PixView™

User's Guide

Version 3.0

Important Notice

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1 Introduction

This manual explains how to install and use PixView, a high-performance Microsoft Windows application for scanning, viewing, printing, and saving images.

About PixView

PixView is an image scanning application that supports more than 125 different scanners.[*] PixView provides an integrated image acquisition environment that allows you to scan, view, print, and store images.

Scanning   PixView uses ISIS® (Image and Scanner Interface Specification) libraries to support all popular monochrome, gray scale, and color scanners. ISIS drivers enable scanning at the full rated speed of your scanner. For most scanners, ScanAhead™ ensures that the next page's image is always immediately available. PixView allows full control of scanner parameters, allowing you to adjust brightness, contrast, scan resolution, scan mode, dithering, color settings, and any other settings available in your scanner. PixView supports scanners that use dedicated controller cards, as well as SCSI scanners via Adaptec and other compatible SCSI host adapters, and video-based scanner interfaces, such as those from Kofax and Xionics. Duplex (double-sided) scanning is supported on scanners that provide this feature.

Viewing   PixView is also a high-performance image viewer that has many features for displaying and manipulating images. Features include fast scaling (zoom in and zoom out), fast rotation (in 90º increments), background preload (for immediate display of images on demand), annotations, scale-to-gray conversion (to improve readability of images displayed at less than full scale), and a pan window (for instantaneous positioning of the image in the view window). In addition, PixView fully supports imaging display hardware

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[*] PixView is sold with various levels of scanner permissions, depending on configuration.

accelerators from Cornerstone. Color images can be displayed either in color or gray scale, and color balance can be adjusted while viewing.

Printing   PixView prints images using any standard Windows-supported printer. Options for convenient image printing include Fit Page, Actual Pixels, Actual Size, and Thumbnails. In addition, PixView supports accelerated printing hardware from Fujitsu (Print Partner 10i) and Xionics (XIPPrint). Faxing of images can be accomplished with any Windows-compatible fax modem and software.

Saving   PixView saves acquired images in a variety of popular image file formats and compression schemes. By using TIFF Group 4, you can achieve compression ratios of 35:1 to 50:1, depending on the type of image and the quality of the scan. Color and gray scale capabilities vary according to your scanner and the image file format in use. PixView supports color and gray scale file storage, scanning, viewing, and printing. For a complete list of file formats and compression schemes, see page 56.

System Requirements

Following are the minimum system requirements for PixView:

Computer:	386SX or higher PC-compatible.
Memory:	4 Mbytes, minimum; 8 Mbytes recommended.
Diskette drive:	3.5" high density.
Mouse:	Windows-compatible pointing device is required to operate PixView.
Hard disk:	The process of image acquisition and storage requires large amounts of disk space, with the actual requirement depending on the number of images you want to store, their type (monochrome, gray scale, color), and compression. PixView itself requires less than 5 Mbytes of disk space.
Display:	VGA (minimum).
Operating system:	16-bit version: DOS 5.0 or higher running Microsoft Windows 3.1 or higher.
	32-bit version: Windows 95 or Windows NT.
Scanner (optional):	A supported image scanner and suitable interface card.
Network:	PixView runs in network environments as a single-user application. It is recommended that PixView be installed on a local drive. Users should be aware that saving large images to a network drive may result in reduced network performance and unacceptable application performance.

Important

If your computer uses a SCSI hard disk drive and you are using a SCSI scanner, we recommend that you connect the scanner to a separate SCSI host adapter from the hard disk. The reasons for this are: 1) there have been cases reported of hard disk crashes apparently related to scanner operation on the same SCSI host adapter, and 2) high-performance scanners will almost certainly degrade system performance when sharing the SCSI host adapter with a hard disk.

Ordering Additional Scanner Drivers

PixView is supplied with and has permissions to use a subset of all ISIS scanner drivers. Drivers are constantly being developed for new scanners, and many new scanners are supplied with an ISIS driver that will work with PixView (provided your copy of PixView has sufficient permissions to use that type of scanner). To obtain information on upgrading PixView to work with additional scanners and information on the availability of other drivers, contact the PixTools Sales department using the contact information listed in .

2 Quick Start

This chapter is for computer users who are familiar with their computers and want to start using PixView as quickly as possible. Chapter 3, "Installing PixView," contains complete installation and setup instructions for users who need detailed information.

Before installing PixView, check for a file named README.TXT on the PixView diskette. If this file exists, then it contains new information that became available after this manual was printed. You should display or print this file and read it carefully.

Installing a Scanner

Before installing PixView, you should install your scanner hardware and make sure it is functioning properly. Be sure that the scanner interface card uses settings that do not conflict with other devices in your system.

A SCSI driver is sometimes required for proper operation of a SCSI host adapter card. Make sure you have the appropriate drivers loaded, as instructed by the manufacturer of your SCSI host adapter.

Installing PixView

PixView is supplied on a CDROM. To install PixView, follow these steps:

1. Launch Windows and insert the PixView CDROM into your CDROM drive.

2. Windows 3.x: From Program Manager or File Manager, choose **Run** from the File menu. Type `e:\setup` and click **OK**. Substitute the drive letter of your CDROM drive if necessary.

    Windows 95/NT 4.x: The install program will launch automatically after the CDROM is inserted.

3. Follow the instructions on your screen to choose an installation directory, a program group, and proceed with installation.

Starting PixView

Windows 3.x: Start PixView by double-clicking its icon in the PixTools Products Program Group.

Windows 95/NT 4.x: Start PixView by choosing **PixView** from the PixTools Products group on the Start menu.

The PixView window now appears. It looks similar to the following, depending on the version of Windows being used, the window's size, and PixView's application settings:

Selecting a Scanner

Before you can scan pages, you must select your scanner:

1. Choose **Select Scanner** from the File menu. The Scanner Selection dialog appears:
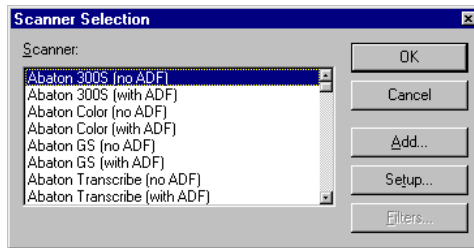
2. In the Scanner Selection dialog, scroll through the list of scanners until you find your scanner, then click to highlight it.

Note

If a message appears stating that you do not have permission to use a particular scanner, you have not purchased the correct level of PixView for your scanner. For information about enabling other scanners, contact the PixTools Sales department using the contact information listed in Appendix C. For information about obtaining and adding support for scanners not listed in the Scanner Selection dialog, see page 23.

3. Click **OK**. You are now ready to scan pages.

Note

All supplied ISIS scanner drivers have been copied to the Windows\Pixtran directory of your hard disk.

Scanning Pages and Documents

To scan pages:

1. Place one or more pages in your scanner.

2. Choose **Scan Page** from the File menu. In a moment, your scanner will scan and the image of the first page will appear in the PixView window.

    or

    Choose **Scan Batch to File** from the File menu. A dialog appears prompting you to supply document naming information. Complete this information and then click **OK**. In a moment, your scanner will begin scanning and continue scanning at its full rated speed until all pages in the feeder have been scanned.

    Note

    Some scanners do not report when pages are loaded in their automatic document feeders. If your scanner falls into this category, then you will see a dialog after choosing **Scan Page** in which you can specify whether a page is on the flatbed or in the feeder.

3. To use other scanning features, see Chapter 4 "Using PixView" on page 25.

Viewing Pages

After you have scanned one or more pages, PixView offers many viewing possibilities. To see a few of these, click the various buttons in the toolbar:

Fit Window	Enlarges or reduces the page until it fits the width of the PixView window.
Fit Width	Enlarges or reduces the page until it fits the width or height of the PixView window, whichever is smaller, to ensure that you can see the entire page image.
View 100%	Displays one pixel on the screen for every pixel in the image.
Zoom In	Zooms in a user-defined amount.
Zoom Out	Zooms out a user-defined amount.
Rotate	Rotates the image 90° clockwise.

Displays the previous page of a set of pages. Inactive when the first page is currently being displayed.

Displays the next page of a set of pages. Inactive when the last page is currently being displayed.

If you scale an image so that it is larger than the PixView window, you can use any of three methods to move other parts of the image into view:

Scroll bars These are the Windows standard for moving around a document, but are not very efficient when dealing with highly magnified image views.

Keyboard Use the cursor arrow keys as well as the HOME, END, PAGE UP, and PAGE DOWN keys to move the image. This is also not very efficient.

Pan window Use the pan window to quickly and efficiently bring the desired portion of the image into view. If the pan window is not visible, press **P** to enable it.

In addition to the toolbar buttons, you can change the appearance of the image in the PixView window by using the **Page Settings** command in the Options menu. You can experiment with these settings now. For more information, see "**Changing Page Settings**" on page 72.

Printing Pages

To print your pages, make sure your printer is configured and selected in the Windows Control Panel, and that it is on-line and ready to print. Then choose one of the following commands from the File menu:

Print (Fit Page) — Prints pages so that they fill the page. For full page images, this may result in a reduction or enlargement to ensure that the entire area is within the printable region of the printed page.

Print (Actual Pixels) — Prints pages such that one pixel in the scanned image corresponds to one pixel on the printed page.

Print (Actual Size) — Prints pages actual size, with no scaling. Most printers have a margin around the page where they cannot print. Image data in this region is clipped. To ensure printing the entire image, **choose Print (Fit Page)** instead.

Print (Thumbnails) — Prompts for number of images per page and then prints multiple tiny page images on each page.

In each case, you can specify the number of copies to print, the print quality, and the range of pages to print. Optionally, you can print just a section of a page. To print a section, you must drag a selection rectangle over the desired portion of the page image before choosing the **Print** command, as explained on page 45.

Saving Pages and Documents

With the exception of single-page scans, PixView saves your pages as you scan. Normally, there is no need to perform a separate save operation. You will need to save individual images scanned using the **Scan Page** command. You will need to save your document in cases where you have opened a document and want to change its attributes, orientation, or file type/compression.

You can save either individual pages or documents (sets of pages). Sets of pages can be saved in a single file (if you are using an image file format that supports multiple pages) or in multiple files (using any of several supplied or user-defined naming schemas). In addition, you can save a selected area of a page or a selected area of every page of a document.

To save the page currently displayed, choose **Save Page As** from the File menu, choose a drive and directory, file type, and compression, then type a name in the File Name box and click **OK**.

To save a document (all pages), choose **Save Document As** from the File menu, chose a drive and directory, file type, and compression, then type a name in the File Name box. Next, choose **Multi-page file** and/or **Use Naming Schema** and click **OK**. For detailed information on naming schema, see "**Naming Schemas**" on page 63.

To save a selection, first select an area of a page by using the mouse. Drag the mouse to create a rectangle around the area you are interested in. Then choose either **Save Page As** or **Save Document As** from the File menu. Note that "Selected area" is checked. Specify the usual parameters and save the file—only the selected area of the page or the selected area applied to every page of the entire document is saved.

Shortcut Keys

Key	Button	Menu Command	Effect
+	Zoom In		Zooms in an amount specified in the Zoom Factor setting
-	Zoom Out		Zooms out an amount specified in the Zoom Factor setting
B			Changes Horizontal Preserve toward Black. (black and white).
			Increases the Brightness (grayscale).
CTRL+1	Rotate		Rotate to portrait orientation (0º).
CTRL+2	Rotate		Rotate to landscape orientation (90º).
CTRL+3	Rotate		Rotate to upside-down portrait orientation (180º).
CTRL+4	Rotate		Rotate to upside-down landscape orientation (270º).
CTRL+A		Options♦ Application Settings	Displays the Application Settings dialog.
CTRL+B			Changes Vertical Preserve toward Black. (black and white). Increases the Contrast (grayscale).
CTRL+C		Edit♦Copy	Copies the image or the selected area to the Clipboard.
CTRL+E	Scan Setup	Options♦ Scanner Settings	Displays the Scanner Settings dialog.
CTRL+G		Page♦Goto Page	Displays the Goto Page dialog.

Key	Button	Menu Command	Effect
CTRL+I		Help♦About Image	Displays the About Image dialog, which gives you information about the image on the current page.
C			Cancels scanning. Note that the scanner may continue to scan one or more pages before it receives and processes the cancel command.
CTRL+M or S		Options♦Page Settings	Displays the Page Settings dialog.
CTRL+L			Loop to next image. Unlike Next Page and Prev Page, goes to first page after displaying last page of document.
CTRL+N	Next Page	Page♦Next Page	Displays the next page of the document.
CTRL+O		File♦Open document	Displays the Open Document dialog.
CTRL+P	Prev Page	Page♦Previous Page	Displays the previous page of the document.
CTRL+R	Loop Demo	Demo♦Loop Images	Loops through up to eight images as fast as possible, then shows flip times when stopped. (Demo version only.)
CTRL+S	Loop Demo	Demo♦Stop Demo	Stops loop demo and shows image flip times. (Demo version only.)
CTRL+T		Page♦Show Thumbnails	Displays the Thumbnail viewer, allowing you to select the page you want to view.

