SCANNER USER'S GUIDE

Chapter 1: Scanning Tutorial

Chapter 2: The TWAIN Dialog Box

Appendices

Table of Contents

Scanning Tutorial

There are two separate methods to scan an image. The Scan dialog box which is ideal for quick and simple scans and the TWAIN dialog box which offers more control over the output.

This chapter shows you how to:
1. Use the Scan Dialog Box
2. Get (Acquire) and Use the TWAIN Dialog Box
3. Perform a Simple Scan
4. Position a Document
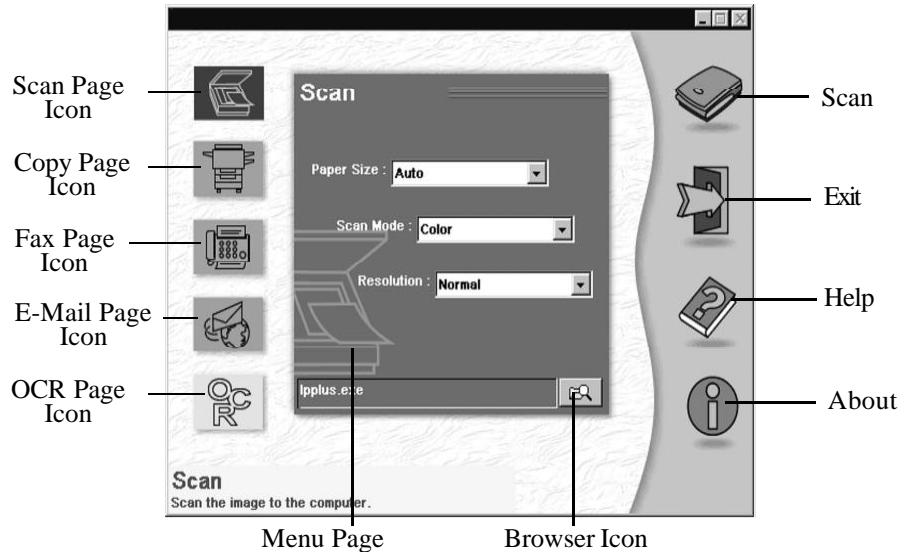5. Scanning Tips

❶ To access the Scan Dialog Box:

The Direct Scan Icon: Simply double click the left Mouse Button on the Direct Scan icon that is located in your Windows notification bar.

The Scan Dialog Box

The Scan dialog box allows you to perform several functions using your scanner (e.g. scan, copy, fax). Simply select the function that you wish to use by clicking on the appropriate page icon and the corresponding menu page will appear. Be sure to make the proper adjustments in regards to Paper Size, Scan Mode, and/or Resolution before Scanning.

Scan Page Icon

Copy Page Icon

Fax Page Icon

E-Mail Page Icon

OCR Page Icon

Scan

Exit

Help

About

Scan

Paper Size : Auto

Scan Mode : Color

Resolution : Normal

Ipplus.exe

Scan
Scan the image to the computer.

Menu Page   Browser Icon

Scan Page:
Scans the image or document to the computer.

Copy Page:
Copies the image or document.

Fax Page:
Scans and faxes the image or document.

E-Mail Page:
Scans and sends the image or document to the Internet

OCR Page:
Converts the image document to a text file

Scan:
Scans the image or document and allows for various features depending on the Menu Page that you are currently in.
Copies your image or document to your printer in Copy.
Faxes your image or document in Fax.
E-mails your image or document to the internet in E-mail.
Scans the document for editing into your OCR software in OCR.

Exit:
Exits the program.

Help:
Offers available on-line help for all of the scanner and software functions.

About:
Shows product information.

The Browse Icon: This icon allows you to select the software application you would like to open the scanned image into.

❷ Get (Acquire) and Use the TWAIN Dialog Box

You can call up the TWAIN dialog box from within any TWAIN-compliant software such as the application software bundled with the scanner. To get into the TWAIN dialog box, the steps are:

1. Launch Windows.

2. Launch the TWAIN-compliant program (e.g. iPhoto+).

3. Under the File menu open the **Acquire** command and choose **Select Source**. The Select Source dialog box appears.

   *Note: In some image editing software you may choose **Select Source** directly from the Select Source command rather than the **Acquire** command.*

4. Choose your scanner in the Select Source dialog box. If there is only one source available, it is automatically selected.

