

## Kodak S5000 TWAIN Scanning Setup Guide

KODAK S5160 Scanner KODAK S5180 Scanner KODAK S5210 Scanner





# Contents

Contents .....	1
1 Overview .....	1
Product Overview .....	1
Capture System.....	1
How do I begin? .....	2
Defining your device settings .....	3
Defining your image output.....	4
2 Windows .....	5
Main Scanner .....	5
Rename window .....	5
Restore window .....	5
Save As window.....	6
Main Scanner window .....	7
Information icons.....	8
3 Document Settings .....	9
Document Settings window .....	9
Document - General tab .....	9
Document - Images tab .....	11
Document - Size tab .....	14
Document - Content Settings tab .....	15
4 Image Settings .....	17
Image Settings window .....	17
Information icons.....	18
Image - Adjust tab - Black and White .....	19
Image - Adjust tab - Color/Grayscale.....	21
Image - Detect tab .....	23
Image - Enhance tab.....	25
Image - General tab .....	27
Image - Size tab.....	29
5 Device Settings .....	32
Device Settings window .....	32
Device - Batch tab.....	33

Device - General tab .....	34
Device - Indexing tab .....	36
Device - Multifeed tab .....	39
Device - Patch tab.....	41
Device - Printer tab .....	42
Device - Sorting tab .....	46
Sorting - General tab.....	47
Sorting - Patch tab .....	48
Sorting - Patch window .....	49
Sorting - Size window.....	50
Device - Stamping tab.....	51
Stamping - Graphic tab .....	52
Stamping - Layout tab .....	53
Stamping - Text tab .....	54
Stamping - Text Message window .....	55
Device - Transport tab.....	57
6 Diagnostics.....	59
Calibration window .....	59
Diagnostics - Debug tab.....	60
Diagnostics - General tab.....	61
Diagnostics - Logs tab.....	62
Diagnostics window .....	63
7 Procedures.....	64
Changing Device Settings.....	64
Changing Image settings .....	65
Creating a new Setting Shortcut.....	66
Creating color/grayscale or black and white images based on the content of your documents .....	67
Creating different settings for each side of a document.....	69
Creating multiple images for each side of a document .....	70
8 Troubleshooting.....	71
Online Technical Support .....	71
Problem Solving.....	72
9 Glossary .....	74
Auto Color Detection.....	74

Black and White image .....	74
Color image .....	74
Compression.....	74
Cropping .....	74
Dual stream output.....	74
Grayscale image .....	74
Image processing.....	75
JPEG .....	75
Multifeed .....	75
Single output.....	75
TIFF .....	75

# 1 Overview

## Product Overview

Our scanners have the capability of providing a wide variety of electronic images. This can be accomplished by using the provided TWAIN Driver/Datasource in concert with your scanning application. The TWAIN Driver/Datasource is the part of the capture system that links the scanner to your scanning application.

When using the TWAIN Driver/Datasource, the main Scanner window will display a list of Setting Shortcuts. Each Setting Shortcut is a group of specific image and device settings. The supplied Setting Shortcuts represent some common electronic image outputs used for a wide variety of input documents. If none of the Setting Shortcuts meet your scanning needs, you can create a customized Setting Shortcut. For example, you can create a setting shortcut called "Invoices," and whenever you want to scan invoices you simply select that *Setting Shortcut*. For more details, refer to Defining your image output and Defining your device settings.

## Capture System

**Scanning Application** - is the piece of software that controls the capture of images. Use your scanning application to convert paper documents to electronic images and to access the TWAIN Driver/Datasource. For more information about your scanning application, see the documentation provided with your application.

**TWAIN Driver/Datasource** - this help file provides details about using the TWAIN Driver/Datasource's user interface that came with your scanner. The scanner's user interface provides many image processing features to help you produce the best possible image to meet your needs. The TWAIN Driver/Datasource follows the standards of the TWAIN Working Group. For more information see <https://www.twain.org>. For details regarding the programmatic capabilities of the scanner, refer to the Integrators folder on the CD that is included with your scanner.

**Scanner** - the image capture device. For more information about your scanner's operation and maintenance, refer to the User's Guide that is included with your scanner.

## How do I begin?

The goal is to make scanning as simple as possible. This is accomplished by selecting a *Setting Shortcut* from the [main Scanner window](#) and then selecting **OK/Scan**.

The scanner comes with some *Setting Shortcuts* already defined. In most cases you will find that these shortcuts are all that you need. If you find that you need different settings, refer to the procedure [Creating a new Setting Shortcut](#). Your custom shortcut will be added to the list of *Setting Shortcuts* and available for all future scanning.

## Defining your device settings

When using your scanner, you need to determine how to use the various scanner-specific options. These options allow you to fine-tune the way you interact with your scanner during normal operation and error recovery, helping you to scan more efficiently. These options can be found on the [Device Settings window](#), which is accessible from the [Image Settings window](#).

Answering the following questions will help you select an existing *Setting Shortcut* or customize a *Setting Shortcut*:

- How many documents might you scan at one time (a full stack, partial stack, or one at a time)? (see the *Paper Source* option on the [Device - General tab](#))
- Do you want to control your scan session at the scanner or the scanning application? (see the *Document Feeder* options on the [Device - General tab](#))
- Do you want to be notified if more than one document is scanned at the same time? (see the [Device - Multifeed tab](#))



## Defining your image output

Most people are familiar with copying documents using a copier. You collect your documents, walk to the copier, place them in the input tray, select the number of copies, and set any other settings (such as two-sided, color, collate, staple, etc.). The result is the physical copies organized in the manner that you selected. Working with the scanner is similar, but instead of physical copies the output is electronic images. Just like using a copier, you need to tell the scanner what output to provide.

Your scanner can produce black and white, color, and grayscale images. It can also create one image per side (single output) or two images per side (dual stream output).

Answering the following questions will help to select an existing *Setting Shortcut* or customize a *Setting Shortcut*:

- Are your documents one sided, two sided, or both? (see the *Input document is* option on the Document - General tab)
- Are your documents color, grayscale, black and white, or a combination? (see the *Scan as option* on the Image - General tab)
- Are you scanning pictures, text, or a combination? (see the *Document type option* on the Image - General tab)
- Do you need the entire document or just a portion? (see the Image - Size tab)
- Do you want to be able to output in color only when necessary? (see the *Images per side* option on the Document - Images tab)
- Do you need to keep blank pages? (see the *Blank Image Deletion* option on the Image - Detect tab)
- Is the information on your document in portrait or landscape orientation? (see the *Post scan rotation* option on the Image - Size tab)
- Is your document a form and do you want to eliminate the form from your electronic image? (see the *Color Dropout* option on the Image - Enhance tab)

## 2 Windows

### Main Scanner

#### Rename window

When you want to change the name of a *Setting Shortcut* that you created, select **Rename** on the [main Scanner window](#).

**Shortcut name** - allows you to enter the new name you want for the shortcut.

NOTE: The current shortcut name will be displayed.

**Graphic** - allows you to change the graphic associated with the shortcut when it is displayed in the *Setting Shortcut* list on the main Scanner window.

- **Browse** - displays the operating system's File Open window so you can find a custom graphic that you want to use.

**OK** - saves the *Setting Shortcut* with the new name. If the name already exists, you will be prompted to enter a different name.

**Cancel** - closes the Rename window without changing the shortcut name.

#### Restore window

When you want to restore all the *Setting Shortcuts* supplied with your scanner to their original settings, select **Restore** on the [main Scanner window](#).

**Include settings shared across Setting Shortcuts** - when selected, the original settings for options shared across *Settings Shortcuts* are also restored. This includes options like **Document Feeder**.

**Yes** - restores all the *Setting Shortcuts* to their original settings.

**No** - closes the Restore window without changing any shortcuts.

## Save As window

When you have made changes to a *Setting Shortcut* that you want to save as another shortcut, select **Save As** on the [main Scanner window](#).

**Shortcut name** - allows you to enter the name you want for the new shortcut.

NOTE: The current shortcut name will be displayed.

**Graphic** - allows you to select the graphic to associate with the shortcut when it is displayed in the *Setting Shortcut* list on the main Scanner window.

- **Browse** - displays the operating system's File Open window so you can find a custom graphic that you want to use.

**Save** - saves the new *Setting Shortcut*. If the name already exists, you will be prompted to enter a different name.

**Cancel** - closes the Save As window without creating a new shortcut.

## Main Scanner window

The main Scanner window is the home window of the scanner's user interface. You can scan by simply selecting a *Setting Shortcut* and then selecting **OK/Scan**.

**Setting Shortcuts** - provides the list of setting shortcuts. The supplied shortcuts are:

- **Default:** the scanner's default settings
- **Black and White Perfect Page Document**
- **Color Perfect Page Document**
- **Dual Stream Perfect Page**

NOTE: If you have made changes to a Setting Shortcut and have not saved your changes, the *Setting Shortcut* will be appended with the text *<changed>*, and the name will be displayed in italics (for example, *\*Default <changed>*).

### Toolbar buttons



**Save:** saves any changes made to the selected *Setting Shortcut*.



**Save As:** displays the Save As window, allowing you to save your current settings as a new *Setting Shortcut*.



**Delete:** deletes the selected *Setting Shortcut*; you will be prompted for confirmation.



**Rename:** displays the Rename window, allowing you to rename a *Setting Shortcut*.



**Reset:** allows you to undo any unsaved changes that have been made to the selected *Setting Shortcut* (when the name is in italics and appended with *<changed>*).



**Restore:** displays the Restore window, allowing you to undo any changes that have been made to the shortcuts supplied with the scanner. This is only available when one or more supplied shortcuts have been changed or removed.



**Import:** imports a set of *Setting Shortcuts* by replacing all current shortcuts. When selected, you will be prompted for confirmation and the operating system's File Open window will appear, allowing you to select the shortcut set you want to import.



**Export:** exports all the current *Setting Shortcuts* to a shortcut set. When selected, the operating system's File Save window will appear, allowing you to select the folder and file name for the shortcut set.

### NOTES:

- **Delete**, **Rename**, **Restore**, **Import**, and **Export** are not available if the selected *Setting Shortcut* is being changed (when the name is in italics and appended with *<changed>*).
- You can use your mouse to rearrange the order of *Setting Shortcuts*. To rearrange, hover over the *Setting Shortcut* to be moved, press and hold the left mouse button, reposition the *Setting Shortcut* to the desired location, and release the left mouse button.
- If you want to transfer *Setting Shortcuts* to another PC, select **Export** on the PC that has the shortcuts you want to transfer and then select **Import** on the other PC.

- If you want to add a *Setting Shortcut* to an existing shortcut set: 1) select **Import** to load the shortcut set; 2) create the new *Setting Shortcut*; and 3) replace the shortcut set by selecting **Export** and save using the same name.
- If you right-click on a *Setting Shortcut*, it will display the list of available items for that shortcut.

**Settings** - this allows you to change the settings for the currently selected shortcut.

- **Document** - displays the [Document Settings window](#).
- **Image** - displays the [Image Settings window](#).
- **Device** - displays the [Device Settings window](#).