Key	Button	Menu Command	Effect
CTRL+U			Loop only once through images. (Demo version only.) Allows display of image read, decompress, and display times. After looping once, images may be cached; demo will then show only display times.
CTRL+W			Changes Vertical Preserve toward White (black and white). Decreases the Contrast (grayscale).
CTRL+Z or P		Options♦Pan Window	Toggles Pan window display on and off.
F1		Help♦Index	Displays the main index of the on-line help system.
F2	⊕ Fit Window		Image is sized to fit the width and height of the window
F3	⟷ Fit Width		Image is sized to fit the width of the window.
F4	1:1 View 100%		One pixel of the image is displayed for each pixel in the display.
F5 or CTRL + D		Demo♦Load Images	Load the five demo images (demo version only).
G			Toggles between normal and scale to gray display.
I			Toggles display between positive and negative image display.
M			Toggles between normal and mirror image display.
O			Toggles the overscan (background window) color between black and white.

Key	Button	Menu Command	Effect
PAGE UP			Scrolls up the page height of the window.
PAGE DOWN			Scrolls down the page the height of the window.
HOME			Scrolls to top of current page.
END			Scrolls to bottom of current page.
N			Returns to default image settings after changing orientation, scaling, brightness, contrast, etc.
W			Changes Horizontal Preserve toward White (black and white).
			Decreases the Brightness (grayscale).

3 Installing PixView

This chapter provides complete installation and configuration instructions for PixView. If you are experienced with Windows software installation, you may prefer to follow the quick start instructions in Chapter 2.

Scanner Installation

The first step in installing PixView is to install your scanner. PixView can open images created by virtually any popular scanner on the market; however, PixView is much more convenient to use with a *supported* scanner. A *supported* scanner is one which can be operated by PixView's scanning controls. For an up-to-date list of scanners supported by PixView, contact PixTools Sales department using the contact information in Appendix C. This list can be accessed from the Internet at Pixel Translations' World-Wide Web site.

Install your scanner by following the manufacturer's instructions. Be sure to remove all packing material and shipping locks. Be sure that your scanner interface settings do not conflict with other devices in your system. In particular, pay attention to the I/O address, memory address, DMA channel, and/or SCSI ID, as needed by your particular scanner interface. If possible, test your scanner using software provided by the manufacturer to be sure it is working properly and communicating with your computer.

Types of Scanners

There are many categories of scanners. Some of the types that are supported by PixView include:

- Flatbed scanners
- Feeder scanners
- Flatbed scanners with document feeders
- Check scanners
- Microfilm scanners

- Duplex (double-sided) scanners
- Full page scanners

- Monochrome scanners
- Gray scale scanners
- Color scanners

Scanner Interfacing

Different scanners connect to computers by different methods:

Dedicated interface card	Must be installed in your computer and connected using a cable provided with the scanner.
SCSI host adapter	In some cases, you can use a commercially-available SCSI host adapter. In other cases, you must use a dedicated SCSI host adapter provided by the scanner manufacturer. In either case, we recommend that you do not use the same SCSI host adapter for your scanner and SCSI hard disk.
Video interface	A few scanners use a special interface card that receives video data from the scanner for high-speed image transfer. These special interface cards are generally manufactured by a third party (Kofax and Xionics, for example) and are connected to the scanner via special cables.
Parallel or serial interface	A few scanners connect directly to your computer's built-in parallel (or even serial) interface. Acquiring images from a scanner connected to the serial port will be a very slow process.

Scanner Settings

Various scanners have different capabilities, and therefore different settings. PixView supports whatever settings are available on your scanner. Typical settings include:

- Brightness (and automatic brightness)
- Contrast (and automatic contrast)
- Mode (black and white, gray scale, color)
- Dither (simulated halftoning)
- Dots per inch (scan resolution)
- Page size
- Outline extraction
- Gamma correction
- Thresholding
- White level
- Noise removal
- Scanning area

For information about changing these settings, see "Changing Scanner Settings" on page 71. During installation, your scanner's default settings should be adequate.

PixView Installation

This section provides step-by-step instructions for installing the PixView software. At any time during the installation process, you may use the **Back** button to return to a previous screen to change the options you selected. If you exit the installation program before it is finished, you will need to rerun the program later.

Installing PixView

Follow these steps to install PixView on your hard disk:

1. Insert the PixView CDROM into your CDROM drive.

2. If you are using Windows 3.1, Windows for Workgroups 3.11, or Windows NT 3.5, from the Windows Program Manager or File Manager, choose **Run** from the File menu. In the Command Line box, type `e:\setup`. (Substitute `e:\` for the drive letter of your CDROM drive if necessary.) Click **OK**.

If you are using Windows 95 or Windows NT 4.0, the installation program will start automatically after you insert the CDROM.

When the installation process begins, follow the instructions on your screen.

3.   You will be prompted for registration information including your name and company, as well as a product serial number. You can find the serial number on the CDROM packaging, or it was provided to you in conjunction with your download instructions.

4.   You can choose to install PixView using Typical, Compact, or Custom setup options. We recommend using the Typical installation option for most users. A Typical setup provides the most commonly used PixView features and utilities that should suit your day-to-day scanning and viewing needs.

A Typical installation includes:

*   The main PixView application.

*   Runtime files that are necessary auxiliary components for PixView to function properly.

*   Documentation on how to use PixTools products and general information about those products.

*   Helpful utilities including a program that will allow you to add additional scanner drivers to your PixView installation later on.

*   Sample images.

A Compact installation only adds the main PixView application and the necessary Runtime files to your system. You should only consider this option if you are severely limited in hard disk space.

A Custom installation allows you to choose which components of PixView to install. The available components are the same as the ones listed under Typical installations. You should only consider this option if you are an experienced user and wishes to have more control over the installation process. At a minimum, you need to install the main PixView application and the Runtime files for the software to function properly.

5.   You will be asked to read and accept the PixView End User License Agreement. If you do not accept the agreement, the installation program will terminate.

6.   You can choose to install a scanner driver for your scanner, or any number of scanner drivers that are supported with PixView. You will need to install at least one scanner

driver if you wish to use PixView's scanning features. You can also add additional scanner drivers to your installation at a later date by using the AddScan utility.

7. Choose a destination folder where the PixView application and other components will be installed. The default destination folder is `c:\pixtran`.

8. Choose a program folder where the program icons for PixView will be installed. The default folder is "PixTools Products".

9. You will be asked to verify your choices and installation settings before files are copied to your system.

10. After the files have been copied to your system, a dialog box will indicate that the installation process completed successfully.

Installing Additional Scanner Drivers

Scanner drivers are normally installed during the regular installation process for PixView. However, you may need to install additional scanner drivers if you did not do so when you installed PixView, or if you wish to use PixView with a new scanning device. To install additional scanner drivers using the AddScan utility, follow these steps:

1. Insert the PixView CDROM into your CDROM drive.

2. Choose Programs from the Start menu.

3. Go to the PixTools Products program folder or the program folder in which you chose to install PixView.

4. Choose the Utilities folder.

5. Choose the Add Scanner icon to run the AddScan utility.

6. You will be prompted to choose your scanner from the list of supported scanners. Click OK. The appropriate driver will be copied to your system.

7. You will receive a message informing you that the scanner driver was installed successfully, or that you already have an updated driver in your system for the scanner you selected.

8. You will now be able to select the new scanner from within PixView.

Selecting a Scanner

The final step in installing PixView is to select your scanner. Follow these steps:

1. Turn on your scanner. (In most cases, you will need to turn on your scanner before launching Windows; otherwise, Windows will not be aware that the scanner is connected.)

2. Launch PixView by double-clicking the PixView icon.

3. Choose **Select Scanner** from the File menu. The following dialog appears:
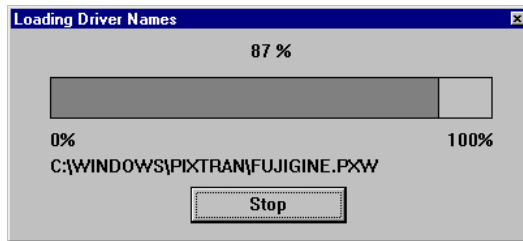
    After all driver names have been loaded, the following dialog appears:

4. Choose your scanner from the list.

Important

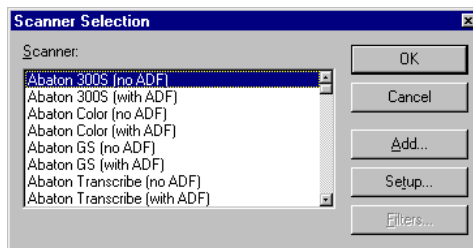PixView is sold with various levels of scanner support. If your copy of PixView does not have sufficient permissions to use a particular scanner, it will not appear in the Scanner Selection dialog, even though its driver is present on your disk drive. Contact PixTools Sales department using the contact information in Appendix C for information about upgrading your copy of PixView to support the scanner you want to use.
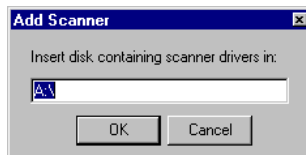
5. Click **Setup** to see your scanner's setup parameters. These parameters vary depending on your scanner. In some cases, there are no setup parameters, or setup parameters are made in the DOS driver that loads in your CONFIG.SYS or AUTOEXEC.BAT file. In these cases, the message "This scanner's configuration is set using the system-level driver" appears. Consult your scanner's documentation for proper setup.

6. Click **OK** when you have made the desired settings.

Adding a Scanner Driver From Within PixView

We recommend that you use the AddScan utility provided with PixView to add new scanner drivers. Some scanner drivers require support files to function properly. AddScan will install all such necessary files for you automatically. For instructions on how to use AddScan, see "Installing Additional Scanner Drivers" on page 21.

You can also add drivers from within PixView. However, only the driver itself is added to your system. If you need to install support files for your scanner, you should use the AddScan utility. Follow these steps to add a scanner driver from within PixView.

1. Choose **Select Scanner** from the File menu.

2. In the Scanner Selection dialog, click **Add**. The Add Scanner dialog appears.

3. Place your PixView CDROM into the CDROM drive.

4. Change the drive letter in the Add Scanner dialog to read `e:\drivers`. Substitute `e:` with the driver letter of your CDROM drive if necessary.

5. Click **OK**. A list of scanners found on the CDROM appears.

6. Select the desired scanner from the list, then click **OK**.

Tip: For users of Kofax scanner interface cards, use the KFXSIMPLX driver for simplex (single-sided) scanners; use the KOFAXBIC driver for duplex (double-sided) scanners.

7. Click **Setup** to see your scanner's setup parameters. These parameters will vary depending on your scanner. In some cases, there are no setup parameters, or setup parameters are made in a DOS scanner driver that loads in your CONFIG.SYS or AUTOEXEC.BAT file. In these cases, the message "This scanner's configuration is set using the system-level driver" appears. Consult your scanner's documentation for proper setup. Here is a typical Setup dialog for a popular SCSI scanner:
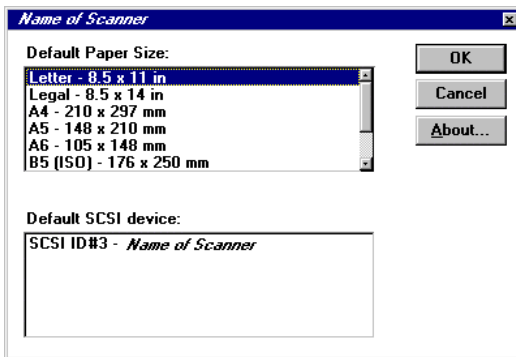
Note that the specific information displayed in this dialog depends both on your scanner and on the way it is configured.

8. Click **OK** when you have made the desired settings.

PixTools/View Control Panel

PixView is supplied with the PixTools/View control panel to display accelerated printing and display. Information on installing and using this control panel can be found in Appendix A.

4 Using PixView

This chapter explains how to perform all types of scanning, viewing, printing, and saving operations in PixView.

Starting PixView

To start PixView, follow these steps:

1. Turn on your scanner. Wait for your scanner to indicate that it is ready.

2. Start Microsoft Windows.

Note

In many cases, the scanner must be on before Windows starts; otherwise, Windows will not be able to communicate with the scanner.