5. Click the Select button. The Select Source dialog box closes.

6. Return to the File menu. Locate and click the Acquire command. The Acquire command is likely to be found beside the Select command. The TWAIN dialog box appears.

The TWAIN Dialog Box

The TWAIN dialog box consists of two sections - the left section where most of the TWAIN control settings are found and the right section, which is the Preview window.

Batch Scan Button
Allows creation of up to 10 scan regions (or Crop Frames) for multiple scanning.

Single Scan Button
Allows only one Crop Frame or scan region.

Zoom Buttons
Magnifies or shrinks the image in the Preview Window.

Help

Language Box
Selects the language

Exit
Exits the program

Scanner Controls

| Main | Enhance | Filters | About |

Scan Mode Settings

Scan Mode — Color
Scan Source — Reflective
Scan Size — Custom
Resolution — 100

Output
Scaling — 100 %
Width — 8.26
Height — 11.50 — inches

Image Size — 2849.70 KB

Descreen

100%

0 2 4 6 8

PreScan

Scan

Prescan Button

Scan Button

Descreen Button
Reduces image

Preview Window

Crop Frame
Outlines the image area or region that

3 Performing a Simple Scan

The steps to follow when scanning are:

1. Select the scan size.

2. Prescan the image.

3. Using the crop frame set the desired scan image size.

4. Select the desired scan mode.

5. Select the desired resolution.

6. Click on the Scan button.

These steps are explained in detail in the following sections.

Select the Scan Size

From the list of available paper sizes, select the size of the document you wish to scan. Custom will automatically be selected when you use the Crop Frame to change the image area to be scanned.

Prescan the Image

A Prescan is a quick low-resolution scan of the entire original image. From this low-resolution scan you can get a clearer idea of the image area you want to include when you click **Scan**. To prescan, the steps are:

1. Place the document face down on the scan window glass.

2. Click on the **Prescan** button. After the scanner has scanned the document, the scanned image will appear in the Preview Window. From the Prescan image, you can now set the exact image area you wish to include in your final scan.

Set the Image Size

Use the Crop Frame in the Preview Window to outline the image area you wish to scan. Click one of the sides or corners of the Crop Frame and drag it to the desired length and width. To move the entire Crop Frame, position the mouse

cursor inside it and drag with the (left) mouse button. Only the area inside the Crop Frame will be included in the resulting scanned image when you click on the Scan button.

Using the Zoom Tools

The Zoom In tool doubles the magnification of the image area. In magnified view, you can then drag the Crop Frame to the exact area you want to scan. Use the Zoom Out tool to shrink the image.

Set the Scan Mode

The Scan Mode determines how the scanner will read the image. Select **Color** to capture images in color. Select **Gray** to capture images in shades of gray. When you wish to scan line art or text for OCR (**O**ptical **C**haracter **R**ecognition), select **LineArt**.

Set the Resolution

The Resolution, which is measured in dots per inch (dpi) determines the effect of the image as it is displayed or printed. Images scanned at a high resolution appear sharp since the scanner is capturing more information but take note that high resolution images also take up more disk space for storage.

Execute the Scan

The scan button is used once you have completed the prescan and are finished with the control settings and have selected the final image adjustments that are to be used for this scan.

4 Document Positioning

For the best possible image scans, it is important that you position your documents correctly and carefully.

1. Lift the document cover.

2. Place the document face down on the glass and in the upper right corner where the alignment marks are located:

3. Slowly lower the document cover, making sure the document remains in position.

4. In your scanning program, set up the scanning parameters such as scan mode and resolution.

5. Execute the scan command.

6. Remove the document after scanning is complete.

Document Cover

Scan Window Glass

❺ Scanning Tips

The following tables provide helpful information you can use when setting the scan mode and/or resolution. Recommended scanning resolutions for various output devices are listed as follows:

