected the "Maintain Aspect Ratio" check box, you can change one (or both) of the "Custom Size" edit boxes to intentionally distort the image by entering different values.

"Maintain Aspect Ratio" Edit Box

You can change the aspect ratio to be maintained by entering a different value in the edit box. When you enter a different aspect ratio in the edit box, the image's width remains the same, but the image's height will change to correspond with the new aspect ratio.

"OK" Command Button

Click the "OK" command button to apply the size you have selected.

"Cancel" Command Button

Click the "Cancel" command button to abort the process.

The "Resize" Dialog Box

"Select the new size..." Options

You must select either a "Standard Size" option button or the "Custom Size" option button.

"Standard Size" Option Buttons

The box on the left side contains standard size option buttons. These standard sizes correspond to various video monitor resolutions. When you select one of these standard size option buttons, the "Custom Size:" option button becomes de-selected, along with all its "Custom Size" edit boxes and check box. Selecting a "Standard Size" option automatically sets the size and aspect ratio of the image.

"Custom Size:" Option Button

The box on the right side contains the "Custom Size:" option button. When you select it, you can manipulate the image size and aspect ratio to be *other* than one of the "Standard Size" options.

"Custom Size:" Edit Boxes

These edit boxes allow you to change the size of the image. The box on the left is the image's width, the box on the right is the image's height. If you enter a new size value in *one* of the "Custom Size:" edit boxes, Paint Shop Pro will automatically change the other box to a size that maintains the same aspect ratio, *if you have selected the "Maintain Aspect Ratio" check box.*

"Maintain Aspect Ratio" Check Box

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Not selected = blank in the check box. The displayed Aspect Ratio will not be maintained.

If you have de-selected the "Maintain Aspect Ratio" check box, you can change one (or both) of the "Custom Size" edit boxes to intentionally distort the image by entering different values.

"Maintain Aspect Ratio" Edit Box

You can change the aspect ratio to be maintained by entering a different value in the edit box. When you enter a different aspect ratio in the edit box, the image's width remains the same, but the image's height will change to correspond with the new aspect ratio.

"OK" Command Button

Click the "OK" command button to apply the size you have selected.

"Cancel" Command Button

Click the "Cancel" command button to abort the process.

The "Adjust RGB" Dialog Box

To change the color values, use the corresponding scroll bar to change the value or enter the value in the corresponding edit box. Acceptable values are from -100 to 100.

Entering a value that is positive will increase the color component's value. Entering a value that is negative will decrease the color component's value. For example, if the value of the red component of a pixel is 75, and you select an adjustment value of +100%, then the new value for that pixel will be 150 (doubling the original value). If you were to select a value of -100%, then the pixel would become 0 (removing that color component).

Scroll Bars - Red, Green, Blue

You can use the scroll bars to edit your values.

1. Position the pointer on a scroll arrow.
2. Hold the button down on your mouse to scroll the value in the edit box to your choice.

The right scroll arrow increases positive values in increments of "1". The left scroll arrow increases negative values in increments of "1".

The scroll bar changes values in increments of "10".

The scroll box makes changes in coarse increments corresponding to the distance it is moved.

Edit Boxes - Red, Green, Blue

You can use the edit boxes to enter your values.

1. Click the pointer in the edit box in which you want to change the value.
2. Type in the new value you want.

"OK" Command Button

Click the "OK" command button to apply the color value adjustments you have entered.

"Cancel" Command Button

Click the "Cancel" command button to abort the process.

The "Brightness/Contrast" Dialog Box

To change the brightness and/or contrast values, use the corresponding scroll bar to change the value or enter the value in the corresponding edit box. Acceptable values are from -100 to 100.

When adjusting the Brightness of an image, you are increasing or decreasing the value of all color components. For example, if the red value=0, the green value=0 and the blue value=128 (this would be a light blue), then you were to select an adjusted brightness value of 100, this particular color would become; red value=0, green value =0, and the blue value=255 (resulting in bright blue).

When adjusting the Contrast of an image, you can move the color farther away from the color's mid-point by selecting positive adjust values. To move the colors closer to the color's mid-point select negative adjust values.

Scroll Bars - Brightness, Contrast

You can use the scroll bars to edit your values.

1. Position the pointer on a scroll arrow.
2. Hold the button down on your mouse to scroll the value in the edit box to your choice.

The right scroll arrow increases positive values in increments of "1". The left scroll arrow increases negative values in increments of "1".

The scroll bar changes values in increments of "10".

The scroll box makes changes in coarse increments corresponding to the distance it is moved.

Edit Boxes - Brightness, Contrast

You can use the edit boxes to enter your values.

1. Click the pointer in the edit box in which you want to change the value.
2. Type in the new value you want.

"OK" Command Button

Click the "OK" command button to apply the brightness/contrast value adjustments you have entered.

"Cancel" Command Button

Click the "Cancel" command button to abort the process.

The "Gamma Correction" Dialog Box

"Enter the correction value." Edit Box

Enter the value you want in the edit box. The value must be greater than zero and less than five.