**Diagnostics** - displays the [Diagnostics window](#).

**OK/Scan** - when selected, you will be prompted to save any unsaved changes.

- If you select *No*, changes only apply to the current scan session.
- If you select *Yes*, changes remain until the Setting Shortcut is changed or restored

**NOTE:** If the OK option is available, any unsaved changes are applied only to the current scan session.

**Cancel** - closes the main Scanner window without saving any changes.

## Information icons



**About:** displays the scanner's version and copyright information

**Help:** displays help information for the driver

## 3 Document Settings

### Document Settings window

From this window you can define the document you are scanning by using the available tabs. The values used in Document Settings are saved in the selected *Setting Shortcut*. The Document Settings window includes the following tabs: [General](#), [Size](#), [Images](#), and [Content settings](#).

**Image** - displays the [Image Settings window](#).

**Device** - displays the [Device Settings window](#).

**Done** - returns you to the [Main Scanner window](#).

### Document - General tab

The General tab allows you to define more complex settings that the scanner can detect.

**Document Feeder** - allows selections for pages fed through the scanner from the input tray.

- **Input document is** - allows you to select which sides of the document have information that you want in an electronic image.
  - **Two Sided**: scans the front and back of the document.
  - **One Sided - Front**: scans only the front side of the document.
  - **One Sided - Back**: scans only the back side of the document.
- **Sleeved Document is** - put pages that are fragile or difficult to feed in an accessory sleeve to simplify feeding or fold a large page and put it in a sleeve. Choose imaging instructions from this list:
  - **None**: sleeve not used.
  - **Folded**: page inside sleeve is folded and both sides are parts of the same image. Images will be merged.
  - **Two Sided**: both sides of the page should be imaged.
  - **One Sided - Front**: only the lower side should be imaged.
  - **One Sided - Rear**: only the upper side should be imaged.

*NOTE:* Choices offered for Sleeved Document are affected by your selection for Input document is.

- **Detect multiple documents**: turn this option on if the sleeve could contain more than one item and you want each one to be a separate document.

### Flatbed Document is

- **Multiple documents**: turn this option on if more than one item could be on the flatbed and you want each one to be a separate document.

**Split Document** - the scanner can split images into two or three equal parts if they conform to length characteristics you set up here.

- Choose the number of images.

- **(none)**: one image is the default.
- **Into 2 images**
- **Into 3 images**
- **Length**: choose the page length characteristics that will prompt an automatic split.
  - **Less than**: if shorter pages should be split, choose this option and enter a length.
  - **Greater than**: if longer pages should be split, choose this option and enter a length.
  - **Between**: enter two lengths; pages between these lengths will be split.

*NOTE:* Refer to the [Document Settings window](#) for information about common buttons and options.

### Information icons



**About:** displays the scanner's version and copyright information



**Help:** displays help information for the driver

## Document - Images tab

The Images tab allows you to define more complex settings for the images created by the scanner.

**Combine front and back images** - typically, for a document, one image is created for the front side and another image is created for the back side. Turn this option on if you want one image that contains both the front side and back side of the document. The selections are:

- **Front on Top:** front side will be above the back side within the image.
- **Front on Bottom:** back side will be above the front side within the image.
- **Front on Left:** front side will be to the left of the back side within the image.
- **Front on Right:** back side will be to the left of the front side within the image.

### NOTES:

- This option is only available for duplex scanner models.
- This option is only available when **Input document** is set to *Two Sided*, **Front and back sides have different imaging settings** is turned off, **Images per side** is set to *One*, and the document is scanned from the *Document Feeder*.
- This option is not applied to the preview image.

**White background** - indicates which side(s) of the document will have white instead of black where there is no paper.

- **(none):** uses the black background for the front and back sides.
- **Both Sides:** uses the white background for the front and back sides.

*NOTE:* This option is only available when **Input document is** set to *Two Sided*.

- **Front Only:** uses the white background only for the front side and black for the back side.

*NOTE:* This option is only available when **Input document is** set to *One Sided - Front*.

- **Back Only:** uses the white background only for the back side and black for the front side.

*NOTE:* This option is only available when **Input document is** set to *One Sided - Back*.

The following are examples of when white background is useful:

- Scanning non-rectangular documents and, in the final image, you want the area outside the document to be white instead of black
- Scanning lightweight or thin paper, with printing on one side, and you do not want the black background to bleed through the document and appear in the final image

**Front and back sides have different imaging settings** - by default, the settings you select in the TWAIN Driver/Datasource apply to both sides of the image. Turn this option on if you want to select different image processing settings for each side of the document you are scanning. For example, if you want the front side to be color and the rear side to be black and white, first make



sure that you have selected the **Two Sided** option of *Input document is* (on the [General tab](#)), then turn on *Front and Back sides have different imaging settings*.

Once you have done this, the *Side* option on the [Image Settings window](#) will no longer be grayed out and you can select different settings for each side. Now that you have turned on different image settings per side, your selections will apply only to the front side of the document you are scanning. After you have made your selections for the front side, use the *Side* option to select the back side and then make the settings you want to apply to the back.

**NOTE:** The *Front and Back sides have different imaging settings* option is only available for duplex scanner models.

**Images per side** - indicates how many images the scanner will create for a side, based on your imaging selections.

- **One:** indicates you want the scanner to create one image.
- **One - Based on Document Content:** indicates you want the scanner to automatically detect if the document is color/grayscale or black and white.

**NOTE:** This option is not applied to the preview image.

- **One - Based on Toggle Patch:** indicates you want to tell the scanner, via a toggle patch document, if the document is color/grayscale or black and white.

**NOTE:** This option is not applied to the preview image.

**NOTE:** This option is not available for all models.

- **Multiple:** indicates you want the scanner to create more than one image.

**NOTE:** If you select **One - Based on Document Content** from the Images per side option, the [Content Settings tab](#) will be displayed.

- **Images to Configure** - indicates which electronic images you need to configure.

**NOTE:** This is only available if you select anything other than **One** from the Images per side option.

See these examples for procedures on how to configure advanced options:

- [Creating color/grayscale or black and white images based on the content of your documents](#)
- [Creating multiple images for each side of a document](#)
- [Creating different settings for each side of a document](#)

When available, use the up and down arrows to select the order the images will be delivered by the scanner to the scanning application.

#### Toolbar buttons



**Add:** adds an image type to the bottom of the configuration list.



**Change:** allows you to change the currently selected image type.



**Delete:** removes the selected image type.

*NOTE:* Refer to the [Document Settings window](#) for information about common buttons and options.

## Document - Size tab

The Size tab allows you to define the size of your scanned image.

**Snap To Size** - when turned on, this allows you to select the size(s) to which you want your scanned documents to snap. The scanner will determine if your document is close to one of the selected size(s) and then snap to that size.

- **Reset:** reverts to the default sizes.
- **Select All:** selects all sizes.

*NOTE:* When this setting is turned on, you must choose at least one document size. You may choose multiple sizes.

*NOTE:* Refer to the [Document Settings window](#) for information about common buttons and options.

## Document - Content Settings tab

The options on the Content Settings tab can be used for either one- or two-sided jobs.

**Side** - determines the side where the *Sensitivity* settings are applied. This option is only available if **Front and back sides have different imaging settings** is turned on from the Document - Images tab.

### Sensitivity

- **Low:** documents requiring only a small amount of color to be saved as color/grayscale images. Used for capturing documents that contain primarily black text with small logos, small amounts of highlighted text, or small colorful photos.
- **Medium:** documents requiring more color, as compared with the Low option, before they are saved as color/grayscale images.
- **High:** documents requiring more color, as compared with the Medium option, before they are saved as color/grayscale images. Used for distinguishing documents containing medium- to large-size colorful photos from plain black text. Photos with neutral colors may require adjustments to the *Color threshold* or *Color amount* values to be captured correctly.
- **Custom:** allows you to manually adjust the *Color amount* and/or *Color threshold*.

*NOTE:* When setting *Sensitivity* values, it is suggested that you start with the **Medium** option and scan a typical job set. If too many documents were returned as color/grayscale vs. black and white, then change to the **High** option and run the job again. If too few documents were returned as color/grayscale vs. black and white, then change to the **Low** option and run the job again. If none of these options provide the desired result, select **Custom** to manually adjust *Color amount* and/or *Color threshold*. **Custom** also allows access to the *Learn* mode, which provides a method for the scanner to analyze documents and recommend settings.

**Color amount** - the amount of color that needs to be present in a document before it will be saved as color/grayscale. As the value of *Color amount* increases, more color pixels are required. The values range from **1** to **200**.

*NOTE:* This is only available for *Sensitivity: Custom*.

**Color threshold** - the color threshold or saturation (such as pale blue vs. dark blue) at which a given color will be included in the color amount calculation. A higher value indicates that a more intense color is required. The values range from **0** to **100**.

*NOTE:* This is only available for *Sensitivity: Custom*.

**Learn** - allows you to calculate your settings based on representative color documents scanned. Before selecting **Learn**, place at least 5 representative color documents in the input tray elevator. The documents will be scanned and analyzed to determine the recommended *Color amount*.

#### NOTES:

- This is only available for *Sensitivity: Custom*.
- The *Color amount* and *Color threshold* sliders will be updated automatically. If these values do not provide the desired results with your job set, you may need to manually adjust the *Color threshold*.

*NOTE:* Refer to the [Document Settings window](#) for information about common buttons and options.

## 4 Image Settings

### Image Settings window








From this window you can define image processing options by using the available tabs. The values used in Image Settings are saved in the selected *Setting Shortcut*. The Image Settings window includes the following tabs: General, Size, Adjust (color/grayscale and black and white), Enhance, and Detect.

**Side** - allows you to select which side and image to configure (Front, Back, Both: Color (24-bit), etc.). All image settings will be applied to the selected image.

#### NOTES:

- This option is only available if Front and back sides have different imaging settings is turned on from the Document - Images tab.
- The *Both* and *Back* options are only available for duplex scanner models.

#### Toolbar buttons

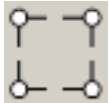
	<b>Zoom In:</b> enlarges the image that is currently being displayed in the preview area.
	<b>Zoom Out:</b> reduces the image that is currently being displayed in the preview area.
	<b>Rotate Outline:</b> rotates the outline 90 degrees. <i>NOTE:</i> This is only available if the rotated outline will fit in the scanner's maximum width.
	<b>Center Outline:</b> adjusts the X origin of the outline such that the outline is centered within the scanner's maximum width.
	<b>Preview Quality:</b> selects the quality of the scanned image. <ul style="list-style-type: none"><li>• <b>Normal:</b> displays acceptable image quality at a lower resolution.</li><li>• <b>High:</b> displays the most accurate representation of the actual image. The image that is displayed in the preview area is a good representation of what the final image will look like.</li></ul> <i>NOTE:</i> Depending on your document content, you may need to zoom in to see a true representation of the image.
	<b>Automatic Preview Updates:</b> allows you to select how the displayed image is updated. <ul style="list-style-type: none"><li>• <b>On:</b> the displayed image will automatically show the effects of your settings changes, in most cases, without having to rescan the document. If a rescan is necessary, you will be prompted to reinsert the document.</li><li>• <b>Off:</b> the displayed image will not update until another preview scan is performed.</li></ul>
	<b>Units:</b> selects the unit of measurement for the scanner; this includes the preview area and any size-related options. The options are <b>Inches</b> , <b>Centimeters</b> , and <b>Pixels</b> .