PRINTER TYPE	INPUT MATERIAL	SUGGESTED SCAN MODE	RESOLUTION
600-dpi Laser or Inkjet Printer	Color	Grayscale	150 dpi
	Grayscale	Grayscale	150 dpi
	Line Art/Text	Line Art/Text	600 dpi
300-dpi Laser or Inkjet Printer	Color	Grayscale	100 dpi
	Grayscale	Grayscale	100 dpi
	Line Art/Text	Line Art/Text	300 dpi
Color Inkjet Printer	Color Grayscale Line Art/Text	Color Grayscale Line Art/Text	Check with manufacturer for recommended resolution
Dye Sublimation or Color Laser Printer	Color Grayscale Line Art/Text	Color Grayscale Line Art/Text	Scan at maximum resolution of printer in all modes

Space requirements for different scan modes:

4" x 4" scan	100 dpi	150 dpi	300 dpi	600 dpi
LineArt	19.5 KB	44 KB	175 KB	703 KB
Gray	156 KB	352 KB	1.37 MB	5.5 MB
Color	469 KB	1 MB	4.12 MB	16.5 MB

The TWAIN Dialog Box

The TWAIN dialog box is part of the scanning module provided with your scanner. TWAIN is an industry standard that allows scanning directly into any TWAIN-compliant software. It eliminates most compatibility problems associated with software and input devices supplied by different vendors.

You can call up the TWIAN dialog box from within any TWAIN-compliant software such as the application software bundled with the scanner (e.g. iPhoto Plus 1.2 or 4.0).

The TWAIN dialog box consists of two sections - the left section where most of the TWAIN control settings are found and the right section, which is the Preview window.

The Preview Window and Buttons

The Preview window is where you can view the prescan image. The first time you want to scan a document, it is better that you do a prescan. With the prescan image, you can then specify the final image area to be included in the actual scan and/or apply the TWAIN image-enhancement commands and filters.

Crop Frame Outlines the scan area or region that will be included in the final scan.

- **Help**
  Provides on-line help for the scanner and software functions.

- **Language Icon**
  Selects the language you would like to view the screen in.

- **Exit Icon**
  Exits the program.

- **Prescan the Image**
  A Prescan is a quick low-resolution scan of the entire original image. From this low-resolution scan you get a clearer idea of the image area you want to include when you click **Scan**. To prescan, the steps are:
  1. Place the document face down on the scan window glass.
  2. Click on the **Prescan** button. After the scanner has scanned the document, the scanned image will appear in the Preview Window. From the Prescan image, you can now set the exact image area you wish to include in your final scan.

- **Scan**
  When you click on the **Scan** button, the Scanner dialog box displays the progress of your image transfer. When scanning is over, the image will be displayed in the main screen of the host software behind the Scanner dialog box. This provides the option of doing additional scans without re-acquiring the Scanner dialog box each time.

- **Single Scan Button**
  When this button is selected, you can only have one Crop Frame (or rectangle) in the Preview window. With the Crop Frame you can outline the image area you wish to scan. Click one of the sides or corners of the Crop Frame and drag it out or in to the desired length and width. To move the entire Crop Frame, position the mouse cursor inside it and drag with the left mouse button.

- **Batch Scan Button**
  Clicking on this button allows you to have multiple scans on any part of your document using different control settings. A dialog box

- Using the Zoom Tools
  The Zoom In tool doubles the magnification of the image area. In magnified view, you can then drag the Crop Frame to the exact area you want to scan. Use the Zoom Out tool to shrink the image.

The Image Setting Buttons
The Image Setting Buttons allow you to create scan settings for your own convenience. Saving image settings allows you to use the same settings again and again without the hassle of resetting all the image options.

Load Button
Loads previously saved settings.

Save Button
Saves current image settings to a file.

Previous Button
Reloads the last saved image setting.

Reset Button
Returns the image settings to their default values.

Information Button
Simultaneously shows the current control settings from all the TWAIN folders.

TWAIN Control Settings

The Main Folder

The Main folder contains the control settings needed for specifying the scanning parameters such as scan mode, scan source, resolution, etc. These parameters will determine how the original image or document will be scanned, displayed or printed.

Scan Mode
The Scan Mode determines how the scanner reads the original image or document. When choosing a scan mode, it is wise to consider for what purpose the resulting scanned image will be used for.