3. If you are using Windows 3.1, Windows for Workgroups 3.11, or Windows NT 3.5, launch PixView by opening the PixTools Products Program Group (or the group you specified when installing PixView) and double-clicking the PixView icon.
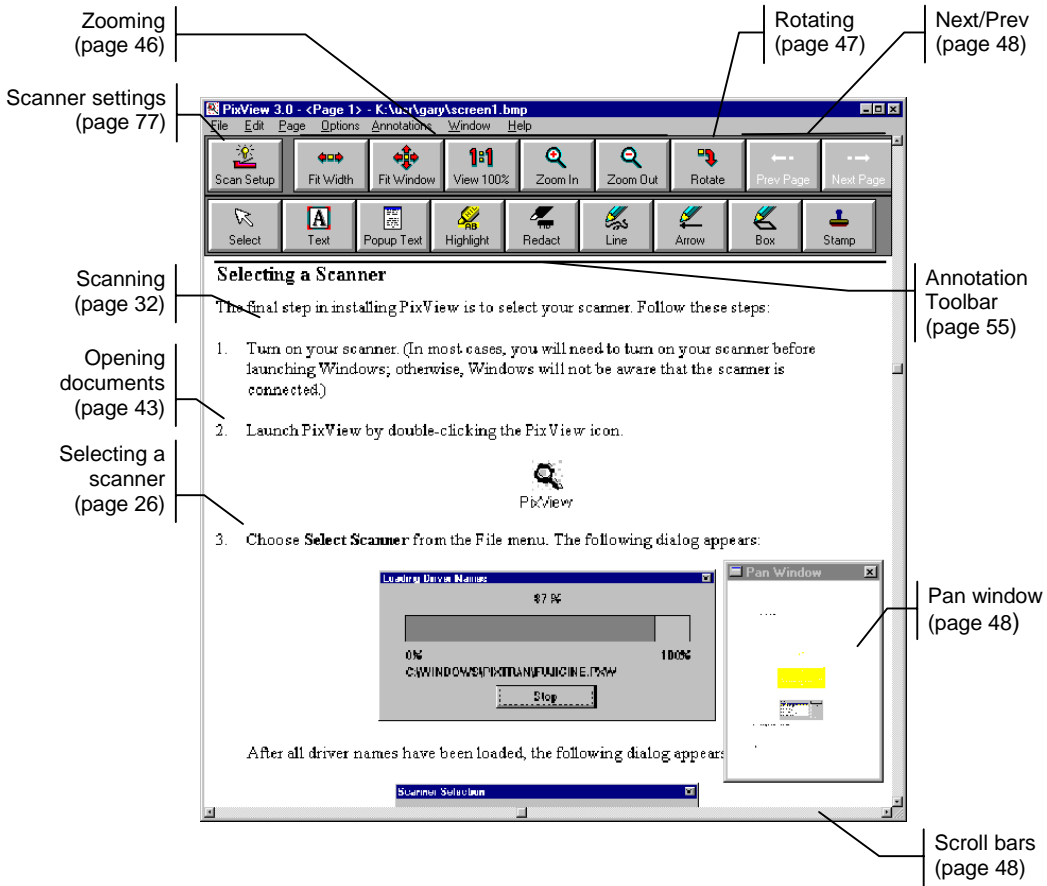

PixView

If you are using Windows 95 or Windows/NT 4.0 or higher, launch PixView by choosing **PixView** from the PixTools Products group on the Start menu (or the group you specified when you installed PixView).

PixView Visual Index

Here is the PixView window after scanning a few pages, with page numbers showing where in this manual you can find more information on each major feature:

Zooming (page 46)

Scanner settings (page 77)

Rotating (page 47)

Next/Prev (page 48)

Scanning (page 32)

Opening documents (page 43)

Selecting a scanner (page 26)

Annotation Toolbar (page 55)

Pan window (page 48)

Scroll bars (page 48)

Scanning Pages

PixView can acquire images either from a scanner or by opening existing image files. This section explains how to scan. For information on opening existing image files, see "Opening Documents" on page 36.

Scanning Batches

PixView is designed to scan batches of pages as quickly and efficiently as possible. When scanning a batch of pages, you tell PixView in advance how to save the resulting file(s). PixView saves each page to the specified file as it scans. Then, in the event of a power failure, system crash, or other unexpected event, the pages you have already scanned are saved and you can continue scanning where you left off.
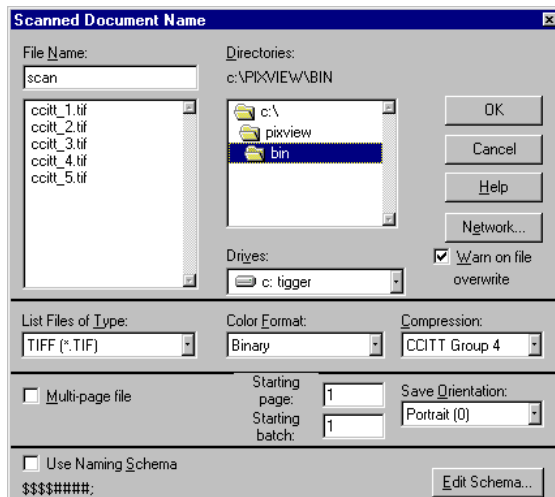
To scan a batch of pages, follow these steps:

1. Choose **Scan Batch to File** from the File menu.

Important

When you choose **Scan Batch to File**, any open pages or documents are closed. If you had previously acquired an image by using the **Scan Page** command and have not saved it, the page image will be lost.

The following dialog appears after you choose **Scan Batch to File**:

2. Choose:

a. An image file format from the List Files of Type list box (see page 56).
b. A color format from the Color Format list box (see page 58).
c. A compression option from the Compression list box (see page 56).
d. An orientation in the Save Orientation list box (see page 63).

3. Decide whether to:

a. Have PixView warn you if you specify an existing file name, or overwrite the existing file with no warning. (Check the Warn on file overwrite check box.)
b. Save the scanned images as a multi-page file. (Check the Multi-page file check box.) (See page 63.)
c. Save the scanned images using a naming schema. A naming schema automatically names each page's image file with an automatically-generated name that can include file name, batch number, page number, side, and other information. (Check the Use Naming Schema check box and optionally edit the naming schema.) (See page 63.)

4. Specify a file name in the File Name text box. You can specify any valid file name (including long filenames and Internet URL path names if your operating environment supports these), but note the following:

a. The file name may be truncated by the naming schema, especially in Windows 3.x environments where only eight characters may be used in a filename.
b. The file name extension is automatically supplied according to the image file type. However, if you specify an extension, or if your naming schema specifies an extension, PixView will use that extension instead.

5.   Click **OK**. If you have already loaded pages in your scanner's document feeder, and your scanner has a stack sensor, PixView starts scanning immediately. If you have not loaded pages into your scanner, or if your scanner does not have a stack sensor, the following dialog appears:
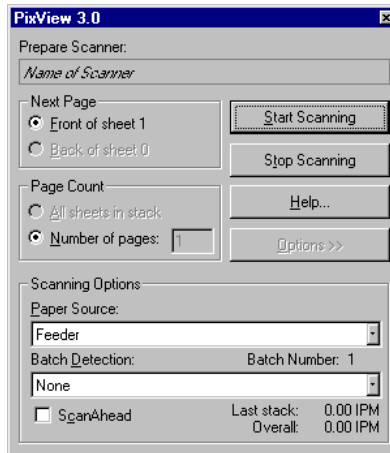
6.   Assuming you want to scan from your scanner's document feeder, place a stack of pages in the feeder, then click **Start Scanning**. In a moment, your scanner will start scanning pages and continue until the feeder is empty. When the feeder is empty, the above dialog again appears.

7.   At this point, you can choose to:

   a.   Stop scanning. To do this, click **Stop Scanning**. Go to "Viewing Pages" on page 38.
   b.   Continue scanning. To do this, load more pages in your scanner's document feeder and click **Start Scanning**.
   c.   Turn the document over to scan the backs of the pages. To do this, select the Back of sheet *m*, batch *n* option button, then click **Start Scanning**. If you chose a double-sided naming schema, your pages will be automatically numbered (or named a/b, etc.) for easy identification. For more information on double-sided scanning, see page 32.

Scanning a Rotated Batch

To use this feature with standard letter-sized paper, your scanner must be able to scan a document as wide as the length of your page, typically 11".

If desired, you can have PixView scan and rotate pages from landscape to portrait orientation in a single operation. This ability is designed to increase throughput on large format (11" wide) scanners by allowing you to scan 8½" x 11" pages sideways. Since the scanner moves 8½" rather than 11" of paper through its feeder, throughput may be increased by almost 25%.

To scan a rotated batch, follow these steps:

1. Choose **Scan Rotated Batch to File** from the File menu. The document naming dialog appears, just as when choosing **Scan Batch to File**, but without the Save Orientation option.

2. Select the desired options as when performing a normal scan batch operation.

3. Load pages in your scanner's document feeder in landscape orientation. You may need to experiment to obtain the correct final orientation. Start by rotating the pages 90º counter-clockwise, feeding the left margin first.

4. Click **OK** to scan the pages. If you inserted the pages correctly, you will see your pages in normal orientation in the PixView window. If your pages are upside-down, start over. This time rotate the pages 90º clockwise.

Scanning Single Pages

Single page scanning is useful if you want to scan and view, scan and print, or scan and save a single page. You can scan a single page many times while you adjust scanning parameters such as brightness and contrast, until you achieve optimum settings, and then start scanning batches.

To scan a single page, choose **Scan Page** from the File menu.

Note

When you scan a single page by using the **Scan Page** command, PixView assumes that you either have a page in your scanner's document feeder or

on the flatbed. If there is no page in the feeder, PixView scans from the flatbed without further prompting.

<center>**Important**</center>

When you choose **Scan Page**, any open pages or documents are closed. If you are in the middle of a **Scan Batch to File** operation or are viewing an open document, this is not a problem. However, if you had previously acquired an image by using the **Scan Page** command and have not saved it, the page image will be lost. If you are scanning to adjust scanner settings, this will not be a problem. However, if you are scanning pages for viewing, printing, and/or saving, you must be sure to perform these operations before choosing **Scan Page** again.

As soon as the page is scanned, PixView displays it. Go to "Viewing Pages" on page 38.

Rescanning Pages

Rescanning lets you replace an existing page in your document with another. You may need to rescan because of a scanner misfeed, upside down page in the stack, or other problem. To rescan a page, follow these steps:

1. Go to the page that you want to replace. See "Going to Other Pages" on page 40.

2. Place the page to rescan in your scanner.

3. Choose **Rescan Page** from the File menu.

<center>**Note**</center>

When you rescan by using the **Rescan Page** command, PixView assumes that you either have a page in your scanner's document feeder or on the flatbed. If there is no page in the feeder, PixView scans from the flatbed without further prompting.

The page that you scan replaces the current page in the PixView window and in your document (if any).

Canceling Scanning

Once you have started scanning, you can cancel scanning at any time. To cancel scanning, either:

- Choose **Cancel Scan** from the File menu, or
- Press C

Scanning stops as soon as PixView is able to regain control of the scanner (which may not be until the current page's scan completes).

Double-Sided Scanning

To use this feature, your scanner must have an automatic document feeder. To scan double-sided pages on a flatbed scanner, simply scan each side of the page in the correct order.

PixView supports double-sided scanning in one of two ways. depending on the capabilities of your scanner:

1. One pass: If you have a duplex scanner, PixView scans both sides of the page at one time, keeping the pages in the correct order.

2. Two pass: If you have a simplex scanner, PixView scans all of the front sides of all pages, then gives you the opportunity to turn the stack over and scan the back sides. The pages are placed into the correct order as they are scanned.

PixView supports one-pass double-sided scanning on supported duplex scanners. Duplex scanning is enabled and disabled from the Prepare Scanner dialog that appears when you start scanning with no pages in the document feeder.

If you have a traditional single-sided scanner, PixView lets you scan both sides of a stack of pages, one side at a time. To do this, follow these steps:

1. Place your document (or a portion of your document) in the scanner's document feeder, so that the front sides of the pages will be scanned. You can place as many pages as will fit in the feeder at one time. (Check your scanner's documentation for feeder capacity.)

2. Choose **Scan Batch to File** from the File menu, supply the appropriate settings (see page 27), and scan all of the fronts of the stack.

3. After scanning the last front page of the stack, PixView displays the following dialog:
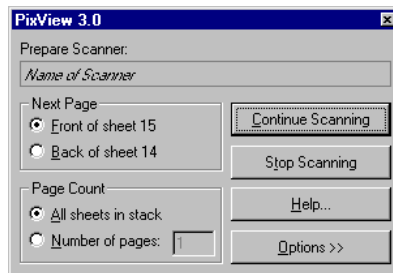
4. Turn the whole stack over and reinsert in your scanner's document feeder, so that the back sides of each page will be scanned, from last through first.

5. Choose the Back of sheet *n* option button.

6. Click **Continue Scanning**.

Note

If the number of back pages scanned does not match the number of front pages, you will see an error message with options for either rescanning the stack or ignoring the discrepancy.

7. When all pages in the stack have been scanned, the Prepare Scanner dialog again appears. Note that if you have scanned the correct number of back sides, the Back of sheet *n* option button is dimmed (unavailable). At this point, you can either:

   a. Click **Stop Scanning** to stop scanning and perform other operations.

   b. Place the front sides of the *next* stack of pages into your scanner's document feeder and click **Continue Scanning**. Continue scanning fronts *and backs* of each stack until you are done with your entire document.

Using Job Separators

To use this feature, your scanner must provide some mechanism for job separator detection. This is typically accomplished by using special separator sheets, a console button, or a foot pedal connected to the scanner.

Job separators let you automatically separate stacks of pages into separate jobs. Jobs are separated by choosing or creating a naming schema that includes a job identifier. The job identifier may be a variation of a file name or it may be differentiation by directory.

To use job separators, follow these steps:

1. If your scanner uses separator sheets, place a separator sheet in the stack at the end of each job. *Do not load the pages into the scanner's document feeder.* If your scanner has a different method of batch detection, arrange the first batch of sheets to be scanned.

2. Choose **Scan Batch to File** from the File menu. The document naming dialog appears, as shown on page 27. Make the appropriate selections and type a base file name for the batch. Choose a naming schema that includes a job identifier. For information on using a naming schema, see page 63.