#### Preview Area

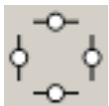
The preview area displays a sample image that is based on your current shortcut settings. An image will be displayed in this area after a preview scan has been performed.

**Outline:** If you choose **Document: Manually Select**, **Document: Continuous**, or **Image: Part of a document** on the [Size tab](#), the preview area will also show the current *Outline* selections. If the outline does not align with your preview image, you may use the mouse to adjust the size and location of the outline. As the mouse cursor moves around the outline, the cursor will change, indicating that you can adjust the outline by pressing and holding the left mouse button.

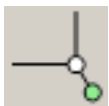
- **Move:** place the mouse cursor within the outline to adjust the location of the outline.
- **Corner:** place the mouse cursor over one of the corner graphics to adjust two sides at the same time.



- **Side:** place the mouse cursor over one of the side graphics to adjust that side.



- **Rotate:** place the mouse cursor over the rotate graphic to adjust the angle of the outline



**Document** - displays the [Document Settings window](#).

**Device** - displays the [Device Settings window](#).

**Preview** - initiates a scan and then displays the [Image Settings window](#) with the scanned image placed in the preview area. The image displayed is a sample based on your current shortcut settings.

**Done** - returns you to the [Main Scanner window](#).

## Information icons



**About:** displays the scanner's version and copyright information



**Help:** displays help information for the driver

## Image - Adjust tab - Black and White

The options available on the Adjust tab depend on the Scan as selection on the [General tab](#). The following options are based on a *Scan* as selection of **Black and White**.

**Conversion quality** - these settings affect how the scanner analyzes a grayscale version of the document, which is used to produce the black and white electronic image.

- **Best - Intelligent QC**: this performs the same analysis as **Best** with the additional benefit of Intelligent QC (Quality Control). For challenging documents, the grayscale version of the document is produced, allowing you final control over image quality within your application software.

*NOTE*: This option is only available with KODAK Capture Pro software. Refer to the software's documentation for more information.

- **Best** (iThresholding): the scanner analyzes each document to determine the optimal settings to produce the highest quality image. This option allows scanning of mixed documents with varying quality (such as faint text, shaded backgrounds, or color backgrounds).
- **Better** (iThresholding): the scanner analyzes each document to determine the optimal settings to produce the highest quality image. This option allows scanning of mixed documents of similar quality.
- **Normal** (ATP - Adaptive Threshold Processing): allows you to determine the optimal settings to produce the desired image quality. This option works best when scanning with consistent document sets. You may also want to use this option if you have difficult documents such that you cannot find a *Contrast* setting for *Best* that produces the desired quality.
- **Draft** (Fixed): allows you to select the grayscale threshold used to determine if a pixel is black or white. This option works best for high contrast documents.

**Contrast** - allows you to make an image lighter or darker. Decreasing this setting will make the image lighter and reduce noise in the image. Increasing this setting will make the image darker and make light information more visible. The values range from **-50** to **50**. The default is 0.

*NOTE*: This setting is only available for *Conversion quality: Best*, *Conversion quality: Better* and *Conversion quality: Normal*.

**Threshold** - aids in controlling the level at which a pixel is considered black or white. Decreasing this setting will make the image appear lighter, which can be used to subdue background noise. Increasing this setting will make the image appear darker, which can be used to help pick up light information. The values range from **0** to **255**. The default is 90.

*NOTE*: This setting is only available for *Conversion quality: Normal* and *Conversion quality: Draft*.

**Text Enhancement** - allows you to configure the scanner to improve the appearance of text. Turn this option on if your document is mostly text and the characters are disconnected or not smooth.



*NOTE:* This may have no effect on small fonts and effectiveness may be diminished if Thinning/Thickening is being used.

**Thinning/Thickening** - allows you to make the pixels appear to be thinner or thicker. Decreasing this setting will make the pixels thinner/smaller. Increasing this setting will make the pixels thicker/larger. The default is 0, no thinning or thickening.

### Filters

- **Noise**
  - **(none)**
  - **Lone Pixel:** reduces random noise by converting a single black pixel to white when it is surrounded by white pixels or by converting a single white pixel to black when it is surrounded by black pixels.
  - **Majority Rule:** sets each pixel based on its surrounding pixels. The pixel will become white if most of the surrounding pixels are white and vice versa.
  - **Background:** blends random noise into the background.
- **Image**
  - **(none)**
  - **Halftone Removal:** enhances dot matrix text and images made with halftone screens (such as newspaper photographs).

**Invert Colors** - allows you to select how the black pixels will be stored in the image. By default, the black pixels are stored as black and the white pixels are stored as white. Turn this option on if you want the black pixels stored as white and the white pixels stored as black.

*NOTE:* Refer to the [Image Settings window](#) for information about common buttons and options.

## Image - Adjust tab - Color/Grayscale

The options available on the Adjust tab depend on the Scan as selection on the [General tab](#). The following options are based on a *Scan* as selection of **Color** or **Grayscale**.

**NOTE:** Most options have additional settings. Those settings will only be visible when the option is turned on. If all the settings do not fit on the screen, a scroll bar will appear, giving you access to all the settings.

### Brightness and Contrast

- **(none)**
- **Automatic:** automatically adjusts each image.
- **Manual:** allows you to set the following specific values that will be used for all images.
  - **Brightness** - changes the amount of white in the color or grayscale image. The values range from **-50** to **50**. The default is 0.
  - **Contrast** - makes the images sharper or softer. The values range from **-50** to **50**. The default is 0.

### Color Balance

- **(none)**
- **Automatic:** adjusts the white background of each document to pure white. This option compensates for the variations that occur between different weights and brands of paper. This is not recommended for use with photographs.
- **Automatic - advanced:** for advanced users who want to further adjust the **Automatic** option.
  - **Aggressiveness** - allows you to adjust the extent of the variation. Increasing this value can help with documents that have yellowed due to age. The values range from **-2** to **2**.
- **Manual:** allows you to set the following specific values that will be used for all images.
  - **Red** - changes the amount of red in the color image. The values range from **-50** to **50**.
  - **Green** - changes the amount of green in the color image. The values range from **-50** to **50**.
  - **Blue** - changes the amount of blue in the color image. The values range from **-50** to **50**.

**NOTE:** Color Balance is not available for grayscale images.

**Sharpen** - increases the contrast of edges within the image.

- **(none)**
- **Normal**
- **High**
- **Exaggerated**

**Foreground Boldness** - use this option for documents or forms where you want the foreground (such as text, lines, etc.) to be more prominent.

- **(none)**
- **Automatic:** all the foreground will be bolder.
- **Automatic - advanced:** for advanced users who want to further adjust the Automatic option.
  - **Aggressiveness** - allows you to adjust the extent at which the foreground is determined. The values range from **-10** to **10**.

**Background Smoothing** - using this option for documents or forms with a background color will help produce images with a more uniform background color. This option improves image quality and may reduce file size.

- **(none)**
- **Automatic:** smoothes up to three background colors.
- **Automatic - advanced:** for advanced users who want to further adjust the **Automatic** option.
  - **Aggressiveness** - allows you to adjust the extent at which the background(s) are determined. The values range from **-10** to **10**.
- **Change to White:** identifies up to three background colors and substitutes each one with white.
- **Apply to:**
  - **Predominant** - smoothes the predominant background color to white.
  - **Neutral** - smoothes only the neutral color to white, and also smoothes up to two additional background colors.
  - **All** - smoothes the neutral color and up to two additional background colors to white.
- **Aggressiveness** - allows you to adjust the extent at which the background(s) are determined. The values range from **-10** to **10**.


*NOTE:* Change To White is only available on some models.

*NOTE:* Refer to the [Image Settings window](#) for information about common buttons and options.

## Image - Detect tab

**NOTE:** Some options have additional settings. Those settings will only be visible when the option is turned on. If all the settings do not fit on the screen, a scroll bar will appear, giving you access to all the settings.

**Blank Image Deletion** - allows you to configure the scanner to not give blank images to the scanning application.

- **(none):** all images are given to the scanning application.
- **Based on Document Content:** images will be considered blank based on the document content within the image.
  - **Content amount:** allows you to select the maximum amount of content that the scanner will consider to be blank. Any image that has more content than this value will be considered non-blank and will be given to the scanning application. The values range from **0** to **100** percent.
  - : *Content amount* will be filled in with the amount of content in the preview image. If you have a representative blank document (such as a blank sheet with letterhead), it can be used to assist with determining the setting for *Content amount*. (Perform a preview scan, click this button, and adjust *Content amount* as appropriate).

**NOTE:** This option is only available when there is a preview image.

- **Based on Size:** images will be considered blank based on the size of the image that would be given to the scanning application (after all other settings have been applied).
  - **Final image size:** allows you to select the minimum image size that the scanner will consider to be non-blank. Any image that is less than this value will be considered blank and will not be given to the scanning application. The values range from **1** to **1000 KB** (1 KB equals 1024 bytes).

**Barcode Reading** - allows you to configure the scanner to search your images for barcodes and return the information to the scanning application.

- **On:** turns barcode reading on.
- **Type:** select one or more barcode types for which you want the scanner to search.

- **Interleaved 2 of 5**
- **Code 3 of 9**
- **Codabar**
- **Code 128**
- **EAN-13**
- **EAN-8**
- **UPC-A**
- **UPC-E**
- **PDF417**
- **QR Code**
- **How Many:** select the number of barcodes for which the scanner will search.
- **Orientation:** select the orientation of barcodes for which the scanner will search.
  - **Horizontal**
  - **Vertical**
  - **Both**

*NOTE:* This is relative to the final image (after any cropping and rotation has been applied).

- **Search Area:** select the area of the image to search.
  - **Entire Document**
  - **Part of Document**
    - **Origin (x, y):** (x) is the distance from the left edge of the image and (y) is the distance from the top edge of the image.
    - **Size (w, h):** the width and height of the area to search.

*NOTE:* These settings are relative to the final image (after any cropping and rotation has been applied).

*NOTE:* Refer to the [Image Settings window](#) for information about common buttons and options.

## Image - Enhance tab

The options available on the Enhance tab depend on the *Scan as* selection on the [General tab](#).

**NOTE:** Most options have additional settings. Those settings will only be visible when the option is turned on. If all the settings do not fit on the screen, a scroll bar will appear, giving you access to all the settings.

**Hole Fill** - allows you to fill in the holes that are around the edges of your document. The types of holes that are filled include round, rectangular, and irregularly shaped (such as double-punched or with a slight tear that could have occurred when the document was removed from a binder).

- **On:** turns hole fill on.

**Barcode Image Enhancement** - allows you to configure the scanner so it will optimize the barcodes for reading by your application.

- **On:** turns barcode optimization on.