- **LineArt**
  Use this mode to scan text documents for use in OCR (**O**ptical **C**haracter **R**ecognition) or when you wish to scan black-and-white drawings.
- **Gray**
  Select **Gray** to capture images in shades of gray. Our Gray mode generates 10-bit (1024 shades of gray) internal images and 8-bit (256 shades of gray) external images.
- **Color**
  Select **Color** to capture images in colors. Our Color mode generates 30-bit (1.074 billion colors) internal images and 24-bit (16.7 million colors) external images.

Note: Internal images refer to images that are originally captured by the scanner. External images refer to images that are transferred to the computer.

Scan Source

The Scan Source setting is used to select the type of document you will be scanning.

- **Reflective**
  Use Reflective when you wish to scan a paper-based document such as photographs or text.

Select the Scan Size
From the list of available paper sizes, select the size of the document you wish to scan. Custom will automatically be selected when you use the Crop Frame to change the image area to be scanned.

Resolution
The Resolution, which is measured in dots per inch (dpi) determines the effect of the image as it is displayed or printed. Images scanned at a higher resolution appear sharp since the scanner is capturing more information but also take up more disk space for storage. You can select from a wide range of preset resolutions.

100 dpi   *400 dpi*

Image Size

Image Size displays the amount of computer memory or disk space needed to display or save the image outlined by the Crop Frame in the Preview window. The Image Size information is automatically updated anytime you change any of the control settings or resize the Crop Frame.

Output Scaling

Output scaling allows you to enlarge the size of the final output image. For example, setting the Output Scaling to 200% will enlarge the output image four times its original size.

Descreen

Descreen is a useful tool for reducing moiré patterns in scanned images of originals that were created by a halftone process. Moiré patterns appear as unsightly interference patterns.
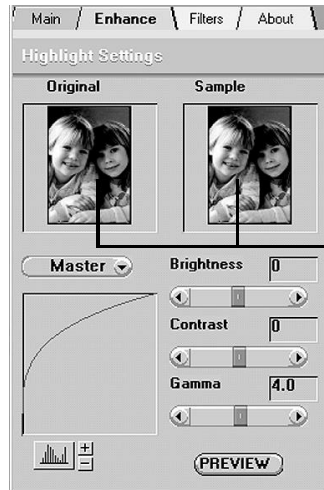

Width and Height

The Width and Length values show the dimensions of the image area inside the Crop Frame in the Preview window. You can change the measurement unit to centimeters or inches.

The Enhancement Folder

The Enhancement folder contains preprocessing controls you can apply to the image before making your final scan. Using these preprocessing controls, you can alter the appearance of the final output image. To view the Enhancement folder, click the Enhance tab.

The Enhancement folder contains two thumbnails of the prescan image, several control settings, and a histogram of the image. Changes you make to the control settings will appear in the sample thumbnail.

If you wish to change the image that appears in the thumbnails, drag the Crop Frame in the Preview window.

If you wish to see the effects of your changes in the Preview window image, click on the Preview button.

Thumbnails

• **Channel Selector**

Channel refers to the red, green, and blue layers that make up a color image. You can choose to change the channels individually or choose Master to change all channels equally and simultaneously. An image in Gray Mode has one channel.

• **Brightness Control**

The Brightness control allows you to adjust the overall amount of light in the image.

Brightness 0   *Brightness 50*

- **Contrast Control**
  The Contrast control allows you to adjust the overall amount of white and black in the image.

Contrast 0   *Contrast 50*

- **Gamma Control**
  The Gamma control is used for adjusting the brightness level in the highlights, midtones, and shadows of the image.

Values of 0.1 to 2.0 primarily affect the shadow areas of the image.
Values of 2.1 to 6.0 primarily affect the midtone areas, and values of 6.1 to 7.9 primarily affect the highlight areas.

Gamma 1.0   *Gamma 1.3*

- **Histogram Button**
  The histogram shows the distribution of the brightness levels   in the image. To adjust the display of the histogram, click on the Histogram button and then click on the + or - button.

- **Preview Button**
  Click the Preview button to see any changes made to the image. The changes will appear in the Preview window image.

The Filters Folder

The Filters folder contains preprocessing controls that allow you to apply special effects to the image before making your final scan. To view the Filters folder, click the Filters tab.