3. Click **OK**. The Prepare Scanner dialog appears:
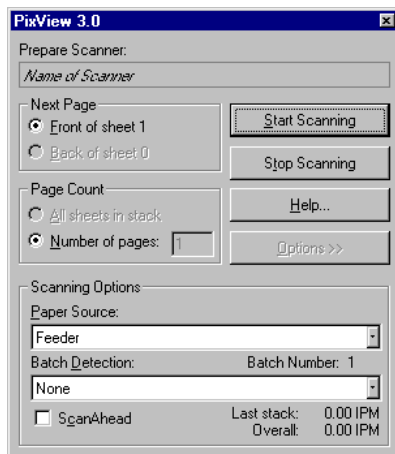
4. Choose the desired batch mode from the Batch Detection list box. The choices available depend on which scanner you are using, and *may* include some or all of the following:

None	The separator sheet is not detected, but is scanned as an ordinary page.
Detect and Scan Separator, Continue Scanning	The separator sheet is detected *and* scanned; any information on the separator is saved as the *last sheet of the current job*. Scanning continues with the next job.
Detect and Scan Separator, Stop Scanning	The separator sheet is detected *and* scanned, so any information on the separator is saved as the *last sheet of the current job*. Scanning stops and the prepare scanner dialog reappears.
Detect and Skip Separator, Continue Scanning	The separator sheet is detected but not scanned. Scanning continues with the next job.
Detect and Skip Separator, Stop Scanning	The separator sheet is detected but not scanned. Scanning stops and the prepare scanner dialog reappears.

Important

If you are scanning double-sided pages with job separators, you should always choose "Skip Separator." Otherwise, the separator will be scanned as the last sheet of the job on the fronts, and the first sheet of the *next* job on the backs, because scanning backs proceeds from last through first. If separators are scanned as part of a double-sided job, the entire job's naming schema will be confused.

7. Load your stack in the scanner's document feeder, then click **Start Scanning**.

ScanAhead

ScanAhead is a feature that keeps your scanner running at its maximum speed, even if your application program temporarily cannot keep up.

Important

Not all scanners support ScanAhead. If your scanner does not support ScanAhead, then the ScanAhead check box will not appear in the Prepare Scanner dialog as described below.

By default, ScanAhead is enabled. To disable or re-enable ScanAhead, follow these steps:

1. Display the Prepare Scanner dialog by starting a **Scan Batch to File** operation with no page in the scanner's ADF.

2. In the Scanning Options section of the dialog, click the ScanAhead check box. When there is a check in the box, ScanAhead is enabled. When there is no check in the box, ScanAhead is disabled. If there is no ScanAhead check box, your scanner does not support ScanAhead.

Opening Documents

PixView can open any supported image file type. Since a document can consist of many pages, and often each page image is a separate file, PixView lets you specify multiple files when opening a document.

Note

A document can consist of any number of pages; however, the PixView viewer can handle a maximum of 500 files at one time.

Reasons for Opening Documents

There are several not-so-obvious reasons to open documents with PixView:

*   Viewing and printing images. (See page 38 for viewing pages, page 45 for printing pages.)
*   Faxing images (if your computer has a Windows fax modem driver configured as a printer).
*   Rotating pages and saving the new orientation. (See pages 63 and 69 for two different methods of changing saved page orientation.)

- Converting images files from one file format/compression/color format to another file format/compression/color format. (See page 54 for information about saving documents with the settings you want.)
- Collecting individual image files into a multi-page file format (See page 54 for information about saving documents with the settings you want.)
- Organizing individual image files into a naming schema/directory structure. (See page 63 for information about naming schemas.)

To open a document, follow these steps:

1. Choose **Open Document** from the File menu. The following dialog appears:
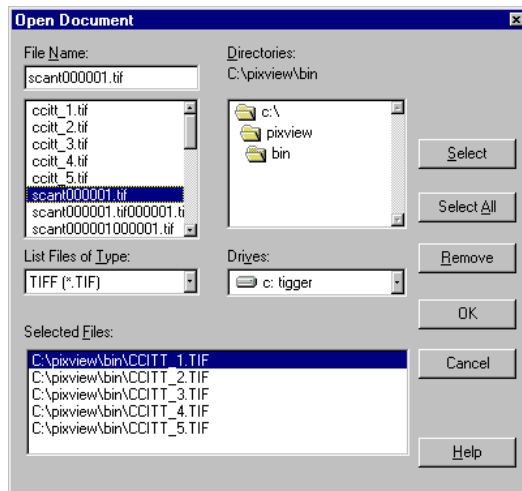
2. Select the drive and directory which contains the files you want to open. If necessary, change the setting in the List Files of Type list box to see the files of interest.

3. Select the files you want to open by one or more of the following methods:

    a. Click to highlight a file, then click **Select** to put it in the Selected Files list.

    b. Double-click a file to put a file in the Selected Files list.

    c. Click the first file of the document, then hold down the SHIFT key while clicking the last file in a contiguous list. This will highlight the entire range of files between the first and last. Click **Select** to put the entire group in the Selected Files list.

d. Click the first file of the document, then hold down the CTRL key while clicking other files. Each time you click, the file you are pointing to is highlighted. When you have selected all the files for your document, click **Select** to put them in the Selected Files list.

e. Click the first file of the document, then hold down the mouse button and drag through the list to select a range of files. Click **Select** to put the highlighted files in the Selected file list.

f. Click **Select All** to select all of the files in the File Name list and put them in the Selected Files list in a single operation.

4. After you have selected all of the files you want to open, click **OK** to open the document. The first file in the document now appears in the PixView window.

Viewing Pages

The PixView viewer lets you see your images in many useful ways. You can zoom, rotate, and move from one image to another. You can use the Pan window for moving quickly around the image, and you can use the Thumbnail viewer to quickly select a page from any number of pages in your document. Also, you can change page settings to make your pages as clear and readable as possible.

Zooming

Zoom in and out using the toolbar. There are several different zooming tools:

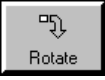| Tool	Page command	Shortcut Key	Result
◁▯▷ Fit Width	Fit to width	F2	Scales the image to fit the width of the PixView window. If you change the size of the window, the image size changes automatically to maintain fit-to-width.
⬕ Fit Window	Fit to window	F3	Scales the image to fit within the window. This setting ensures that you always see the entire image. If you change the size of the window, the image size changes automatically to maintain fit-to-window.

Tool	Page command	Shortcut Key	Result
1:1 View 100%	1:1	F4	Displays one pixel of the image for each pixel in the display. If you change the size of the window, the image size does not change.
Zoom In	Zoom in	+	Zooms in an amount specified in the Zoom Factor setting of Application Settings, described on page 74.
Zoom Out	Zoom out	–	Zooms out an amount specified in the Zoom Factor setting of Application Settings, described on page 74.

Zooming With the Mouse

You also can zoom in and out by using the mouse. To do this, point to the image, click and hold the left mouse button, and drag a selection rectangle that defines the area you want to magnify. Release the left mouse button, then click the right mouse button. When you click the right mouse button, the area defined by the selection rectangle instantly fills the PixView window.

Rotating

PixView can rotate your images in 90º increments:

Tool	Page command	Shortcut Key	Result
Rotate	Rotate	CTRL+1 CTRL+2 CTRL+3 CTRL+4	Rotates the current page 90º clockwise each time it is clicked. The shortcut keys represent 0º, 90º, 180º and 270º rotation, respectively.

Note that the image is rotated around the current window view point, so if you are zoomed in, you will not lose your point of reference when you rotate the view.

Tip: Rotating an image affects the *view* of the image only, not the actual file. To save a file once you have changed the image rotation, you must check the **Use Current Orientation** check box. (See page 56). Or, to save just the current image in its current orientation, choose **Replace Page w/ New Orientation** from the File menu.

Using the Clipboard

PixView can copy either the entire image or a selected portion to the Windows Clipboard.

To copy the entire image to the Clipboard, choose the **Copy** command from the Edit menu, or press CTRL+C.

To copy a selected area of an image to the Clipboard, first select an area by dragging a selection rectangle with the mouse. Point to the upper left corner of the area you want to select, then press and hold down the left mouse button. Move the mouse to define a rectangle around the area you want to select, then release the mouse button. Next, choose the **Copy** command from the Edit menu, or press CTRL+C. The following dialog appears:
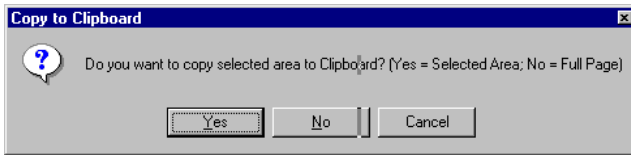
Click **Yes** to copy just the selection to the Clipboard. Click **No** to copy the entire image to the Clipboard.

Once you have copied an image to the Clipboard, you can paste it into another application. (Consult the documentation for your other applications to determine whether or not they support pasting of images from the Windows Clipboard.)

Going to Other Pages

There are several ways to go from one page to another:

Tool	Page command	Shortcut Key	Result
Prev Page	Previous Page	CTRL+P	Displays the previous page of your document. Dimmed if you are viewing the first page.
Next Page	Next Page	CTRL+N	Displays the next page of your document. Dimmed if you are viewing the last page.

| Tool	Page command	Shortcut Key	Result
	Goto Page	CTRL+G	Goes directly to the page number you enter in the Goto dialog.
	Show Thumbnails	T	Displays the Thumbnail window from which you can jump to any page by clicking on it. See page 42.

Using Scroll Bars

Scroll bars are the traditional Windows method of navigating around pages. In PixView, scroll bars are always enabled, and work just as you would expect.

Using the Pan Window

Scroll bars are tedious to use when navigating around large or highly-magnified images. The Pan window is a much more efficient tool. To use the Pan window, follow these steps:

1. If you do not see the Pan window, it is disabled. To enable the Pan window, either check Display Window in the Pan Window group of the Application Settings dialog, or press **P** while on the main PixView window. The Pan window looks like this:
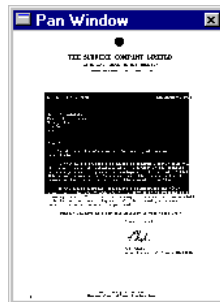
The reversed (black) area in the Pan window represents the area displayed in the main PixView window. If your entire Pan window is reversed, then the entire image is visible in the main window. You must then zoom in before you can use the Pan window.

2. Point to the reversed area of the Pan window, then click and hold down the left mouse button.

3. Drag the mouse and watch the image in the main window change.

4. If desired, you can change the size of the Pan window by dragging its corner borders. Generally, the Pan window's default size is adequate.

5. The Pan window always stays on top of the PixView window. If the Pan window is in your way, you can move it by pointing to its title bar and dragging. You can place the Pan window anywhere on your screen—it does not have to be within the PixView window.

6. To close the Pan window, click the close button or press **P**.

The Pan window has some additional settings that are explained on page 74.

Displaying Thumbnails

Thumbnails are miniature representations of each page of your document. Displaying thumbnails is a convenient way to see an overview of your entire document and to quickly go to a particular page.

Note:

The Thumbnail Viewer is included with PixView as an example of the kinds of features that can be implemented by using PixTools products. It is not intended to be used in a production environment and may give less-than-satisfactory results.

To display thumbnails, follow these steps:

1. Scan or open a document consisting of at least two pages.

2. Choose **Show Thumbnails** from the Page menu. (Shortcut: Press T in the main PixView window.) The following dialog appears:
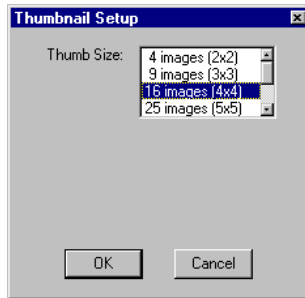
3. Select the desired number of thumbnails to display at one time, then click **OK**. The Thumbnail window then appears. A typical window looks like this:
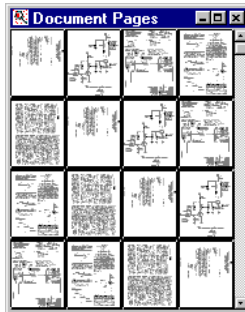

4. To get a better view of the individual pages, you can enlarge the Thumbnail window by dragging its corner borders. The Thumbnail window can be made as big as your screen allows. The Thumbnail window always stays on top of the PixView window. If the Thumbnail window is in your way, you can move it by pointing to its title bar and dragging. You can place the Thumbnail window anywhere on your screen—it does not have to be within the PixView window.

5. To go to a particular page, simply point to it and click.

6. To close the Thumbnail window, double-click the Control-menu icon in the upper left corner of the window.

Displaying with ScaleToGray™

When an image is viewed at sizes smaller than 1:1, PixView must decide which pixels to show and which pixels to hide. For example, when an image is viewed at 25% of its actual size, only one pixel out of four is visible. The remaining pixels are disregarded. The resulting image can be unreadable.