**Image Edge Fill** - fills the edges of the final electronic image by covering the area with the specified color.

### Color

- **(none)**
- **Automatic:** the scanner will automatically fill the edges of the image using the surrounding color.
- **NOTE:** if images show some unwanted border, use Automatic to remove it.
- **Automatic - include tears:** in addition to filling the edges, the scanner will also fill in tears along the edges of the document.
- **White**
- **Black**
- **All sides match:** when turned on, an equal amount will be filled in on all sides.  
**NOTE:** This option is only available for **White** or **Black**.
- **Top:** determines how much of the top edge will be filled in.  
**NOTE:** This option is not available when **All sides match** is turned on.
- **Left/Right:** the option on the left will determine how much of the left edge will be filled in and the option on the right will determine how much of the right edge will be filled in.  
**NOTE:** These options are not available when **All sides match** is turned on.
- **Bottom:** determines how much of the bottom edge will be filled in.  
**NOTE:** This option is not available when **All sides match** is turned on.

## NOTES:

When using *Image Edge Fill*, be careful not to enter a value too large as it could fill in image data that you want to keep.

This option is applied to the preview image.

**Streak Filter** - allows you to configure the scanner to filter vertical streaks from your images. Streaks are lines that may appear on an image and are not part of the original document. Streaks may be caused by contaminants on your documents (such as dirt, dust, or frayed edges) or by not following the recommended cleaning procedures for your scanner.

- **On**: turns streak filter on.
- **Aggressiveness**: allows you to adjust the extent at which the streaks are filtered. The values range from **-2** to **2**. The default is 0.

**NOTE:** If photographs are being scanned, choose Photograph as the document type on the Image - General tab to get better photographic images than you would from a different document type choice.

**Color Dropout** - used to eliminate a form's background so that only the entered data is included in the electronic image (and the form's lines and boxes are removed). For black and white images, these settings affect the grayscale version of the document, which the scanner analyzes to produce that electronic image.

- **Color**: select the desired dropout color.
  - **(none)**
  - **Multiple**: drops colors other than dark shades (such as black or dark blue ink)
  - **Predominant**: drops the predominant color
  - **Red**
  - **Green**
  - **Blue**
  - **Orange**
  - **Orange and Red**
- **Aggressiveness**: allows you to adjust the extent at which the colors are dropped. The values range from **-10** to **10**. The default is 0.

**NOTE:** This option is only available when *Color* is set to **Multiple** or **Predominant**.

- **Include non-dropped image**: for each dropout image, the scanner will also generate the original version of the image (the application will receive two separate images).

**NOTE:** The *Color Dropout* options are only available when the *Scan as* selection is **Black and White** or **Grayscale**.

**NOTE:** Refer to the Image Settings window for information about common buttons and options.

## Image - General tab

The General tab contains the commonly used image options. In most cases you will not have to change options on other tabs.

**Scan as** - allows you to select the electronic image format.

- **Color (24-bit)**: the scanner will produce a color version of your document.
- **Grayscale (8-bit)**: the scanner will produce a grayscale version of your document.
- **Black and White (1-bit)**: the scanner will produce a black and white version of your document.

*NOTE:* The *Scan as* option is only available when **Images per side: One** is selected on the Document - Images tab.

**Document type** - allows you to select the type of content on your documents.

- **Text with Graphics**: the documents contain a mix of text, business graphics (bar graphs, pie charts, etc.), and line art.
- **Text**: the documents contain mostly text.
- **Text with Photographs**: the documents contain a mix of text and photographs. Unlike the other *Document type* options, the scanner will analyze each document. Based on that analysis, the scanner will perform different processing on each area of the document.

*NOTE:* This option is not available for all models.

- **Photograph**: the documents contain mostly photographs.

**Media type** - allows you to select the type of paper you are scanning, based upon the texture/weight. The options are **Plain Paper**, **Thin Paper**, **Glossy Paper**, **Card Stock**, and **Magazine**.

**Resolution** - allows you to select the dots per inch (dpi), which largely determines the quality of the scanned image. While scanning at a greater resolution produces a better quality image, it may also increase scanning time and image size.

*NOTE:* This option is not applied to the preview image when *Preview Quality* is set to **Normal**.

**Compression** - allows you to reduce your electronic image size.

- **Type**: the options available depend on the *Scan as* setting
  - If *Scan as* is set to color or grayscale, the options are:
    - **(none)**: uses no compression, which may produce a large image size.
    - **JPEG**: uses JPEG techniques to compress the image.  
*NOTE:* This option is not available for *Scan as: Black and White (1-bit)*.
  - If *Scan as* is set to black and white, the options are:
    - **(none)**: uses no compression, which may produce a large image size.
    - **Group-4**: uses a CCITT standard to compress the image, often used in conjunction with TIFF files.  
*NOTE:* This option is only available for *Scan as: Black and White (1-bit)*.
- **Quality**: allows you to select the quality of the compressed JPEG image:
  - **Draft**: maximum compression, which produces the smallest image size.



- **Good:** a fair amount of compression, which still produces acceptable image quality.
- **Better:** some compression, which produces decent image quality.
- **Best:** minimal compression, which produces very good image quality.
- **Superior:** the least amount of compression, which produces the largest image size.

*NOTE:* This option is not applied to the preview image.

*NOTE:* Refer to the [Image Settings window](#) for information about common buttons and options.

## Image - Size tab

**Document** - allows you to select how the scanner will detect your documents as they are fed through the scanner.

- **Automatically Detect and Straighten:** the scanner will automatically find each document (regardless of size) and will straighten any document that may have been fed crooked.
- **Automatically Detect:** the scanner will automatically find each document (regardless of size). If a document is fed crooked, it will not be straightened.
- **Photograph:** the scanner will locate the photograph on the document and return an image that contains just the photograph. If the scanner finds more than one photograph on a document, one image is still returned which contains all photographs.
- **Manually Select:** the scanner will return an image based on the area you specify with the Outline options. It is suggested that you only use this option for scan jobs that contain same-sized documents.
- **Continuous:** the scanner will split the document into separate images based on the area you specify with the Outline options. It is suggested that you select an Outline that covers the entire width of the document and a height around 11 inches (297 mm).

**Image** - allows you to select which part of the document you want to use for creating your electronic image.

- **Entire document:**
  - if you select **Document: Automatically Detect and Straighten**, **Document: Automatically Detect**, or **Document: Manually Select**, it returns the entire document.
  - if you select **Document: Photograph**, the entire document is used to locate the photograph.
- **Part of the document:**
  - if you select **Document: Automatically Detect and Straighten** or **Document: Continuous**, it returns the portion of the document that you specify with the Outline options.
  - if you select **Document: Photograph**, only the portion of the document that you specify with the Outline options will be used to locate the photograph.

**Outline** - allows you to select the location and size to use for creating your electronic image. The preview area will show the outline.

- **Origin (x, y):**
  - if you select **Document: Automatically Detect and Straighten** or **Document: Photograph**, (x) is the distance from the left edge of the document and (y) is the distance from the top edge of the document.
  - if you select **Document: Manually Select** or **Document: Continuous**, (x) is the distance from the left edge of the scanner's paper path and (y) is the distance from the first portion of the document detected by the scanner.
- **Size (w, h):**
  - if you select **Document: Automatically Detect and Straighten** or **Document: Manually Select**, this is the width and height of the electronic image.

- if you select **Document: Photograph**, this is the width and height of the area of the document to use to locate the photograph.
- if you select **Document: Continuous**, this is the width and height of each separate electronic image.  
*NOTE:* The electronic image may be shorter than you specified if the outline goes beyond the end of the scanned document.
- **Angle:** allows you to select the angle of the outline.
- **Predefined sizes:** provides a list of commonly used paper sizes. Selecting an item in this list will automatically set the size of the outline to that paper's size. **Custom** will be displayed when the outline size does not match any sizes in this list.

*NOTE:* You can also adjust the outline displayed in the preview area using your mouse.

**Border** - allows you to select what action to perform on the edges of your electronic image.

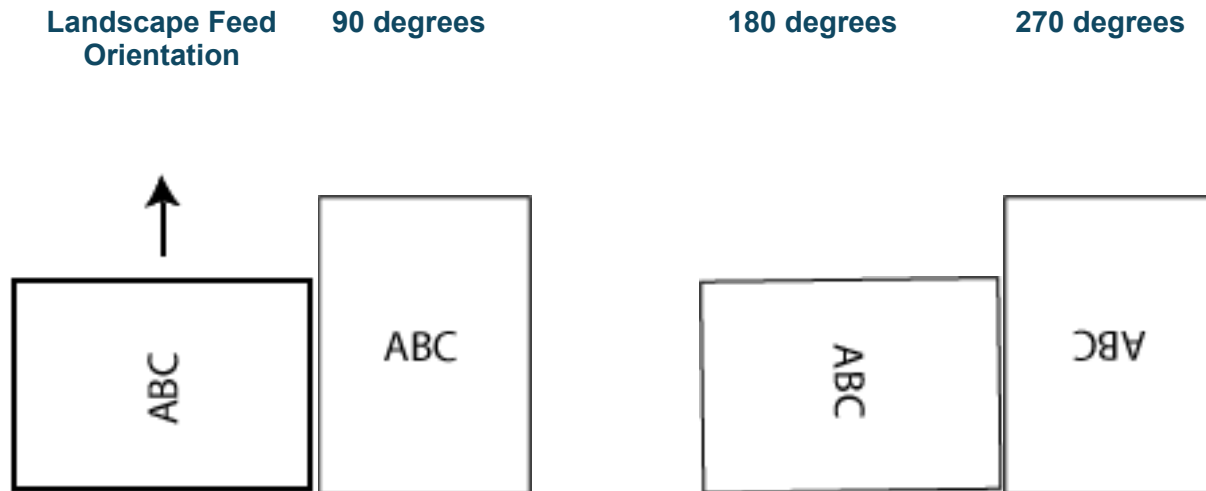
- **(none)**
- **Add:** includes up to approximately 0.1 inches of border around all of the image edges.  
*NOTE:* This option is only available for **Document: Automatically Detect and Straighten**, **Document: Automatically Detect**, or **Document: Manually Select**.
- **Remove:** Deletes approximately 0.1 inches of data around all sides of the image edges. Residual border can be caused by variations in a document edge; for example, it can occur when a document is not a perfect rectangle and/or was fed crooked.  
*NOTES:*
  - While this option will not remove large amounts of residual border, there is a possibility that a small amount of the document will be lost.
  - This option is only available when both **Document: Automatically Detect and Straighten** and **Image: Entire Document** are selected.

*NOTE:* This option is not applied to the preview image.

**Post scan rotation** - allows you to select any rotation to be applied to the electronic image after it has been scanned.

- **(none)**
- **Automatic:** the scanner will analyze the content of each document to determine how it was fed and will rotate the image to the proper orientation.
- **Automatic - default 90:** the scanner will analyze the content of each document to determine how it was fed and will rotate the image to the proper orientation. If the scanner cannot determine how the document was fed, it will rotate the image 90 degrees.
- **Automatic - default 180:** the scanner will analyze the content of each document to determine how it was fed and will rotate the image to the proper orientation. If the scanner cannot determine how the document was fed, it will rotate the image 180 degrees.
- **Automatic - default 270:** the scanner will analyze the content of each document to determine how it was fed and will rotate the image to the proper orientation. If the scanner cannot determine how the document was fed, it will rotate the image 270 degrees.