"OK" Command Button

Click the "OK" command button to apply the gamma correction value you have entered.

"Cancel" Command Button

Click the "Cancel" command button to abort the process.

The "Capturing Options" Dialog Box

During any Capture operation you will be presented with the "Capture" dialog box. This dialog box allows you to select what you want to happen to the Paint Shop Pro window while the capturing steps are being taken. Your options are:

"Hide It" Option Button

This causes Paint Shop Pro to disappear while capturing is in progress.

"Make it an icon" Option Button

This causes Paint Shop Pro to reduce to an icon while you make the capture.

"Leave it alone" Option Button

Nothing will happen to Paint Shop Pro during the capture. It will remain on the screen.

Note:

The image that will be returned will have the same number of bits per pixel as your diver's maximum capabilities are. Since *Windows* does not support a 16 bits per pixel image, the image returned on a 16 bits per pixel system will be a 24 bits per pixel image, but the image will have 32,768 colors or less.

The "Decrease Color Depth - 2 Colors" Dialog Box

The "Decrease Color Depth - 2 Colors" dialog box will allow you to determine the way that the image's colors should be reduced. Select your options from the three areas, Palette, Reduction Method, and Options.

"Palette" Option Buttons

Palette refers to the *original* palette of colors. To determine whether a pixel should be set to black or white, the *original* color of the pixel is examined. Normally, the pixel's Grey Value is used to make this determination. But, you may obtain better results if just one of the color components of the original palette is used. For example, an image with a lot of flesh tones comes out better if you only use the red color component. An image that is mainly green will look better if you use only the green color component. In the Palette section, select "Grey Values" or one of the "Red", "Green", or "Blue" color components to be used in the color reduction.

"Reduction Method" Option Buttons

Reduction Method is the way you would like to have the image's colors converted to your new palette. Select either "Nearest Color" or "Error Diffusion".

"Nearest Color" Option Button

This option will find the nearest color in the new palette (either black or white). Any difference between the nearest color and the original color will be ignored.

"Error Diffusion" Option Button

This option will find the nearest color in the new palette (either black or white). A difference between the nearest color and the original color is considered an error. This error is diffused to the neighboring pixels (this is known as Error Diffusion Dithering). Within error diffusion there are three algorithms that are most popular. They are: Floyd-Steinberg, Burkes, and Stucki. They each give different results. After selecting "Error Diffusion", select either "Floyd-Steinberg", "Burkes", or "Stucki".

"Options" Option Buttons

"Weighted Palette" Option Button

This option will alter the *original* palette by setting the original colors closer to black or white. This will result in more of the colors being set to black or white with no error. As a result, there will be less dithering. Thus, it will appear that there are fewer levels of grey. In addition, the edges should appear sharper. You may select a weighted palette by clicking the option button.

"Non-weighted Palette" Option Button

This option will leave the *original* palette alone. This will result in normal dithering patterns. Edges may not be as sharp, but it will appear that there are more levels of grey. You may select a "Non-weighted Palette" by clicking the option button.

"OK" Command Button

Click the "OK" command button to apply the options you have selected.

"Cancel" Command Button

Click the "Cancel" command button to abort the process.

The "Decrease Color Depth - 16 Colors" Dialog Box

The "Decrease Color Depth - 16 Colors" dialog box will allow you to determine the way that the image's colors should be reduced. Select your options from the three areas, Palette, Reduction Method, and Options.

"Palette" Option Buttons

Palette is the *new* set of colors that the image will use. Select either Optimized or Windows'.

"Optimized" Option Button

This option will create and use an optimized palette of the 16 closest and most popular colors. This will always produce the best results, since the new colors will be selected from the *original* colors.

"Windows" Option Button

The 16 colors that result will be the 16 *default* colors that *Windows* uses. You should choose this option if the image will be displayed on an EGA system or a VGA system in 16 color mode. This option will allow you to create many images that all use the same palette.

"Reduction Method" Option Buttons

Reduction Method is the way you would like to have the image's colors converted to your new palette. Select either "Nearest Color" or "Error Diffusion".

"Nearest Color" Option Button

This option will find the nearest color in the new palette. Any difference between the nearest color and the original color will be ignored.

"Error Diffusion" Option Button

This option will find the nearest color in the new palette. A difference between the nearest color and the original color is considered an error. This error is diffused to the neighboring pixels (this is known as Error Diffusion Dithering). The error diffusion method that is used is Floyd-Steinberg.

"Options" Check Boxes

"Boost Marked Colors by" Check Box

This option is only available if you select "Palette" - "Optimized", *and* an area of the image has been marked. It will increase the chances that the colors in the marked area are included in the final palette of colors. To activate the booster, click on the check box. Then, enter the amount to boost the colors by in the edit box.

Note:

The marked area must be defined prior to opening the dialog box. To mark an area of the image:

- a. Move the cursor to the upper left point of the area to be marked off.
- b. Hold down the left mouse button.
- c. Move the cursor to the lower right corner of the area to be marked off.
- d. Release the left mouse button.