PixView solves this problem with binary (black and white) images by using scale to gray. Scale to gray represents the average density of missing pixels with a shade of gray, making reduced images much more readable. To see the improvement, toggle scale to gray off and on by pressing G from the main PixView window.
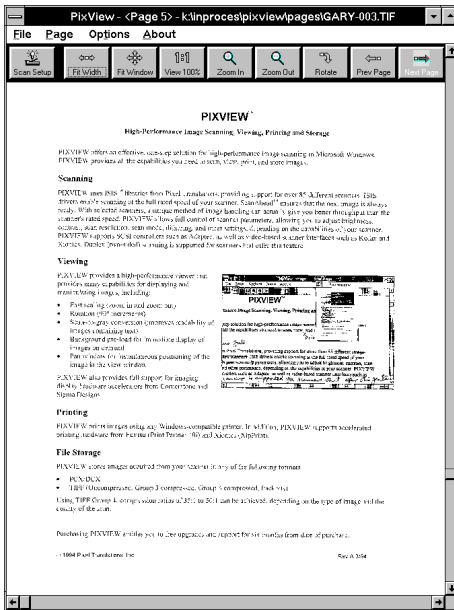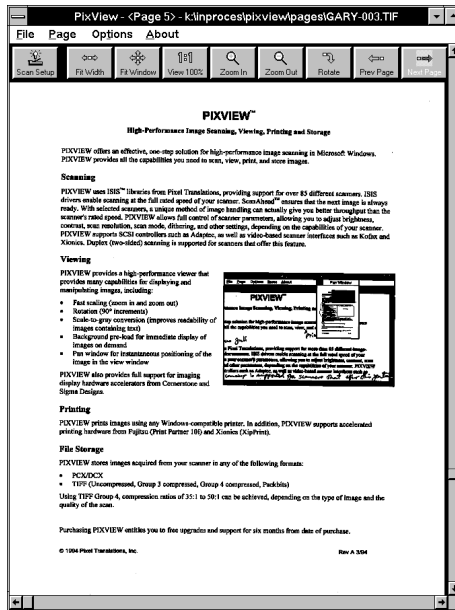
Scale to Gray Off   Scale to Gray On

Annotating Pages

Annotations give you the ability to add text, lines, highlighting, and other objects to your pages. Annotations appear on top of your page images; they do not become a part of the image data.

Important

Because annotation data is saved in TIFF tags, non-TIFF files do not support saving of annotations. Annotations are saved only when the file format is TIFF.

To place annotations on your pages, follow these steps:

1. Display the Annotation toolbar. To do this, choose **Application Settings** from the Options menu, then check **Display Annotation Toolbar** in the Display Features group.
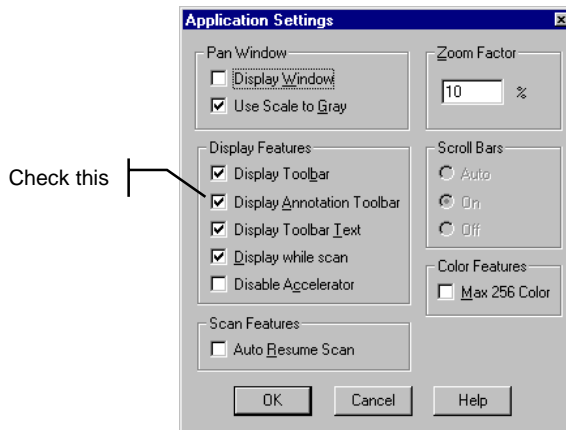
2. Click **OK** to close the Application Settings dialog. The Annotation toolbar now appears near the top of the window.

3. Click the annotation tool that you want to use.

4. If desired, change the annotation tool's attributes by using the Annotations menu.

Annotations	
✔ Print Annotations	
Text	▶
Popup Text	▶
Highlight	▶
Redact	▶
Line	▶
Arrow	▶
Box	▶
Stamp	▶
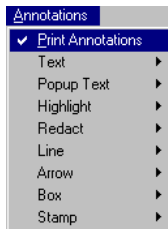
Each annotation tool has a different set of attributes, and each is explained in "Annotation Attributes" below.

5. Place the annotation. The way in which you place an annotation depends on which annotation tool you are using. For example, to place a text annotation, click at the desired starting point, then type text. To place a highlight annotation, click and drag to define a rectangle.

To move an annotation, use the Select tool. Point to the annotation, then click and drag to move it.

To resize an annotation, use the Select tool. Point to the annotation and click to select it. Note that "handles" (small black rectangles) appear in the corners of the annotation. Position the mouse pointer over one of these rectangles, then click and drag to resize the annotation.
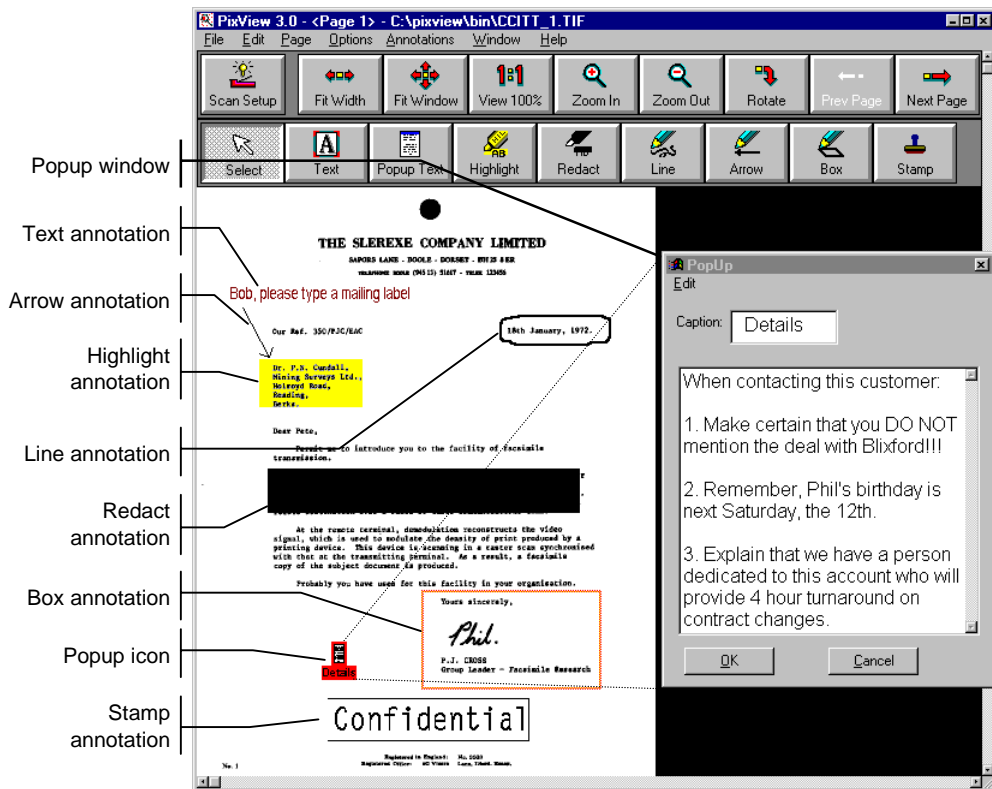
To delete an annotation, use the Select tool. Point to the annotation and click to select it. Then press DELETE.

Annotation Tools

You can place any of eight different types of annotations on your pages. The following table describes each of the annotation tools:

Annotation Tool	Use
Select	Select annotations for the purpose of moving, resizing, or deleting them, or changing their properties.
Text	Place a text annotation.
Popup Text	Place a popup icon which, when clicked, opens to a window of scrollable text.
Highlight	Draw transparent colored rectangles over areas of the page, similar to the appearance of a highlighter pen.
Redact	Draw opaque, usually black, rectangles over areas of the page to obscure them from being seen.
Line	Draw freehand lines.
Arrow	Draw straight lines arrowheads on either or both ends, or no arrowheads..
Box	Draw rectangles.
Stamp	Place a bitmap image that you specify.

A typical annotated page might look similar to the following on your screen:

Popup window

Text annotation

Arrow annotation

Highlight annotation

Line annotation

Redact annotation

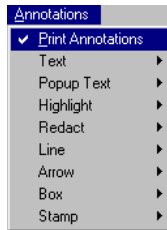Box annotation

Popup icon

Stamp annotation
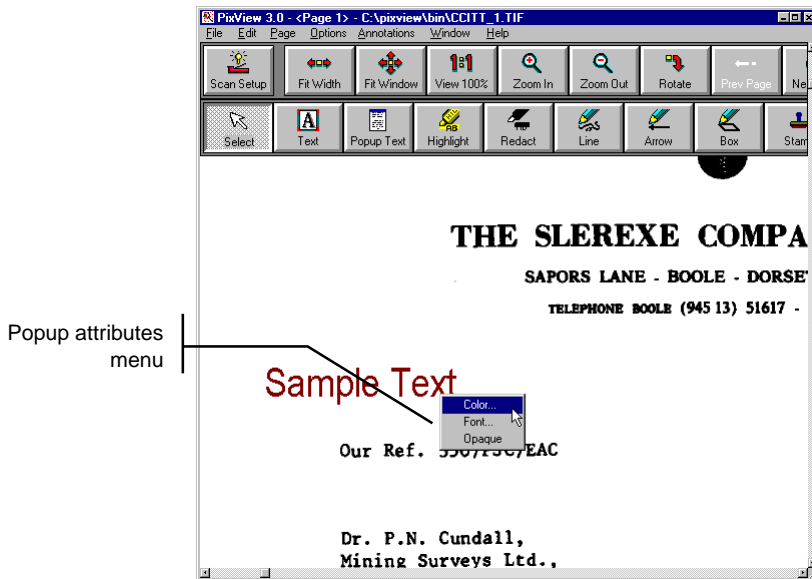
Annotation Attributes

Each type of annotation has various attributes that you can set as desired. This section explains each of these annotation attributes.

You can change the attributes either before or after you place an annotation:

- To change the attributes before you place an annotation, use the Annotations menu.

- To change the attributes of an existing annotation, move the mouse pointer over the annotation. (When property positioned, the mouse pointer changes from an normal arrow to a four-headed "move" arrow.) Then right-click to display a popup attributes menu. Make a selection from this menu to change the annotation.

Popup attributes menu

The following table describes each annotation attribute:

Annotation Tool	Attribute	Effect
Text	Color	Set the color of the text
	Font	Set the font, font style, size, effects, and color
	Opaque	Toggle whether text is transparent or opaque
Popup Text	Color	Set the color of the popup text icon
	Font	Set the font of the popup text and caption text
Highlight	Color	Set the color of the highlighter
Redact	Color	Set the color of the redacted area
Line	Color	Set the line's color
	Width	Set the line's width in unscaled pixels
	Transparent	Toggle whether line is transparent or opaque
Arrow	Color	Set the arrow's color
	Width	Set the arrow's line width in unscaled pixels
	Arrows	Choose arrowhead at head, tail, both, or none
	ArrowHeads	Choose hollow or solid arrowheads
	Transparent	Toggle whether arrow is transparent or opaque
Box	Color	Set the color of the box outline
	Width	Set the box outline's width in unscaled pixels
	Transparent	Toggle whether the box outline is transparent or opaque
Stamp	File	Choose the bitmap file to use as a stamp

Printing Pages

By using the various printing commands in PixView, you can print your pages in a number of useful ways. Each print command (except Print Thumbnail) lets you optionally print a *selection.* A selection is an area of a page that you determine by drawing a rectangle on the page image prior to choosing one of the print commands, as shown:


Selection made by dragging the mouse
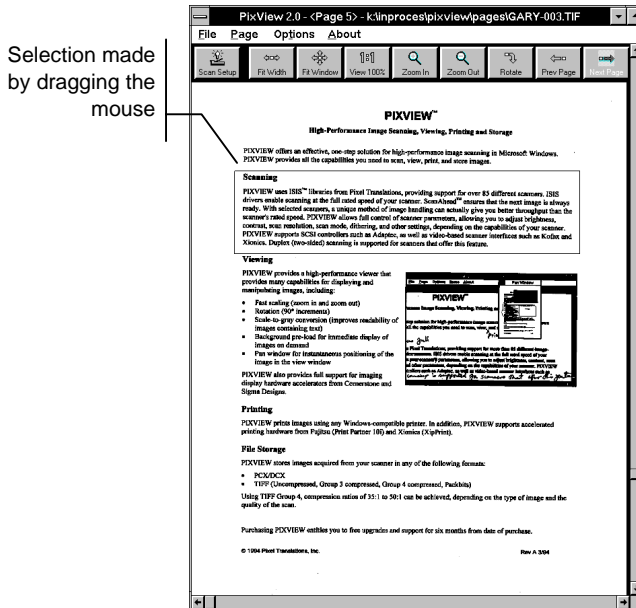
To print, follow these steps:

1. If you want to print a selection, use the mouse to select an area of a page by drawing a rectangle around the desired area. To change the size of the selection once you have made it, hold down the SHIFT key, click the left mouse button and continue stretching the selection rectangle. To start a new selection, simply click anywhere on the image and drag.

2.   Choose one of the print commands from the File menu:

> **Print** (Fit Page)   Prints each page image (or selection) scaled so that it fits the printer's page size.
>
> **Print** (Actual Pixels)   Prints each page image (or selection) with one printer pixel for each pixel in the image.
>
> **Print** (Actual Size)   Prints each page image (or selection) in its original size. If the image is bigger than the printer page size, only a portion of the image will print. PixView does not tile images when printing. For normal 8½" x 11" pages and printers, this will amount to cropping about ¼" along each edge.
>
> **Print Thumbnails**   Prints a specified number of page images on each page.