- **90, 180, 270 degrees:** the amount of rotation. The following example shows how these settings affect a document that was fed in landscape orientation.



*NOTE:* This option is not applied to the preview image.

**Character sets** - allows you to select the character set(s) the scanner will use as the basis for Automatic post scan rotation.

- **Numbers** - the scanner will utilize numeric characters for determining how to rotate the image to the proper orientation.
- **Latin** - the scanner will utilize Latin characters for determining how to rotate the image to the proper orientation.
- **Chinese/Japanese** - the scanner will utilize Chinese/Japanese characters for determining how to rotate the image to the proper orientation.
- **Korean** - the scanner will utilize Korean characters for determining how to rotate the image to the proper orientation.
- **Arabic** - the scanner will utilize Arabic characters for determining how to rotate the image to the proper orientation.

*NOTE:* This option is only available for the Automatic post scan rotation choices.

*NOTE:* Refer to the [Image Settings window](#) for information about common buttons and options.

## 5 Device Settings

### Device Settings window

From this window you can set all scanner-specific options by using the available tabs. The values used in Device Settings are saved in the selected *Setting Shortcut*. The Device Settings window includes the following tabs: [General](#), [Transport](#), [Sorting](#), [Indexing](#), [Printer](#), [Stamping](#), [Multifeed](#), [Batch](#), [Patch](#).

**Document** - displays the [Document Settings window](#).

**Image** - displays the [Image Settings window](#).

**Done** - returns you to the [Main Scanner window](#).

### Information icons



**About:** displays the scanner's version and copyright information



**Help:** displays help information for the driver

## Device - Batch tab

Batching is the operation of counting pages or documents.

*NOTE:* This tab is only available when *Format* is set to **Image Address** on the [Indexing tab](#).

**On** - turns batching on and makes the rest of the options on this tab available.

**Level to count** - sets the level to count. The options are **Level 1**, **Level 2**, and **Level 3**.

*NOTE:* The level you want to count must exist in the image address template as defined on the [Indexing tab](#).

**How Many To Count** - defines the number of documents to be counted prior to performing the action to take when the count has been reached.

### When Count Reached

- **Next level:** defines the level for the next document after the count is reached. The options are **(none)**, **Level 1**, **Level 2**, and **Level 3**.  
*NOTE:* The level you want to count must exist in the image address template as defined on the [Indexing tab](#).
- **Action to take:** defines the action to be taken after processing the last document in the batch.
  - **(none)**
  - **Pause Scanning:** scanning will stop but the scanning application will wait for additional images (the feeder stops). Scanning may be resumed by touching **Resume** on the touchscreen. Scanning may be stopped by touching **End Job** on the touchscreen or via the scanning application.
  - **Stop Scanning:** scanning will stop, and control will return to the scanning application (the job ends). Restart the scan session from the scanning application.
  - **Continue Scanning and Restart Count:** the scanner will continue to scan and automatically start a new batch by resetting *How Many To Count*.

*NOTE:* You can also end a batch before the **How Many To Count** value is reached by using the touchscreen on the scanner.

*NOTE:* Refer to the [Device Settings window](#) for information about common buttons and options.

## Device - General tab

The General tab allows you to set scanner-specific options and provides access to scanner diagnostics.

### Paper source

- **Automatic:** looks for paper in the document feeder first. If there are no documents in the input tray, the scanner will scan from the flatbed.
- **Automatic - 100 Sheets:** looks for paper in the input elevator first. If there are no documents in the input elevator, the scanner will scan from the flatbed. This selection is recommended when you are scanning between 25 and 100 sheets from the input elevator.
- **Automatic - 250 Sheets:** looks for paper in the input elevator first. If there are no documents in the input elevator, the scanner will scan from the flatbed. This selection is recommended when you are scanning between 100 and 250 sheets from the input elevator.
- **Automatic - 500 Sheets:** looks for paper in the input elevator first. If there are no documents in the input elevator, the scanner will scan from the flatbed. This selection is recommended when you are scanning between 250 and 500 sheets from the input elevator.
- **Automatic - 750 Sheets:** looks for paper in the input elevator first. If there are no documents in the input elevator, the scanner will scan from the flatbed. This selection is recommended when you are scanning between 500 and 750 sheets from the input elevator.
- **Document Feeder:** the input elevator is in the highest position. This selection is recommended when you are scanning 25 sheets or fewer from the input elevator.
- **100 Sheets:** this selection is recommended when you are scanning between 25 and 100 sheets from the input elevator.
- **250 Sheets:** this selection is recommended when you are scanning between 100 and 250 sheets from the input elevator.
- **500 Sheets:** this selection is recommended when you are scanning between 250 and 500 sheets from the input elevator.
- **750 Sheets:** this selection is recommended when you are scanning between 500 and 750 sheets from the input elevator.
- **Flatbed:** scanner will scan from the flatbed.

**NOTE:** **Automatic** and **Flatbed** options are only available if you had the flatbed accessory attached when the scanning application connected to the scanner.

### Paper destination:

- **Upper Tray:** select this option to use the topmost output tray.
- **Lower Tray:** select this option to use the lower/normal output tray.
- **Rear Exit:** select this option to use the rear paper exit.

**NOTES:**

- This option is not available for all models.
- For models that support this option, some selections may not be available.
- For **Rear Exit**, make sure there is enough space behind the scanner for the paper to fully exit the scanner. (Pull the scanner away from any walls and clear any obstacles behind it.)

## Document Feeder

**Timeout:** allows you to select the amount of time, in seconds, the scanner will wait once the last document enters the feeder before the timeout occurs. This option can also be turned **off**.

**Action when timeout occurs** - indicates the action that will be taken when the document feeder timeout has been reached.

- **Stop Scanning:** scanning will stop, and control will return to the scanning application (the job ends).
- **Pause Scanning:** scanning will stop but the scanning application will wait for additional images (the feeder stops). Scanning may be resumed by pressing the **Start/Resume** button on the scanner. Scanning may be stopped by pressing the **Stop/Pause** button on the scanner or via the scanning application.
- **Pause Scanning - wait for paper:** scanning will stop but the scanning application will wait for additional images (the feeder stops). Scanning may be resumed by placing documents into the input elevator. Scanning may be stopped by pressing the **Stop/Pause** button on the scanner or via the scanning application.
- **Automatically start scanning** - if selected, and not scanning from the flatbed, the scanner will wait for up to 10 seconds for documents to be placed in the input elevator before scanning will begin. In addition, once the input elevator has been emptied, the scanner will automatically resume scanning when paper is placed in the input elevator. The scanner will wait the amount of time specified by the document feeder timeout.

*NOTE:* The *Document Feeder* settings are shared with all *Setting Shortcuts*. Any changes will affect other shortcuts unless you turn on the **Only save to this Setting Shortcut** option.

**Sheet Counter** - enter the number to be assigned to the next physical sheet of paper entering the scanner. This is incremented sequentially by the scanner and is returned in the image header. If the sheet counter reaches its maximum value (999,999,999), the next sheet will have sheet counter value = 1. If the counter is used in digital stamping, the number of digits in the digital stamp impacts the maximum value. For example, if the number of digits in the digital stamp counter is set to 1, then the counter will reset to 1 every 10th document.

*NOTE:* Changing this will affect the **Counter** option on the Device - Printer tab.

*NOTE:* Refer to the Device Settings window for information about common buttons and options.



## Device - Indexing tab

Indexing is used for document tracking, batch control, and image management. The scanner will increment the indexes based on how you set up the selections on this tab.

### Format

- **Single Sheet Documents:** use this when the documents in your job consist of only one sheet of paper. The scanner will increment the *Document* number for each sheet of paper scanned.
- **Multiple Sheet Documents:** use this when the documents in your job have multiple sheets of paper and you want to track each sheet within each document. When the scanner detects a Patch 2 sheet, the *Document* number is incremented, and the *Sheet* number is set to 0. However, if the first page scanned is a Patch 2 sheet and the starting Sheet number is 0, then neither number is changed. This allows you to place a Patch 2 sheet before your first document and not have it affect the document's number.
- **DCN/DLN/Bates Numbering:** use this when the documents in your job have multiple sheets of paper and you only want to track the document's number. When the scanner detects a Patch 2 sheet, the *Document* number is incremented. However, if the first page scanned is a Patch 2 sheet and *New Job* was On, then the number is not changed. This allows you to place a Patch 2 sheet before you first document and not have it affect the document's number.
- **Image Address:** allows you to set an image address starting point. The scanner will increment the image address based on how you set up the image address rules on this tab.

### NOTES:

- For options other than **(none)** and **Image Address**, when you select a *Format* the Printer Template is automatically updated with the *Document* and, if available, the *Sheet* value. If printing was not On, it will automatically be turned On.

**NOTE:** The options in this section are available when the *Format* selection is not **Image Address**.

### Starting Value

- **Document:** allows you to enter the starting value for the Document number. The values range from **0** to **999,999,999**. This value is maintained by the scanner. When powered on, the scanner initializes this value to 1.
- **Sheet:** allows you to enter the starting value for the Sheet number. The values range from **0** to **999,999,999**. This value is maintained by the scanner. When powered on, the scanner initializes this value to 0.  
*NOTE:* This option is only available when *Format* is **Multiple Sheet Documents**.
- **New Job:** allows you to indicate if the next scan is a new job or a continuation of the previous scan. This value is maintained by the scanner. When powered on, the scanner initializes this value to On.  
*NOTE:* This option is only available when *Format* is **DCN/DLN/Bates Numbering**.

**Print on patch sheets** - allows you to select whether the print string is applied to the Patch 2 sheets.

**NOTE:** This option is only available when Format is not **Single Sheet Documents**.

**Example** - shows an example job and what will be printed on each sheet. You can change the sheets in the example to represent your job. The printed value shown is based on the current selections for *Starting Value*, *Print on patch sheets*, and the sheets within the example.

**NOTE:** The options in this section are available when the Format selection is **Image Address**.


**Current value** - displays the scanner's current image address. This value is used by the scanner as the next image address, which is assigned to the next document scanned.

**Starting Address** - allows you to enter a starting image address that overrides the *Current* value. You can enter a value for each available field, up to the maximum allowed characters for that field. The number of available fields, the field types, and the number of characters allowed per field are based on the *Template* settings for *Format* and *Field width* (see below).