The Filters folder contains two thumbnails of a sample image. Any filter you choose will immediately show its effect in the sample thumbnail.

- **None**
  The None setting means no filter is applied. This is the default setting.

- **Blur**
  The Blur filter (controlled with the plus and minus buttons) smoothes the image by lightening the pixels that are in sharp contrast to their neighboring pixels.

- **Sharpen**
  The Sharpen filter (controlled with the plus and minus buttons) enhances the detail in blurry images by improving the focus and increasing the contrast in the image.

- **Invert**
  The Invert filter reverses an image to its negative or compliment.

- **Flip**
  The Flip filter creates a mirror image of the original by flipping the image horizontally.

- **Unsharp Mask**
  The Unsharp Mask filter detects shape edges and color boundaries and then emphasizes them.
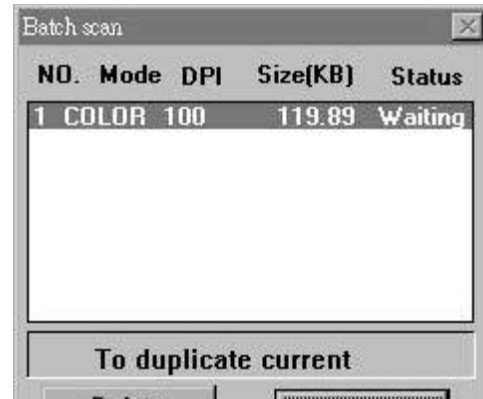
- **Emboss**
  The Emboss filter makes the elements in an image appear raised or sunken.

About Folder

The About folder contains the current driver version number and the copyright notice. To view the About folder, click the About tab.

Using Batch Scan

Batch scanning is an easy way to multi-scan any part of your document using different scan modes and resolutions (however, certain application programs do not support this function). In batch scanning, you can specify up to a maximum of 10 scan regions or you can scan a single region several times using different combinations of scan modes and resolutions.

NO.	Mode	DPI	Size[KB]	Status
1	COLOR	100	119.89	Waiting

To duplicate current

To do a batch scan, the steps are:

1. Click on the Batch Scan button. The Batch Scan dialog box appears.

2. Create a scan region:
   (a) Move the cursor inside the preview window.
   (b) Hold down the Shift key, press the left mouse button and drag the mouse to create a crop frame.
   (c) Reposition or resize the crop frame if necessary.

3. Set the desired scan mode and resolution for the current scan region.

4. Repeat steps 2 and 3 if you wish to create more scan regions. You can have up to 10 scan regions.

5. Click **Scan**. The scanner will begin to scan the scan regions one after the other.

Appendices
A: Troubleshooting

Note:
It is not possible to print and scan at the same time.
Do not dissemble the device to fix problems by yourself!

Q 1.   The computer fails to recognize the scanner.

1. Check if the scanner is correctly connected to the computer.

> *Make sure the cable connection is correct. Turn off your computer and the scanner, and reconnect them by following our instructions in the hardware setup.*

Q 2.   After powering up the scanner, it does not work any further.

1. The AC power outlet may be bad.
> *Connect the power cord to another power outlet.*

2. The power cable is not connected correctly to the outlet.
> *Correctly plug the power cable.*

3. If you still have difficulty, the computer or the power supply may be defective.
> *Ask your dealer to solve the problem.*

Q 3.   The scan command is not executed.

1. The scanner cable may be connected loosely.
> *Check if the connection is correct or not (as the solution in Q1). If this problem persists, contact your dealer.*

Q 4.   During scanning, the scanner makes a lot of noise while moving along the sub-scanning rail shafts.

1. The surface of the rail shafts is dirty.
> *Ask your dealer to clean them for you.*

Q 5.   The scanned picture is not clear.

1. The scan window glass is not clean.
> *If the outside surface is dirty, please refer to our maintenace instruction to clean it. If the inside is dirty, please call your dealer to clean it.*

B: Maintenance

It is recommended to keep the scan window glass and the document cover clean. They should be cleaned on a regular basis. The cleaning steps are:

1. Turn off the scanner and unplug the power cord.

2. Open the document cover and use a cloth slightly damped with a little alcohol to clean the scan window glass and the cover separately.

3. Use a lint-free dry cloth to dry the glass and cover.