If you chose **Print Thumbnails**, the following dialog appears:
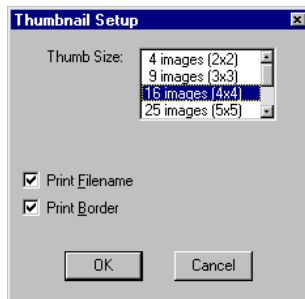
Choose the number of images to print on each page and, if desired, enable printing of borders and/or filenames for each image. Click **OK**.

1.   After choosing a print command (and, if printing Thumbnails, choosing a Thumbnail layout), the following dialog appears:
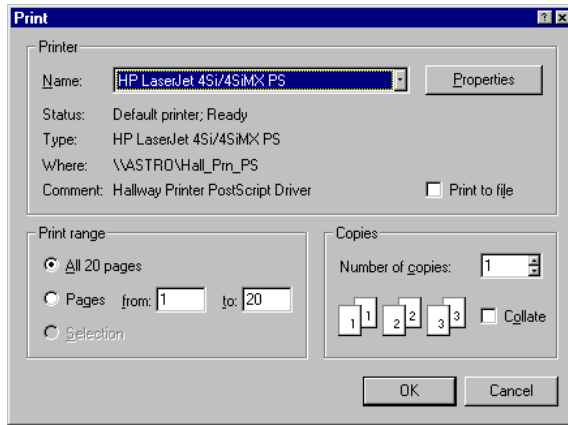
2.   Choose the desired printing options:

   a.   If necessary, click **Setup** to choose the printer you want to use and set its options. Click **OK** when done.

   b.   Choose a print range. **All** prints all pages in your document. **Selection** prints only a previously-defined selection on a single page. If no selection exists, this option is dimmed. **Pages** prints the range of pages you specify in the From and To text boxes.

   c.   Click the **Properties** button to change printer settings. These settings vary according to your printer's capabilities.

   d.   Specify the number of copies to print and whether or not to collate. For multipage documents, collating is more convenient. When making several copies of each page, not collating may result in faster printing.

3.   Click **OK** to start printing.

Printing Annotations

If you have pages with annotations and you want those annotations to print, be sure that
**Print Annotations** is checked in the Annotations menu.
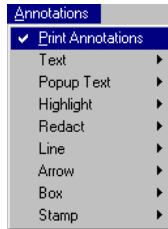
Saving Pages and Documents

In almost all cases, your pages are automatically saved as you scan them, according to the
instructions you specify in the Scan batch to file dialog. You only need to save pages or
documents in the following cases:

1. You scanned a single page using the **Scan Page** command. (The resulting image is not
    automatically saved.)

2. You want to make a change to the file format, compression, or color format.

3. You want to change the orientation of the image in the file.

4. You want to change the naming schema.

5. You want to change from individual files to a multi-page file format or vice-versa.

Saving a page is exactly the same as saving a document; the only difference is the save
range, explained below. To save a page or a document, follow these steps:

1. Choose **Save Page As** or **Save Document As** from the File menu. The following dialog
   appears:
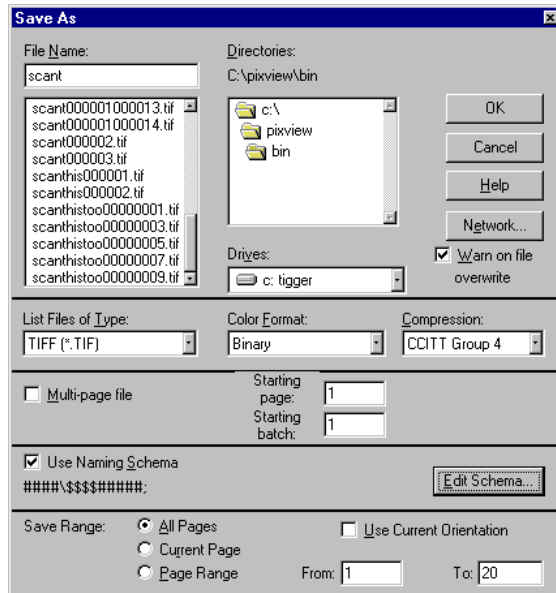
2. Choose:

    a. An image file format from the List Files of Type list box (see page 56).
    b. A color format from the Color Format list box (see page 58).
    c. A compression option from the Compression list box (see page 56).

3. Decide whether to:

    a. Have PixView warn you if you specify an existing file name, or overwrite the existing file with no warning. (Check the Warn on file overwrite check box.)
    b. Save the document as a multi-page file. (Check the Multi-page file check box.) (See page 63.)
    c. Save the document using a naming schema. A naming schema names each page's image file with an automatically-generated name that can include file name, batch number, page number, side, and other information. (Check the Use Naming Schema check box and optionally edit the schema. (See page 63.)
    d. Save the document using the original orientation or the current orientation. Normally, the document is saved in the original orientation. If you have rotated

pages and you want to save them in their current orientation, you must check the Use Current Orientation check box.

4. Specify a starting page number and starting batch number for the document. If you are using a naming schema, these settings will affect the resulting file names.

5. Choose a range of pages to save. If you chose the **Save Page As** command, the Current Page box is checked by default. If you chose the **Save Document As** command, the All Pages check box is checked by default. If you want to save a range of pages, check the Page Range check box and enter a page number in the From and To text boxes.

6. Select a drive and directory in which to save your page or document, and type a file name in the File Name text box. You can specify any valid filename, but note the following:

    a. The filename may be truncated by the naming schema, if one is being used. This is especially true when using Windows 3.x with its limited eight-character filenames.
    b. The filename extension is automatically supplied according to the image file type. However, if you specify an extension, or if your naming schema specifies an extension, PixView will use that extension instead.

7. Click **OK** to save the document. While PixView is saving the document, you will see a progress monitor similar to the following:
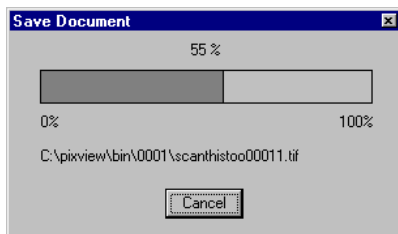
Selecting File Formats and Compression Options

PixView supports a number of popular image file formats. You can choose from among the following according to the requirement of other applications. If possible (for binary images), you should choose TIFF JBIG or TIFF Group 4, which can achieve a 35:1 to 50:1 compression ratio, depending on the characteristics of the image.

Format Extension	File Format	Multi-page Support?	Color/gray support?	Compression Options[1]
TIF (also see Plexus TIFF)	Tagged Image File Format (TIFF)	Yes	Yes	CCITT Group 4 CCITT Group 3 Modified Group 3 JBIG Enhanced JBIG JPEG Packbits ZIP WANG JPEG None
TIF	Plexus TIFF	No	Yes	CCITT Group 4 CCITT Group 3 Modified Group 3 Packbits None
PCX	ZSoft PC Paintbrush	No	Yes	RLE
DCX	ZSoft PC Paintbrush FAX extension	Yes	No	RLE
BMP	Microsoft Windows Bitmap	No	Yes	None RLE for some color formats
JBG	JBIG	No	Gray	JBIG, Enhanced JBIG
JPG	JPEG JFIF	No	Yes	JPEG
PDA	Calera Processed Document Architecture	No	No	CCITT Group 4 CCITT Group 3 None

---

[1]Available compression options may vary according to selected Color Format.

Format Extension	File Format	Multi-page Support?	Color/gray support?	Compression Options[1]
PDF	Portable Document Format (Adobe Acrobat)	Yes	Yes	CCITT Group 4 CCITT Group 3 ZIP
PNG	Portable Network Graphics	No	Yes	ZIP
CAL	DOD CALS	No	No	CCITT Group 4
MDA	IBM MO:DCA	Yes	Yes	CCITT Group 4 JPEG None

How to Choose a File Format

Different file formats produce files with different characteristics and sizes. Often, your choice of file format will depend on the requirement of other image applications that must use the images captured in PixView. However, if you have more than one choice of file format, you may want to determine the best format for your application. There are three settings that affect the file format:

1. File Type (TIFF, PCX, BMP, etc.)

2. Color Format (Binary, Gray scale, 8-bit Palette, 24-bit color, etc.)

3. Compression (None, Packbits, CCITT Group 4, etc.)

When saving documents, keep in mind their intended use. If you do not need color or gray scale, you should probably save using the binary setting because the resulting files will take up much less disk space. Each pixel of a binary image requires one bit of disk space (uncompressed). Each pixel of a 24-bit color image (which provides 16 million color possibilities) requires 24 times as much disk space. Generally, binary images compress significantly better than color or gray scale images.

The available color format settings vary according to the file type selected. The compression settings vary according to both the file type and color format settings. In the following brief descriptions, *compression* is the compression options available in PixView listed from best (most compression) to worst (least compression).

BMP	Windows (and OS/2) Bitmap
Advantages:	Wide support under Microsoft Windows. Handles black-and-white, gray scale, palette color and 24-bit color images.
Disadvantages:	Poor support outside of Windows (OS/2). Poor support for compressed files. Does not support multiple images per file.

Compression:	Binary:	None
	Gray/Palette Color:	RLE, None
	24-bit Color:	None

CALS	Department of Defense Computer Aided Logistics Support
Advantages:	Compatibility with CALS imaging systems.
Disadvantages:	PixView only reads CALS files; it does not write them.
Compression:	CCITT Group 4

DCX	Fax Extension of PCX
Advantages:	Same as PCX, but black-and-white only. Supports multiple images per file.
Disadvantages:	Same as PCX.
Compression:	Binary: RLE

JBIG	Joint Bilevel Imaging Group
Advantages:	Excellent binary and gray scale compression.
Disadvantages:	No support for color. Not widely supported at this time.

Compression:	Binary:	JBIG
	Gray:	JBIG

JBIG is both a file format and a compression scheme, and is available in JBIG files as well as in TIFF files.

JPEG   Joint Photographic Experts Group Compressed Bitmap

Advantages: By far the best compression for photographic images.

Disadvantages: Many incompatible implementations. Lossy, meaning that color and image data is discarded to save storage space at the expense of image qualities that typically are below the threshold of human vision.

Compression: JPEG is a compression scheme, which can be used in other file types. The correct name for a stand-alone JPEG file is JFIF. On the PC, these files typically have the extension JPG.

MO:DCA   IBM Mixed Object: Document Content Architecture.

Advantages: Compatibility with IBM imaging systems.

Compression: CCITT Group 4

PCX   ZSoft PC Paintbrush Image File Format

Advantages: Widely supported on PC platforms. Supports black-and-white, gray scale, palette color and 24-bit color images. Reasonably efficient storage of images with large areas of constant tone. Images are always compressed using run-length encoding (no user choice).

Disadvantages: Run-length encoding is inefficient for storing typical scanned images. Produces files twice the size of TIFF Packbits. Generally not supported on non-PC platforms.

Compression: Binary: RLE

                    Gray/Palette Color: RLE

                    24-bit Color: RLE

PDA   Caere Corporation Processed Document Architecture

Advantages: Single file format can contain bitmap image data or text. Very good compression is possible.

Disadvantages: Very little support other than Caere applications (WordScan, M/Series Professional). No color support. (Developed for OCR applications.)

Compression:	Binary:	CCITT Group 4, CCITT Group 3, None

Plexus TIFF   Modified TIFF Format for Plexus Software

Advantages   Compatibility with Plexus imaging systems.

Disadvantages   Only support a subset of the regular TIFF features.

Compression	Binary:	CCITT Group 4, CCITT Group3, CCITT Modified Group 3, Packbits, None
	Gray:	Packbits, None
	Palette/24-bit Color	Packbits, None

PDF   Adobe Acrobat Image File Format

Advantages   Compatibility with Adobe Acrobat.

Disadvantages   PixView only reads image-only PDF files.

Compression	Binary:	CCITT Group 4, CCITT Group3, ZIP
	Gray:	JPEG, ZIP
	Palette/24-bit Color	JPEG, ZIP

PNG   Portable Network Graphics

Advantages   May become a replacement for GIF as the standard web graphics format. Superior to GIF because it also supports binary and 24-bit color.

Disadvantages   Not widely supported at this time.

Compression   ZIP

TIFF   Aldus/Microsoft Tagged Image File Format

Advantages: Handles black-and-white, gray scale, and color images well. Supports multiple images per file in PixView's implementation. Works across multiple platforms. Available in most commercial imaging applications.

TIFF with JBIG compression provides the best binary and gray scale file compression. TIFF with JPEG compression provides excellent color file compression.

Disadvantages: So flexible that many implementations are not complete; therefore, TIFF files from one application may not be compatible with another application's implementation. Format also allows for private, undisclosed data field formats making certain implementations closed to other applications.

Compression: Binary: CCITT Group 4, CCITT Modified Group 3, CCITT Group 3, JBIG, Enhanced JBIG, ZIP, Packbits, None

Gray: JBIG, Enhanced JBIG, ZIP, Packbits, None

Palette/24-bit Color JPEG, WANG JPEG, Packbits, ZIP, None

Summary: Group 4 compression provides the best compression for black & white images. Modified Group 3 provides half the compression but is more widely supported. JPEG is lossy, meaning that it discards some of the original image's information in order to attain a higher compression. PCX is more widely supported and is not lossy.