### Template

- **Format:** allows you to select the format of the image address. The examples below indicate the available fields.
  - **Fixed:** Fixed
  - **Level 3:** Fixed Level 3.Level 2.Level 1
  - **Level 2:** Fixed Level 2.Level 1
  - **Level 1:** Fixed Level 1
  - **Level 3 Offset:** Fixed Level 3.Level 2
  - **Level 2 Offset:** Fixed Level 2

### NOTES:

- When you make a *Format* selection, the *Field width* and *Next Level* settings will automatically be set to the defaults for that format.
  - If you have made changes to the *Field width* or *Next Level* settings, the *Format* will be appended with the text *<changed>*, and the name will be displayed in italics (such as *\*Level 3 <changed>*).
- 
-  **Reset:** allows you to undo any changes that have been made to the format. This is only available when you have modified the format (name is in italics and appended with *<changed>*)
  - **Field width:** allows you to configure the width of each field from **1 - 9**. However, the sum total of all the field widths cannot exceed 27, therefore the field width may be limited to a value less than 9.
  - **Next Level:** the level to assign to the next document.
    - **After Level 3:** allows you to select what level to assign to the document that follows a level 3 document.
    - **After Level 2:** allows you to select what level to assign to the document that follows a level 2 document.

- **After Level 1:** allows you to select what level to assign to the document that follows a level 1 document.

The options for all three of the above are **Level 1**, **Level 2**, and **Level 3**. However, the available options are based on the image address format. For example, if the *Format* does not have Level 3 as one its fields, then *Level 3* will not be available.

*NOTE:* While scanning, a document can also be assigned a level by inserting a patch sheet (when turned on via the [Patch tab](#)) or selecting a level field on the scanner's touchscreen. For more information, refer to the User's Guide that is included with your scanner.

**Leading zeroes** - allows you to configure the format of the level address fields when the width of the value is less than the field width. (The examples indicate a field width of 3 and the image address at A.3.2.1.)

- **Display:** "A.003.002.001"
- **Do Not Display:** "A.3.2.1"
- **Display As Spaces:** "A. 3. 2. 1"

*NOTE:* Refer to the [Device Settings window](#) for information about common buttons and options.

## Device - Multifeed tab

Multifeed detection aids in document processing by detecting documents that may go through the feeder overlapped. Multifeeds can happen due to stapled documents, adhesives on documents, or electrostatically charged documents.

### Ultrasonic Detection

- **Sensitivity** - controls how aggressively the scanner will work to determine if more than one document is fed into the scanner. Multifeeds are triggered by detecting air gaps between documents. This allows multifeed detection to be used with job sets containing documents with mixed thicknesses.
  - **(none)**
  - **Low:** least aggressive setting, which is less likely to detect labels or poor quality, thick, or wrinkled documents as multi-fed documents.
  - **Medium:** use if your job set has documents with varying thicknesses or labels attached. Depending on the label material, most documents with labels should not be detected as multi-fed documents.
  - **High:** the most aggressive setting, which is good to use if all documents have a thickness no greater than 20-lb bond paper.

*NOTE:* Regardless of the setting, "sticky" notes may still be detected as multi-fed documents.

- **Sensors** - five sensors cover the width of the paper path. In order for multifeed documents to be detected correctly, they must pass under one of these sensors.
  - **Left through Right:** these allow you to select which of the five sensor(s) you want to have turned on. For example, if you know that the left side of the document has a "sticky" note on it, you can turn off the left sensor.
  - **Ignore up to:** ignores a multifeed anywhere on the document that is less than the value entered. This option is useful when you have a known multifeed situation that you want to allow (such as a small "sticky" note), but you do not want to have the sensor off for the entire document.

#### NOTES:

- This option is available when at least one sensor is set to **On - Ignore**.
- This length applies to all sensors set to **On - Ignore**.

**Length Detection** - allows you to select the maximum length of the documents in your job set. If the scanner detects a document longer than this value, it will determine that a multifeed has occurred. You can turn this option **off** or set a length.

**Action When Detected** - select what action you want the scanner to take when a multifeed is detected. With all options, the condition will be logged in the scanner.

- **Stop Scanning:** scanning will stop and control will return to the scanning application (the job ends). Image(s) of the multi-fed document will not be generated. Verify that the paper path has been cleared and restart the scan session from the scanning application.
- **Stop Scanning - generate image(s):** scanning will stop and control will return to the scanning application (the job ends). Image(s) of the multi-fed document will be

generated. Verify that the paper path has been cleared and restart the scan session from the scanning application.

- **Stop Scanning - leave paper in path:** scanning will stop immediately (making no attempt to clear the paper path) and control will return to the scanning application (the job ends). Image(s) of the multi-fed document will not be generated. Clear any documents from the paper path prior to restarting the scan session from the scanning application.
- **Stop Scanning - leave paper at exit:** scanning will stop, the last portion of the multi-fed document will be held at the transport's exit, and control will return to the scanning application (the job ends). Image(s) of the multi-fed document will not be generated. Clear any documents from the paper path prior to restarting the scan session from the scanning application.
- **Continue Scanning:** the scanner will continue to scan. Image(s) of the multi-fed document will be generated.
- **Pause Scanning - generate image(s):** scanning will stop but the scanning application will wait for additional images (the feeder stops). Image(s) of the multi-fed document will be generated. Scanning may be resumed by pressing the **Start/Resume** button on the scanner. Scanning may be stopped by pressing the **Stop/Pause** button on the scanner or via the scanning application.
- **Pause Scanning - leave paper in path:** scanning will stop immediately (making no attempt to clear the paper path) but the scanning application will wait for additional images (the feeder stops). Image(s) of the multi-fed document will not be generated. Clear any documents from the paper path prior to resuming the scan session. Scanning may be resumed by pressing the **Start/Resume** button on the scanner. Scanning may be stopped by pressing the **Stop/Pause** button on the scanner or via the scanning application.
- **Pause Scanning - leave paper at exit:** scanning will stop and the last portion of the multi-fed document will be held at the transport's exit, but the scanning application will wait for additional images (the feeder stops). Image(s) of the multi-fed document will not be generated. Clear any documents from the paper path prior to resuming the scan session. Scanning may be resumed by pressing the **Start/Resume** button on the scanner. Scanning may be stopped by pressing the **Stop/Pause** button on the scanner or via the scanning application.

**Interactive Multifeed Recovery:** scanning will stop but the scanning application will wait for additional images (the feeder stops). Images of the multi-fed document will be displayed on your computer. You can accept these images or rescan to replace them. You can make your selection on your computer or the scanner. Send the images to your application and resume scanning by selecting **Accept**. Selecting **Rescan** will discard the images and scanning will resume. Scanning may be stopped by selecting **Stop**.

**NOTE:** Put the multi-fed document(s) into the input tray before selecting **Rescan**.

**Play sound on PC** - turn this option on if you want the PC to make a sound when a multifeed is detected. You can click the **Browse** button to select the desired .wav file.

**NOTE:** The sound on the PC may not occur at the exact time the scanner detects the multifeed.

**NOTE:** Refer to the [Device Settings window](#) for information about common buttons and options.

## Device - Patch tab

The Patch tab provides choices of what patch type(s) to recognize. One or more patches can be selected at a time. The type of patch recognized is returned in the image header.

Patch Readers can automatically sense predefined patch code(s) and be configured to control document level changes.

**Patch Confirmation Tone** - the confirmation tone may be used to signal that a patch has been recognized by the scanner.

- **Recognize** - select which patch type(s) to recognize.
    - **Level 2**: assigns a Level 2 to the current document (whether it is your document with a patch on it or a Level 2 patch sheet).
    - **Level 3**: assigns a Level 3 to the current document (whether it is your document with a patch on it or a Level 3 patch sheet).
    - **Transfer**: assigns a level to the next document (after the Transfer patch sheet).
      - **None**: select this if you do not want to recognize transfer patches.
    - **As Level 2**
    - **As Level 3**
- NOTE*: The Transfer patch will be treated as a level 0.

### Feature

- **Patch Types 1, 4, and 6**: these patch types can be used by the scanning application for post-scan image control (they are not used for image addressing). For example, use these patch types for workflow control, such as changing between black and white and color/grayscale imaging.

*NOTE*: This option is only available when *Format* is set to **Image Address** on the Indexing tab.

**Use Heads** - select which patch heads/readers you want to use. Each patch head/reader can be turned on and off independently.

*NOTE*: This option is only available when *Format* is set to **Image Address** on the Indexing tab.

**Scanner** - select which action the scanner will take when a patch is detected. Each patch can be configured separately, but you cannot assign the same action to more than one patch. The available actions are:

(none)

- **Turn Off Multifeed - For One Sheet**: multifeed detection will be turned off for only the next sheet of paper after the patch sheet.
- **Turn Off Multifeed - Between Patches**: multifeed detection will be turned off for all sheets of paper after the patch sheet, until the same patch sheet is detected again.
- **Stop Scanning**: scanning will stop and control will return to the scanning application (the job ends). Image(s) of the patch sheet will be generated.

*NOTE*: Refer to the Device Settings window for information about common buttons and options

## Device - Printer tab

The Enhanced Printer provides a vertical print capability and supports alphanumeric characters, date, image address, time, document count, and custom messages. All print information is captured in the image header of each document.

**Print on front image** - turns digital printing on for all front images.

**Print on back image** - turns digital printing on for all back images.

**Level to configure** - choose the level of the document on which you want the specified print string to be printed. For example, if you use three-level image addressing, you can print the date on your level 3 document, nothing on level 2, and the document count on level 1. If you want all the print strings to be the same for all levels, then select **All levels match**.

**NOTE:** This option is only available when *Format* is set to **Image Address** on the [Indexing tab](#).

**Template: Format** - allows you to define your print string. The maximum number of characters for the print string is 40 characters (including spaces).

### Toolbar buttons



**Add:** displays a list of items you can add to your print string. When you select an item, that item will appear at the end of the Format list.



**Change:** allows you to change the currently selected item in the Format list with one of the items from the list that is displayed.



**Delete:** allows you to remove the currently selected item from the Format list.

**NOTE:** As you build your print string, only items that will fit in the 40-character limit will be available from the *Add* and *Change* lists.

**Items** - when an item is selected, any associated options will be displayed to the right of the Format list.

- **Counter:** this value is incremented sequentially for each sheet of paper scanned and is returned in the image header.
  - **Starting value:** allows you to set the number for the next sheet of paper that will be scanned.

**NOTE:** Changing this value will affect the **Sheet Counter** option on the Device - General tab.
  - **Field width:** allows you to configure the width of the counter from **1 - 9**. However, if for example, you only have 6 characters left in the print string, then the field width would be limited to 6.
  - **Leading zeroes:** allows you to configure the format of the counter when the width of the value is less than the field width. (The examples indicate a field width of 3 and the counter at 4.)
    - **Display:** "004"
    - **Do Not Display:** "4"
    - **Display As Spaces:** " 4"



- **Increment:** allows you to configure when the counter is incremented.
  - **Every Sheet**
  - **Patch Type T**
  - **Patch Type 1**
  - **Patch Type 2**
  - **Patch Type 3**
  - **Patch Type 6**
- **Reset:** allows you to configure when the counter is reset.
  - **Never**
  - **Patch Type T**
  - **Patch Type 1**
  - **Patch Type 2**
  - **Patch Type 3**
  - **Patch Type 6**
- **Reset Value:** allows you to select the value for the counter when it is reset.
- **Date:**
  - **Format:**
    - **MMDDYYYY**
    - **MMDDYY**
    - **DDMMYYYY**
    - **DDMMYY**
    - **YYYYMMDD**
    - **YYMMDD**
    - **DDD (Julian)**
    - **YYYYDDD (Julian)**
    - **YYDDD (Julian)**
  - **Separator:** (the examples indicate a format of YYYYMMDD)
    - **(none)**
    - **Slash:** 2006/08/24
    - **Hyphen:** 2006-08-24
    - **Period:** 2006.08.24
    - **Space:** 2006 08 24
  - **Specific date:** allows you to select a specific date if you do not want to use the current date within the scanner.
- **Time:**



- **HHmm**
- **HHmmss**
- **HHmmss.xx**
- **hhmm**
- **hhmmss**
- **hhmmss.xx**
- **hhmm tt**
- **hhmmss tt**
- **hhmmss.xx tt**

*NOTE:* **HH** is 24 hours from 00 to 23; **hh** is 12 hours from 01 to 12; **mm** is minutes from 00 to 59; **ss** is seconds from 00 to 59; **xx** is a counter from 00 to 99; and **tt** is AM or PM.