"Boost Marked Colors by" Edit Box

After clicking on the check box, enter the amount to boost the colors by in the edit box. The allowable range is from 1 to 10. By boosting the colors by a factor of 10, the colors should be present in the final image.

"Reduce Color Bleeding" Check Box

This option is only available if you select "Reduction Method" - "Error Diffusion". It will reduce the carry-over of the error diffusion. This results in less dithering of the colors and thus reduces the bleeding of the colors. This option can be selected by clicking on the check box.

"OK" Command Button

Click the "OK" command button to apply the options you have selected.

"Cancel" Command Button

Click the "Cancel" command button to abort the process.

The "Decrease Color Depth - 256 Colors" Dialog Box

The "Decrease Color Depth - 256 Colors" dialog box will allow you to determine the way that the image's colors should be reduced. Select your options from the three areas, Palette, Reduction Method, and Options.

"Palette" Option Buttons

Palette is the *new* set of colors that the image will use. Select either Optimized or Standard.

"Optimized" Option Button

This option will create and use an optimized palette of the 256 closest and most popular colors. This option will always produce the best results, since the new colors will be selected from the *original* colors.

"Standard" Option Button

This option will use a mix of various colors for the new palette. This option will allow you to create many images that all use the same palette.

"Reduction Method" Option Buttons

Reduction Method is the way you would like to have the image's colors converted to your new palette. Select either "Nearest Color" or "Error Diffusion".

"Nearest Color" Option Button

This option will find the nearest color in the new palette. Any difference between the nearest color and the original color will be ignored.

"Error Diffusion" Option Button

This option will find the nearest color in the new palette. A difference between the nearest color and the original color is considered an error. This error is diffused to the neighboring pixels (this is known as Error Diffusion Dithering). The error diffusion method that is used is Floyd-Steinberg.

"Options" Check Boxes

"Boost Marked Colors by" Check Box

This option is only available if you select "Palette" - "Optimized", *and* an area of the image has been marked. It will increase the chances that the colors in the marked area are included in the final palette of colors. To activate the booster, click on the check box. Then, enter the amount to boost the colors by in the edit box.

Note:

The marked area must be defined prior to opening the dialog box. To mark an area of the image:

- a. Move the cursor to the upper left point of the area to be marked off.
- b. Hold down the left mouse button.
- c. Move the cursor to the lower right corner of the area to be marked off.
- d. Release the left mouse button.

"Boost Marked Colors by" Edit Box

After clicking on the check box, enter the amount to boost the colors by in the edit box. The allowable range is from 1 to 10. By boosting the colors by a factor of 10, the colors should be present in the final image.

"Include Windows' Colors" Check Box

This option is only available if you select "Palette" - "Optimized". When Paint Shop Pro

creates an optimized palette of colors, it may not include the 16 default colors that *Windows* reserves. Thus, 16 of the colors that are in the palette of colors can not be represented properly and the image will appear to be improperly dithered. By selecting this option, the 16 default colors of *Windows* will be included in the optimized palette, thus all colors from the new palette will be displayable. This option can be selected by clicking on the check box.

"Reduce Color Bleeding" Check Box

This option is only available if you select "Reduction Method" - "Error Diffusion". It will reduce the carry-over of the error diffusion. This results in less dithering of the colors and thus reduces the bleeding of the colors. This option can be selected by clicking on the check box.

"OK" Command Button

Click the "OK" command button to apply the options you have selected.

"Cancel" Command Button

Click the "Cancel" command button to abort the process.

The "Decrease Color Depth - 32K Colors" Dialog Box

The "Decrease Colors Depth - 32K Colors" dialog box will allow you to determine the way that the image's colors should be decreased. Select the reduction method you desire. Since *Windows* does not recognize 16 bits-per-pixel images, after decreasing the color depth to 32k colors, Paint Shop Pro will still treat the image as a 24 bit image. The image will have been reduced to include not more than 32k colors.

"Reduction Method" Option Buttons

Reduction Method is the way you would like to have the image's colors converted to your new palette. Select either "Nearest Color" or "Error Diffusion".

"Nearest Color" Option Button

This option will find the nearest color in the new palette. Any difference between the nearest color and the original color will be ignored.

"Error Diffusion" Option Button

This option will find the nearest color in the new palette. A difference between the nearest color and the original color is considered an error. This error is diffused to the neighboring pixels (this is known as Error Diffusion Dithering). The error diffusion method that is used is Floyd-Steinberg.

"OK" Command Button

Click the "OK" command button to apply the options you have selected.

"Cancel" Command Button

Click the "Cancel" command button to abort the process.

Purchasing The Licensed Version of Paint Shop Pro

The licensed version of Paint Shop Pro may be purchased from the vendor of your choice. You may also want to check your local software store to see if they carry the licensed version.

Vendor List:	Location:
<u>BUDGETWARE</u>	Australia
<u>The Thompson Partnership</u>	England
<u>PD-SERVICE-LAGE</u>	Germany
<u>Public software Library</u>	USA
<u>JASC, Inc.</u>	USA

JASC, INC. (USA)

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