Choose a compatible format as close to the top of the following lists as possible:

Binary images:

1. JBIG
2. TIFF Group 4
3. TIFF Group 3 Modified
4. TIFF Group 3
5. TIFF Packbits
6. PCX
7. TIFF Uncompressed

Color/gray scale images:

1. JBIG (gray scale only)
2. JPEG
3. TIFF Packbits
4. PCX
5. BMP

Note

Dithered images generally compress very poorly, due to the large number of transitions in pixel values. Sometimes compressed dithered images can be larger than their uncompressed counterparts.

Changing Page Orientation

PixView maintains the orientation of the images in the files you save unless you specifically instruct it to change the orientation. If you want to save the orientation of each image in the file after rotating some or all of the images, check the Use Current Orientation check box. (See page 56.)

Multipage Options

A multi-page file is a single file that can contain multiple images. The formats that support multi-page files are listed in the table on page 56. Note that the application in which you intend to view, manipulate, or print the images must also support multi-page files; otherwise, you may see just the first page of a multi-page file, or the program may display an error message or crash.

Naming Schemas

Naming schemas let you automatically name large batches of scanned pages in such a way that they are easily identifiable. You can choose from a list of common naming schemas or you can create your own to meet the requirements of your job. Schemas can be thought of as "pictures" of how you want your documents' file names to look, including automatically-generated batch number, page numbers, and side identifiers.

To use naming schemas, check the Use Naming Schema check box in the Save Document As, Save Page As, or Scan Batch to File dialog. The currently-selected naming schema appears just below this check box:

```
☑ Use Naming Schema
$$$$####;                          Edit Schema...
```

Selecting a Naming Schema

To select a different naming schema, click **Edit Schema**. The following dialog appears:

```
File Naming Schema                                          ☒
Schema:
│$$$$####;                                      ▾│   │   OK   │
│ Default List │  │ Add Schema │  │ Delete Schema │  │ Cancel │
Description:
┌─────────────────────────────────────────────────────┐
│ Single sided only. Produces file names with consecutive page numbers. │
│                                                       │
└─────────────────────────────────────────────────────┘
                                               │  Help...  │
┌─ Sample Files Generated ──────────────────────────────────┐
│ Batch 0   Sheet 1           Sheet 2           Sheet 187    │
│   Front: │.\scan0001.tif   .\scan0002.tif    .\scan0187.tif│
│   Back:  │illegal path     illegal path      illegal path  │
│ Batch 17                                                   │
│   Front: │.\scan0001.tif   .\scan0002.tif    .\scan0187.tif│
│   Back:  │illegal path     illegal path      illegal path  │
└────────────────────────────────────────────────────────────┘
```

Note that the file name specified prior to clicking **Edit Schema** was scan. Choose the desired naming schema from the Schema drop-down list box. To see hypothetical results of each schema, refer to the list of Sample Files Generated. Note that in the example shown above, a double-sided document could not be saved, because the naming schema results in an illegal path name for the backs of pages. Other supplied schemas make provisions for the backs of double-sided documents as well as for batch identifiers. Some of the naming schemas even divide large jobs into directories each containing no more than a predetermined number of files. This can be important in large jobs, because the performance of the DOS file system slows down considerably as more and more files are added to a given directory.

Selecting a Predefined Naming Schema

PixView has several predefined naming schemas. You can choose the desired predefined schema from the Schema drop-down list box. Rather than describe all of the schema in this manual, you can choose each one in turn and note the results under Sample Files Generated. You also can read a description of how the schema works under the Description heading in the dialog.

Defining a Custom Naming Schema

If none of the predefined naming schemas meet your needs, you can define your own. To define a custom naming schema, follow these steps:

1. Select the text in the Schema drop-down list box. It doesn't matter which schema is currently selected—this operation does not overwrite the predefined schemas.

2. Type a new naming schema, replacing the text you selected in Step 1. Follow the rules for naming schemas described in the following section. Note that as you type, the information under Sample Files Generated changes to show the hypothetical results of your schema. If you type a schema that results in an illegal filename, the words `illegal path` appear under Sample Files Generated.

3. If you want to permanently save the schema, click **Add Schema**. Your new naming schema is added to a position in the list determined by ASCII character sort order of the characters in your schema.

4. Click **OK** to close the dialog and return to the Document Name dialog.

Naming Schema Formats and Rules

Naming schemas can be entered in one of two different formats:

- PixName format
- Printf format

The PixName format is easy to use, while the Printf format provides more functionality. The PixName format should be able to represent naming schema for most of your needs. The general schema format for both naming schemas is:

$$\textit{format[,varlist][;format[,varlist]]}$$

format can be either a PixName format string or a Printf format string. If **format** is a PixName format, then you do not need to enter a **varlist**. If the naming schema needs to be different for the front and back sides of sheets, use a semicolon (**;**) to separate the front side format from the back side format The string can contain any legal file name characters. The characters "**\$**," "**#**," and "**%**" have special meanings described in the following section, and must be preceded by "**%**" if they are to be treated as literal characters in the file name.

varlist is an optional list of expressions that is evaluated for every file name generated and substituted into the **format** string. Each expression in a **varlist** is separated from the next expression by a comma (**,**). Up to four expressions can be entered within a single **varlist**. An expression is either a text expression or a numeric expression. Text expressions are limited to the variable "**r**" that represents the root file name. Numeric expressions can contain multiple occurrences of the variables "**b**" and "**p**" that represent the current batch number and the current page number, respectively. Numeric expressions also can contain numbers and mathematical operators. The operators "**+**," "**−**," "**/**," and "*****" (addition, subtraction, division, and multiplication) are supported. All numerical expressions are evaluated left to right without regard to operator precedence.

PixName Format Strings

The PixName format uses two special characters, "**\$**" and "**#**," to represent place holders for the root file name, batch number, and page number, as follows:

"**\$**" Place holder for the root file name. The number of consecutive dollar signs has no bearing on the size of the field the root file name will fill. PixName automatically truncates the root file name as needed to fit the other requirements of the naming schema. (Internally, a sequence of dollar signs is translated into the Printf format "**%s**" with the variable expression "**,r**.")

"**#**" Place holder for one digit in either the batch number or the page number. A sequence of three number signs means that a zero-padded number, three characters (or more) long, is plugged into the file name in place of the number signs. For example, if the format string "**pix####,p**" is entered, and the page number is 17, then the file name generated would be "**pix0017**."

The first sequence of number signs is always a place holder for a page number expression involving the variable "**p**" unless a second sequence is entered. If a second sequence of number signs is detected, then the first sequence becomes a place holder for the batch number (variable "**b**") and the second sequence becomes the

page number expression.

If you enter only one PixName format string that is not followed by a **varlist**, then PixView assumes that a double-sided document is being created. This implies that the front sides of sheets have odd page numbers and the back sides of sheets have even page numbers. The Printf expression that creates this series for input page numbers "1, 2, 3,..." is "**,p*2-1**" for front side page numbers and "**,p*2**" for back side page numbers. If you enter different front and back side **format** strings, PixView assumes simple page numbering using the simple Printf expression "**,p**" for both the front and back sides.

Printf Format Strings

The Printf format allows a subset of the output formatting available in the C language **printf** function call. The format string can contain any characters, symbols, or digits permitted by the file system in file names. Portions of the string that begin with the percent sign (**%**) have special meanings that usually represent a place holder for an evaluated expression that will be substituted. The general form for a "**%**" specification is:

$$\texttt{\%[0}\textit{width}\texttt{]}\textit{type}$$

These characters and fields have the following meanings:

0   Pads the output number with zeros. The number is right justified within the specified *width* characters. Any characters to the left of *width* spaces not used by the number are filled with zeros.

width   Minimum number of spaces a number will occupy. Numbers larger than *width* characters are **not** truncated. A number is right aligned within the *width* field.

type   Type of value to be substituted into the string. The following *types* are supported:

type	Meaning
c	Insert a single character having an ASCII value determined by the corresponding expression in **varlist**.
d, i	Insert a signed decimal integer argument.
ld, li	Insert a long signed decimal integer argument.

type	Meaning
u	Insert an unsigned decimal integer.
x	Insert an unsigned hexadecimal integer argument in lower case.
X	Insert an unsigned hexadecimal integer argument in upper case.
lx,lX	Insert an unsigned long hexadecimal integer argument in the indicated case.
s	Insert a character string.

Schema Entry Rules

Following are a few rules for entering naming schemas:

1. Do not mix formats. Use either PixName format or Printf format.

2. If you use PixName format, **varlist** is generated automatically, even though it is not visible. You can type in your own **varlist** if necessary.

Do not enter full path names as part of the format. PixView will provide a "prefix" portion of the file name that is not displayed in the samples of the dialog. Entering drive letters will cause an "illegal path" error.

Schema Examples

The following table gives several examples of both PixName Format and Printf Format strings.

PixName Format	Printf Format	Resulting File Name (base name = abcdefgh.tif)
HELLO	HELLO	(front) hello.tif (back) hello.tif
$	%s,r	(front) abcdefgh.tif (back) abcdefgh.tif

PixName Format	Printf Format	Resulting File Name (base name = abcdefgh.tif)
##	%02d,p*2-1;%02d,p*2	(front) 01.tif (back) 02.tif
HELLO##	HELLO%02d,p*2-1; HELLO%02d,p*2	(front) hello01.tif (back) hello02.tif
$$$-###	%s-%03d,r,p*2-1; %s-%03d,p*2	(front) abcd-001.tif (back) abcd-002.tif
####\SCAN####	%04d\SCAN%04d,b,p*2-1; %04d\SCAN%04d,b,p*2	(front batch 1) 0000\scan0001.tif (back batch 1) 0000\scan0002.tif (front batch 17) 0017\scan0001.tif (back batch 17) 0017\scan0002.tif
SCAN###A; SCAN###B	SCAN%03dA,p;SCAN%03dB,p	(front) scan001a.tif (back) scan001b.tif
$##\$.###	%s%02d\%s.%03d,r,b,r,p*2-1; %s%02d\%s.%03d,r,b,r,p*2	(front) abcdef01\abcdef.001 (back) abcdef02\abcdef.002

Saving a Selection

In the same manner as printing a selection (described on page 45), you can save a selected area of a single page or a selected area on each page of an entire document. To save a selection, follow these steps:

1. Use the mouse to select the area of the page you want to save, or the area you want to save on each page of an entire document. (When saving a document, the same selection is saved on every page of the document.) To select an area, use the mouse to draw a rectangle. To change the size of the selection once you have made it, hold down the SHIFT key, click the mouse button, and continue stretching the selection rectangle. To start a new selection, simply click anywhere on the image and drag.

2. Choose **Save page as** or **Save document as** from the File menu. The Save dialog appears, but with an additional check box, as shown:
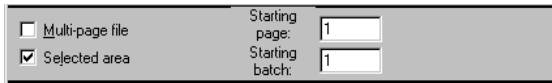
3. Note that the "Selected area" check box is checked by default. If you have defined an area but don't want to save an area, clear the check box.

4. Complete all other information in the Save dialog normally, then click **OK**. If you are saving a document, the entire document will be saved by applying the selection to each page, and only saving the portion that falls within the selected area.

Replacing a Page with a New Orientation

You can change the orientation of individual pages in your document, and then save that orientation in either of two ways. This section describes a way of changing the current page's orientation. The method of saving the current orientation of all pages in a document is described on page 63.

When you choose **Replace Page w/ New Orientation** from the File menu, the result depends on the image format you are using to save the page or document. If you are using TIFF, the current page's orientation tag in the image header is changed. *The orientation of the image itself is not changed.* The orientation of the image you will see in another image application depends upon the other application's support of the orientation tag. Image formats other than TIFF do the following:

1. If saving in a single-page file, the original file is deleted and replaced with a new file containing the rotated image.

2. If saving a multi-page file, the current page in the file is deleted and replaced with the new page. Generally, any extra space in the file that is freed by this operation is not recovered.

Changing settings

Changing Scanner Settings

To change scanner settings, click the **Scan Setup** button or choose **Scanner Settings** from the Options menu. A dialog similar to the following appears:
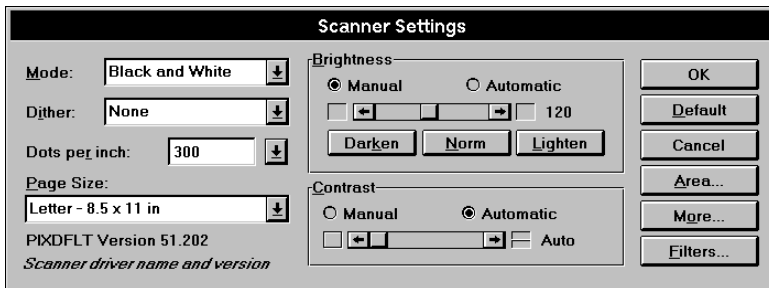
The dialog for your scanner may be slightly different, so as to provide controls for all of your scanner's features.

Choose settings as desired, and then click **OK**.