- **Specific time:** allows you to select a specific time if you do not want to use the current time within the scanner.

- **Space:** adds a space.
- **Indexing: Document** and **Indexing: Sheet:** these options are available based on the setting of *Format* on the [Indexing tab](#).

*NOTE:* These options are automatically added to the template. You cannot remove them but can move them within the template.

- **Image Address: Fixed** and **Image Address: Levels:** these are defined on the Indexing tab. Only the levels currently defined will be available.

*NOTE:* This option is only available when *Format* is set to **Image Address** on the [Indexing tab](#).

- **Message:** allows you to specify custom text to be included in your print string. A maximum of 40 characters is allowed. You can have up to 6 unique messages. Each message cannot have more than 20 characters.

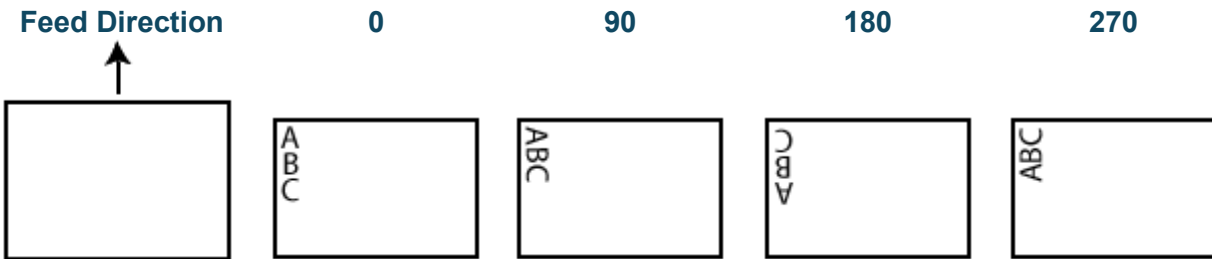
*NOTE:* To view the Japanese characters correctly you must get the MS Gothic font by installing the Microsoft Global IME 5.01 for Japanese - with Language Pack, English Language Version, which can be found at [http://www.microsoft.com/msdownload/iebuild/ime5\\_win32/en/ime5\\_win32.htm](http://www.microsoft.com/msdownload/iebuild/ime5_win32/en/ime5_win32.htm).

**Template: Example** - shows a sample of what the print string will look like. As you select items in the Format list, the corresponding portion within the example will be highlighted.

**Font** - you can select what orientation to use for printing your information.

- **Style:** available character styles are Normal, Bold, and Extra Bold.

- **Orientation:** while the characters are printed vertically (starting at the lead edge of the document), this setting allows you to select the orientation of the print string. Available options are: 0, 90, 180, 270.



- **Resize:** allows you to adjust the width of the font. The default is **0** (no adjustment).

*NOTE:* This option only affects what is printed on the physical sheet of paper.

**Offset From Edge** - determines how far the printed information will appear from the edge.

- **Paper's Lead:** select a value for the distance from the leading edge of the document.

*NOTES:*

- Printing automatically stops 6.3 mm (1/4 inch) from the trailing edge of the document even if the information has not been completely printed.
- The horizontal print position is determined by the location of the print cartridge within the scanner. See the User's Guide for setting print positions.
- This option is only available when printing on the physical sheet of paper.

- **Image's Top:** select a value for the distance from the top edge of the image.

*NOTE:* This option is only available when digitally printing on images.

- **Image's Left:** select a value for the distance from the left edge of the image.

*NOTE:* This option is only available when digitally printing on images.

*NOTE:* Refer to the [Device Settings window](#) for information about common buttons and options.

## Device - Sorting tab

The Sorting tab allows you to set options for separating sheets of paper, within your document set, to different output locations.

The sorting options are contained within these sub-tabs: [General](#), [Patch](#).

**Paper destination** - indicates the default output location where all sheets of paper will be delivered. Typically, the destination for your sorted sheets of paper will be different from this destination.

*NOTE:* This is the same option that is on the [Device - General tab](#), so any changes will automatically be reflected in both places.

*NOTE:* Refer to the [Device Settings window](#) for information about common buttons and options.

## Sorting - General tab

The General tab allows you to set options to sort multi-fed sheets or paper and/or sheets of paper that are a specific size.

### Multifeed

- **On** - turns multifeed sorting on and makes the rest of the options in this group available.

*NOTE:* Multifeed detection must also be turned on (see [Device - Multifeed tab](#)) and the *Action When Detected* option must be an option that does not leave the paper in the scanner. For example, if *Pause Scanning - leave paper in path* is selected, the sheet is not sorted because the sheet of paper remains in the scanner.

- **Destination** - indicates the output location to deliver each multi-fed sheet.

### Size

- **On** - turns on sorting by size and makes the rest of the options in this group available.
- **Rules** - you can have up to two rules. The table displays the details for each rule; the columns represent each selection from the [Size window](#).

### Toolbar buttons



**Add:** allows you to create a new rule. The [Size window](#) will be displayed.

*NOTE:* This option will not be available if you have created the maximum number of allowed rules



**Change:** allows you to change the currently selected rule. The [Size window](#) will be displayed with the rule's current options selected.



**Delete:** allows you to remove the currently selected rule.

*NOTE:* Refer to the [Device - Sorting tab](#) for information about common buttons and options.

## Sorting - Patch tab

The Patch tab allows you to set options to sort patch sheets and sheets after the patch sheet.

**On** - turns patch sorting on and makes the rest of the options available.

**Rules** - you can have up to eight rules. The table displays the details for each rule; the columns represent each selection from the [Patch window](#).

### Toolbar buttons



**Add:** allows you to create a new rule. The [Patch window](#) will be displayed.

*NOTE:* This option will not be available if you have created the maximum number of allowed rules.



**Change:** allows you to change the currently selected rule. The [Patch window](#) will be displayed, with the rule's current options selected.



**Delete:** allows you to remove the currently selected rule.

*NOTE:* Refer to the [Device - Sorting tab](#) for information about common buttons and options.

## Sorting - Patch window

From this window you can select all options for one patch rule.

**Patch** - allows you to select the patch that must be on the sheet of paper for this rule to be met.

- **T, 1, 2, 3, 4** and **Toggle, 6, 10, 11, 12, 13, 14, and 15**
- **All**: indicates all remaining patches (any patch that is not already used in another rule).

**NOTE:** A patch can only be used once. If the patch is used in another rule, it will not be available.

**Delete patch image** - indicates all images of the patch sheet will be discarded and not sent to your application.

### NOTES:

- When selected, the images are deleted no matter how the rest of the scanner options are set.
- When not selected, the rest of the scanner options determine if the patch image is deleted or not.

**Destination** - indicates the output location to deliver each patch sheet that meets this rule.

**Sheets After The Patch To Sort** - allows you to select which sheets of paper, immediately following the patch sheet, must also be sorted.

- **(none)**
- **Specified Number**: allows you to select an exact number of sheets from **1** to **99**.
- **All Until This Patch**: indicates every sheet of paper is sorted up to the next sheet of paper when this rule's patch is detected.

**NOTE:** Use this option if you have an unknown number of consecutive pages in your document set that you want to sort. In this case, obtain two patch sheets that have the same patch, then place one patch sheet before the pages to sort and place the other patch sheet after the pages to sort.

- **All Following**: indicates every sheet of paper after the patch sheet is sorted, until the scanning session ends.

**Destination**: indicates the output location to deliver each sheet that follows the patch sheet.

**NOTE:** This is only available when *Sheets After The Patch To Sort* is not **(none)**.

**NOTE:** This is not available when Patch is **All**.

**OK** - saves any changes and closes this window.

**Cancel** - closes this window without saving any changes.



**Help**: displays help information for the driver

## Sorting - Size window

From this window you can select all options for one size rule.

**Length** - allows you to select the length the sheet of paper must be for this rule to be met.

(none)

- **Less Than:** sheets shorter than this length will be sorted.
- **Greater Than:** sheets longer than this length will be sorted.
- **Between:** sheets whose length falls within the selected range will be sorted.

**NOTES:**

- An option can only be used once. If the option is used in another rule, it will not be available.
- The available length values may change based on the selection for Destination.
- When entering a length, consider including an extra 1/2 inch / 25 mm to account for possible document skew during scanning.

**Destination** - indicates the output location to deliver each sheet that meets this rule.

**OK** - saves any changes and closes this window.

**Cancel** - closes this window without saving any changes.



**Help:** displays help information for the driver

## Device - Stamping tab

The Stamping tab allows you to superimpose your own graphic and a small amount of text onto images. You may also put a rectangular border around the stamp. The defined stamp is connected to the settings profile, so you can have more than one digital stamp defined for your users. A digital stamp that has been saved with a profile will be exported when profiles are exported.

The stamping options are contained within the sub-tabs [Text](#), [Graphic](#), and [Layout](#).

### Preview

The preview area displays a sample image that is based on your current stamping settings. The preview pane shows the positioning, orientation, opacity, and content of your digital stamp. Positioning, orientation, and opacity are controlled in [Layout](#).

Selecting the **Preview** button will initiate a scan. The scanned image is used to display your digital stamp on a real image.



**Zoom In:** enlarges the current image display in the preview.



**Zoom Out:** reduces the current image display in the preview.



**Preview Quality:** selects the quality of the scanned image.

- **Normal:** displays acceptable image quality at a lower resolution.
- **High:** displays the most accurate representation of the actual image. The image that is displayed in the preview area is a good representation of what the final image will look like

#### NOTES:

- You may need to zoom to see a true representation of the image.
- The quality setting affects both this display and resolution of the final image.



**Automatic Preview Updates:** allows you to select how the displayed image is updated.

- **On:** the displayed image will automatically show the effects of your settings changes.
- **Off:** the displayed image will not update until another preview scan is performed.



**Units:** selects the unit of measurement, which can be **Inches**, **Centimeters**, or **Pixels**.

**NOTE:** Some icons described above are available only when a preview image is displayed.

**NOTE:** Refer to the [Device Settings window](#) for information about common buttons and options.



## Stamping - Graphic tab

**On** - enables a graphic part of the digital stamp.

### Toolbar buttons



**Add:** displays the operating system's File Open window so you can browse to a graphic to use. If you have already put a graphic into your message and want to replace it, select Add and browse to your replacement graphic.