Additional settings also are available from this dialog:

Click	To set
Default	Return scanner settings to their default values.
Area	To set the scanning area. Scanning area is set by specifying a measurement unit, and then specifying the upper left X and Y positions and the width and height of the area.
More	When enabled, the scanner has additional settings that are scanner-specific. These additional settings may include separator page detection, gamma curve correction, binarization matrix selection, pixel patching, and so forth. Consult your scanner's documentation for information about these additional settings.
Filters	When enabled, the scanner or system has image enhancement filters, such as deskewing and noise removal. These filters may be available in the scanner hardware or may be added via software modules.

Changing Page Settings

To change page settings, choose **Page Settings** from the Options menu. The following dialog appears:
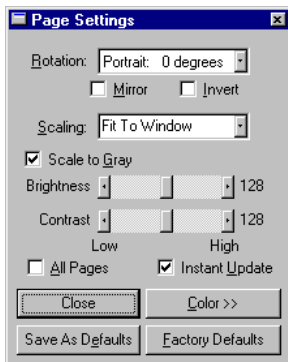
Page settings only affect the view of the image on your screen. They do not change the contents of your image files whatsoever. You can change the following settings:

Setting	Effect
Rotation	Changes the page orientation in 90º steps.
Mirror	Displays a mirror image of the page.
Invert	Inverts the image display from positive to negative or negative to positive.
Scaling	Changes the scaling of the image to one of several predefined sizes. In addition, you can type any value between 4 and 200 (percent) in this box.
Scale to Gray	For black and white images that are being viewed at sizes smaller than 1:1, changes pixels to shades of gray based on the relative brightness of the reduced area. This improves clarity of the image.
Brightness Contrast	Changes the relative brightness of a color, gray scale, or scaled-to-gray image view.

Setting	Effect
Horz Pres Vert Pres	With binary images only, changes the threshold at which a black pixel is converted to white when displaying the image at scale factors less than 1:1. This can improve readability in some cases without using Scale to Gray (which may reduce display speed slightly). **Note:** These settings are available only when viewing a black and white image with Scale to Gray disabled.
All Pages	Makes changes applicable to all pages in a document. When disabled, only the current page is affected.
Instant Update	Makes changes instantly visible in the PixView view window as you make them. When disabled, changes take effect when you click **OK**.
Save As Defaults	Saves all current settings as the default values that will be used whenever a new document is opened.
Factory Defaults	Returns all settings to their factory default values.
Color	Enables color settings by extending the Settings dialog, as shown in the following illustration:
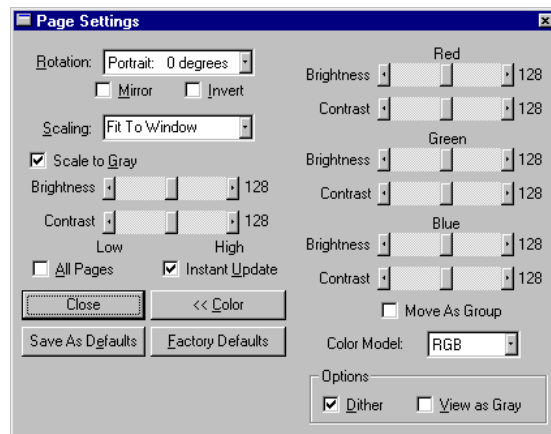
The following color settings can be changed:

Setting	Effect
Brightness Contrast	Change the relative brightness and contrast of each of the primary colors (Red, Green, and Blue).
Move As Group	Causes all Brightness or Contrast scroll bars to move in unison, when any individual slider is moved, thereby keeping the relationship and color balance the same as the overall brightness or contrast is changed.
Color Model	Allows selection of the desired color model. At this time, only RGB (Red/Green/Blue) is supported.
Dither	Using dithering to approximate tonal ranges inherent in the image but not possible to display, either due to the display adapter's color capabilities or the scale factor of the image.
View as Gray	Displays color images as gray scale.

Changing Application Settings

To change application settings, choose **Application Settings** from the Options menu. The following dialog appears:

You can change the following settings:

Setting	Effect
Pan Window	
Display Window	When enabled, PixView always launches with the Pan window enabled.
Use Scale to Gray	Displays the image in the Pan window using Scale-to-Gray. This results in a better looking image, but may result in slower display performance if not using a hardware display accelerator such as ImageAccel.
Display Features	
Display Toolbar	Displays the toolbar at the top of the PixView window.
Display Annotation Toolbar	Displays the annotation toolbar at the top of the PixView window.
Display Toolbar Text	Adds text descriptions to the toolbar buttons.
Display while scan	Displays the image being scanned while scanning is taking place. Use this option with slow or color scanners only to see the image while you are waiting for the scan to complete. Note that this setting works only when ScanAhead is disabled, as explained on page 35.
Disable Accelerator	Disable hardware image display acceleration. Use this option if you have a Cornerstone ImageAccel or Sigma Designs display adapter so that you can compare accelerated and unaccelerated display performance. This setting has the same effect as disabling display acceleration in the PixTools/View Control Panel described in Appendix A.
Scan Features	
Auto Resume Scan	For scanners that have stack sensors in their document feeders, causes PixView to continue scanning as soon as more pages are inserted. When disabled, causes PixView to wait until the user clicks the **Continue Scanning** button.

Setting	Effect
Zoom Factor	Sets the zoom amount that occurs when you click the Zoom In or Zoom Out button.
Scroll Bars	This feature is disabled at this time. Scroll bars are always on.
Color Features	
Max 256 Colors	When scanning or opening a non-palette (typically 24-bit) color image, reduces the in-memory image to an 8-bit optimized palette image. This uses less memory and produces a faster display. *Note:* If you save the page or document, the file will contain the 8-bit palette image, not the original full color image.

Changing Printer Settings

To change printer settings, choose **Print Setup** from the File menu. A dialog similar to the following appears:
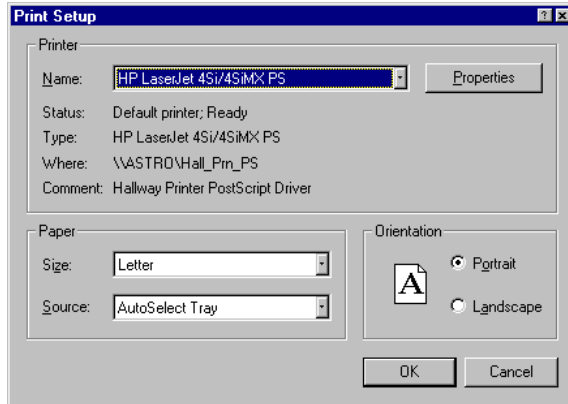
You can change the following settings:

Setting	Effect
Printer	
Default Printer	Selects the printer that is specified in Windows as being the default printer.
Specific Printer	Allows selection of any printer defined in your Windows setup.
Orientation	
Portrait	Prints with the top of the image across the narrow dimension of the paper.
Landscape	Prints with the top of the image across the wide dimension of the paper.
Paper	
Size	Allows selection of the size of paper on which to print.

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Setting	Effect
Source	Allows selection of paper tray to use.
Options	Displays a dialog of printer-specific settings.

Appendix A PixTools/View Control Panel

The PixView CDROM includes the PixTools/View control panel, which enables you to control hardware-accelerated printing and display. PixTools applications and libraries support accelerated printing for the following printer accelerators:

- Xionics XIPPrint
- Fujitsu PrintPartner 10i

PixTools applications and libraries also support accelerated image display for Cornerstone's Image*Accel* display system, and for hardware-accelerated displays from several other manufacturers.

Accelerated printing and display work by sending run-length encoded compressed image data from memory or disk directly to the printer or display card. A special card in your printer or a special display adapter card then decompresses this data using very fast hardware decompression. Compressed data moves faster over the computer's bus and the printer/network cables, and can be read more quickly from a disk drive or from memory, drastically reducing the amount of time it takes to print or display an image. In addition, image display acceleration is further increased by attempting to send device-dependent bitmaps to the display adapter. Accelerated printing and display are enabled and disabled by using the PixTools/View control panel.

By default, accelerated printing is disabled and accelerated display is enabled (assuming you have installed a display adapter with supported accelerator hardware). To change the settings associated with accelerated display and printing, use the PixTools/View control panel.

The PixTools/View control panel is installed automatically when PixView is installed.

Using the Control Panel

To use the PixTools/View Control Panel, follow these steps:

1. If you are using Windows 3.1, Windows for Workgroups 3.11, or Windows NT 3.51, open the Windows Main program group and double-click the Control Panel icon.

    If you are using Windows 95 or Windows/NT 4.0 or higher, open the Start menu and choose Control Panel from the Settings entry.

    The Windows Control Panel appears:

2. Double-click the PixTools icon:

The PixTools/View control panel appears:
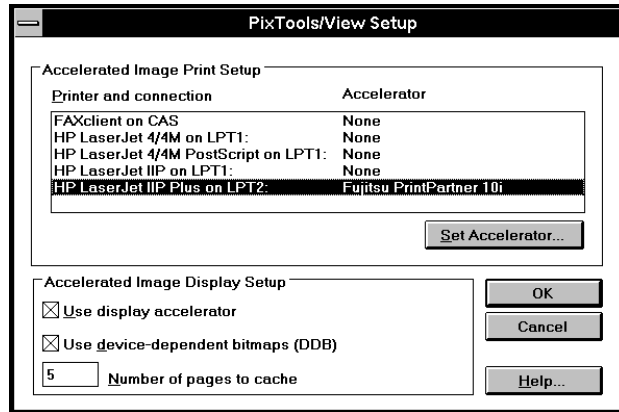
Controlling Accelerated Printing

The upper portion of the PixTools/View control panel controls accelerated printing. To enable accelerated printing, you first must have a printer accelerator card installed in your printer. Then, choose the printer for which you want to enable accelerated printing, and click **Set Accelerator**. The following dialog appears:
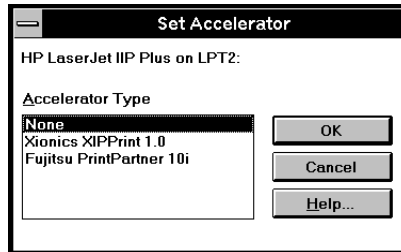
Choose the printer accelerator from the list, and click **OK**.

Important

Printer acceleration varies according to the type of data sent to the printer and the capabilities of the printer accelerator. Consult the documentation supplied with your printer accelerator for specific information. If you

experience problems with images printing incorrectly, you should disable accelerated printing. Please contact PixTools Support department using the contact information in Appendix C, supplying as much information about the problem as possible

Controlling Accelerated Image Display

The lower portion of the PixTools/View control panel controls accelerated image display. If you have an image display system capable of accelerated image display, the settings default to enabled.

Normally, the enabled settings should work fine. However, if you experience problems with image display quality, first try disabling "Use device-dependent bitmaps (DDB)." This setting, when enabled, sends bitmap data to the display adapter using a bitmap format that the display should understand. Disabling this setting sends device-independent bitmaps to the display adapter. This may result in slower display performance.

If the display problem persists, disable "Use display accelerator." Images are then sent to the display adapter with no compression.

Important

If you experience any image quality problems when using accelerated image display, please contact PixTools Support department using the contact information in Appendix C, supplying as much information about the problem as possible.

The "Number of pages to cache" lets you specify how many pages to store in memory. For systems with 8 to 16 MB of memory, the default of 5 should provide good performance without using too much memory.

Appendix B Other Pixel Translations Products

Pixel Translations offers several toolkit products related to image acquisition and management. These products are designed to allow programmers to easily integrate image scanning, viewing, printing, and storage into their applications. PixView is an example of the type of application that can be developed using these toolkits.

PixTools/Scan   *Universal scanner interface and driver toolkit*

PixTools/Scan is a set of libraries that allow an application program to work with more than 90 different scanners from over 25 manufacturers. These libraries shield the application developer from concerns about scanner type and capabilities, while providing scanning at the full rated speed of the scanner.

PixTools/View   *High performance image viewing and printing toolkit*

PixTools/View is an image management library that allows applications to easily provide popular and important image viewing and printing capabilities such as zoom, pan, and rotate. In addition, PixTools /View provides a variety of anti-aliasing techniques, including scale-to-gray. Cornerstone display accelerators are supported transparently. Accelerated printing is supported with the Fujitsu PrintPartner 10i and Xionics XIPPrint. PixTools / View also supports full 24-bit color and 8-bit gray scale.

PixTools/View provides file import, export, and conversion libraries for standard image files types (including TIFF, PCX/DCX, JPEG, CALS Type 1, and PDA, etc) and compression types (uncompressed, Group 3, modified Group 3, Group 4, PackBits, JPEG, and RLE, etc).

PixTools/EZ *4GL ActiveX™ Control for Scanning, Viewing, and File I/O*

PixTools/EZ is an ActiveX control that can be easily integrated into various fourth-generation (4GL) programming environments, such as Microsoft Visual Basic, Borland Delphi, PowerBuilder, and others. You can easily build a fully-functional image-enabled application using drag-and-drop controls. All top-level functionality of PixTools/Scan and PixTools/View is maintained, while an easy migration path is provided for developers who need the low-level control provided only by PixTools/Scan and PixTools/View.

Appendix C Contacting Pixel Translations

Use the following information to contact Pixel Translations:

Pixel Translations
A Division of Input Software Inc.
1710 Fortune Drive, Suite 200
San Jose, CA 95131   USA

Telephone: (408) 325-3800
Fax: (408) 232-9292

Internet: www.pixtran.com

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