**Delete:** removes the graphic from this stamp *and from all other digital stamps that use it*. To remove a graphic from just this stamp - *without* removing it from all other stamps - uncheck the **On** box on this tab.

**Graphic selection** - a scrolled list allows you to select the graphic for the digital stamp.

- The graphic will be displayed with the size it will use on the scanned image.
- If the graphic is too large to fit in the **Preview** display area, it will be shown cut off.
- The ratio of stamp resolution to scanned image resolution determines final graphic size on the scanned image. Higher image resolution (dpi) for the scanning profile means a smaller graphic on the image.
  - a 1 x 1 300-dpi digital stamp on a 300-dpi image will be 1 x 1
  - a 1 x 1 300-dpi digital stamp on a 200-dpi image will be 1.5 x 1.5
  - a 1 x 1 200-dpi digital stamp on a 300-dpi image will be 0.67 x 0.67

**Alignment** - whether to position the graphic to the left or right of the text within this stamp.


### Notes on digital stamp graphic file format

- The graphic file must be .png format, either RGB or RGBA. Bitonal and gray .png files are not supported. When scanning in grayscale or black and white, the scanner converts the .png file to grayscale or black and white for digital stamping
- The opacity (alpha channel) in an RGBA file is ignored. Use the **Opacity** setting on the [Stamping - Layout tab](#) to achieve the desired effect.
- The graphic file must be smaller than 360,000 color pixels.

**NOTE:** Refer to the [Device - Stamping](#) tab for information about common buttons and options.

## Stamping - Layout tab

The Layout tab allows you to specify where the digital stamp should appear and other details about its appearance. To preview the stamp you have created, use the **Preview** button and

enable automatic preview updates  to see the effect of your changes. See [Device - Stamping tab](#) for more explanation of **Preview**.

**First Page Only** - if checked, the digital stamp will appear on only the first page of your scan job.

**Side** - put the digital stamp on images from **Both sides**, the **Front**, or the **Back** of the scanned paper.

*NOTE:* Options may vary with your scan Setting Shortcut.

**Origin (x, y)** - define where to position the upper left corner of the stamp on the final rotated image.

**Orientation** - set the digital stamp at this angle.

### Border

- **On:** check, to put a rectangular line around the perimeter of your stamp.
- **Color:** use the **Select** button to choose the border color.
- **Thickness:** select how heavy a line to use for the border.

**Opacity** - 0% makes the digital stamp completely transparent; 100% makes it completely opaque (any image data behind the stamp will not be visible).

*NOTE:* Refer to the [Device - Stamping tab](#) for information about common buttons and options.

## Stamping - Text tab

**On** - enables a digital stamp that includes text.

### Message

The display area shows the format of any text message you have created. Use the following button to edit the message.

### Toolbar button



**Change:** allows you to change the digital stamp text message. The [Stamping - Text message](#) window will be displayed, with the text message available to edit.

### Font

- **Size** - point size for the text
- **Color** - color for the text; use the **Select** button to bring up a screen for choosing color.

*NOTE:* Refer to the [Device - Stamping tab](#) for information about common buttons and options.

## Stamping - Text Message window

In this screen you can create, change, or delete the digital stamp text message for this scanning profile. The text message of the digital stamp supports date, time, document count, and custom messages.

The maximum number of characters for each row of the text message is 40 (including spaces).

### Toolbar buttons



**Add:** displays a list of items you can add to your message. When you select an item, that item will appear at the end of the *Format* list.



**Change:** allows you to change the currently selected item in the *Format* list with one of the items from the list that is displayed.



**Delete:** allows you to remove the currently selected item from the *Format* list.

**NOTE:** As you build your message, only items that will fit in the 40-character limit will be available from the *Add* and *Change* lists.

**Items** - when an item is selected, any associated options will be displayed to the right of the *Format* list.

### Format

Define the text part of the digital stamp by choosing one or more elements. You can add the same element more than once, for instance if you want your text to have more than one **Space** in it. Up to 6 **Message** elements are allowed per text message; they may be repeated.

Select from these elements for your digital stamp:

- **Date:** choose a date format to be added and a separator (for example, YYYYMMDD with hyphen separator: 2017-04-28), or choose to enter a specific date.
- **Time:** choose a time format to be added; or choose to enter a specific time.
- **Counter:** this value is incremented sequentially for each sheet of paper scanned.
  - **Field width:** allows you to configure the width of the counter from **1 - 9**. However, if for example you only have 6 characters left in this line of the digital stamp, then the field width would be limited to 6.
  - **Leading zeroes:** allows you to configure the format of the counter when the width of the value is less than the field width. (The examples indicate a field width of 3 and the counter at 4.)

- **Display:** "004"
  - **Do Not Display:** "4"
  - **Display As Spaces:** " 4"
- **Message:** allows you to specify custom text to be included in the digital stamp text. You can have up to 6 unique messages. Each message cannot have more than 20 characters.
  - **Space:** adds a space.
  - **New line:** go to another line before continuing with the next element in the message.

#### **Up and Down** arrows

Use the arrows to reorder elements within this message (as shown in the **Example** field).

#### **Example**

Shows a sample of what the text message will look like. As you select items in the *Format* list, the corresponding portion within the example will be highlighted.

**OK** - saves your changes.

**Cancel** - closes the window without saving any changes.

## Device - Transport tab

The Transport tab allows you to set options for how your documents are managed by the scanner's transport area.

**Handling** - allows you to select how the scanner transports documents through the scanner. This affects how the documents are fed into the scanner, how fast they move through the scanner, and how they are placed in the output tray.

- **Normal:** no additional handling is performed. Best used when all documents are similar in size.
- **Improved Stacking:** aids in controlling how the documents are stacked/ordered in the output tray for mixed document sets. This option should work for the majority of mixed sets.
- **Best Stacking:** when your document set contains a great variability in size, this option provides the best control of how the documents are stacked/ordered within the output tray.
- **Fragile:** for documents that need extra care as they are transported through the scanner and placed in the output tray.
- **Thick:** for documents that are thicker than card stock (110 lb / 0.25 mm).
- **Thin:** for documents that are thinner than 20-lb bond paper (such as rice paper).

### Document Length

- **Longest** - select a value that indicates the length of the longest document in your document set.

#### NOTES:

- Changing this value will affect the maximums for the following settings: Image Size - Outline, Printer - Offset From Edge, Multifeed - Length Detection.
- Not all combinations of settings for *Scan as* and *Resolution* are supported at the larger lengths. To allow for greater flexibility with applications, the scanner will not generate an error until it sees a document whose length is not supported.
- The scanner's throughput may be reduced for large lengths.

**Intelligent Document Protection** - allows you to select how aggressively the scanner detects documents that enter the scanner incorrectly. This can occur when documents are not prepared properly for scanning (such as stapled or paper clipped documents).

- **(none)**
- **Minimum:** select this option if the scanner is stopping too frequently on documents that you do not want it to detect.  
*NOTE:* Documents may become more damaged before detection occurs.
- **Normal:** this is the recommended option as it provides a balance between minimizing document damage and stopping the scanner unnecessarily.

- **Maximum:** select this option to get the least amount of document damage.  
*NOTE:* This may cause the scanner to stop unnecessarily.

**Staple/Metal Protection** - will stop scanning when metal, the size of a #10 staple or larger, is detected as it enters the paper transport area.

**Action when paper jam occurs** - allows you to select what happens when the scanner detects a paper jam.

- **Stop Scanning:** scanning will stop and control will return to the scanning application (the job ends). Verify that the paper path has been cleared and restart the scan session from the scanning application.
- **Pause Scanning:** scanning will stop but the scanning application will wait for additional images (the feeder stops). Clear the paper path, then scanning may be resumed by pressing the **Start** button on the scanner. Scanning may be stopped by pressing the **Stop** button on the scanner or via the scanning application.

*NOTE:* Refer to the [Device Settings window](#) for information about common buttons and options.

## 6 Diagnostics

### Calibration window

When it becomes necessary to calibrate, select **Calibrate** on the [Diagnostics - General tab](#).

*NOTE:* Frequent calibration is not necessary or recommended. Only perform a calibration when instructed to do so by your support personnel.

**Type** - allows you to select which calibration to perform.

- **Magnification:** sets the amount of reduction/enlargement applied to images.
- **Magnification Test:** determines the amount of reduction/enlargement the scanner is applying to the images.

**OK** - initiates the calibration. If the scanner does not detect the target, you will be prompted to insert it. You will be notified upon successful calibration.

**Cancel** - closes the Calibration window without performing a calibration.



## Diagnostics - Debug tab

The Debug tab allows you to turn on options that allow support personnel to diagnose any issues you may encounter with using your scanner. It is suggested that you only make changes on this tab when instructed by your support personnel.

### NOTES:

- All the options on this tab apply to all Setting Shortcuts, not just the currently selected *Setting Shortcut*.
- For any changes on this tab to take effect, you must restart your application.

**Logging** - saves the communications between the scanner and the scanning application. The options are **Off**, **On**, **Flag** or **Custom**.

### Images

- **Received From Scanner:** saves the images received at the PC from the scanner.
- **Sent To Application:** saves the images received at the scanning application from the scanner.

**Simulation** - allows you use the TWAIN Driver/Datasource without using the actual scanner.

- **Model:** allows you to select the specific scanner model to simulate.
- **Flatbed:** allows you to select which flatbed accessory to simulate.
- **Flags:** if supported by your TWAIN Driver/Datasource, this will contain a list of accessories your simulated scanner has installed.

**NOTE:** Refer to the [Diagnostics window](#) for information about common buttons and options.

## Diagnostics - General tab

The General tab allows you to perform a scanner test and calibrate the scanner.

### Tests

- **Scanner:** similar to, but more extensive than, a power-on self test; selecting this will immediately put the device through a series of checks to determine that all the scanner hardware is working.
- **Count only:** counts the number of documents entering the scanner without actually sending the images to a scanning application. This test is performed during any scan session in which this option is turned on.  
*NOTE:* This test is automatically turned off when the scanning application disconnects from the scanner.
- **Printer:** tests the functionality of the Enhanced Printer (such as whether all ink jets are working). This test is performed during any scan session in which this option is turned on.  
*NOTE:* This test is automatically turned off when the scanning application disconnects from the scanner.

**Calibrate** - displays the [Calibration window](#).

*NOTE:* Frequent calibration is not necessary or recommended. Perform calibration only when instructed to do so by a support/service representative.

**Ship Scanner** - allows you to move the flatbed camera to the lock position for shipping.

*NOTE:* This option is only available when *Device* is set to **Flatbed** and the attached flatbed accessory has a lock switch.

**Magnification Correction** - allows you to customize the X and Y dimensions of the final image size.

*NOTE:* Perform magnification correction only when instructed to do so by a support/service representative.

*NOTE:* Refer to the [Diagnostics window](#) for information about common buttons and options.

## Diagnostics - Logs tab

The Logs tab allows you to view scanner information.

### Logs

- **General:** displays the scanner's version information, serial number, attached/installed accessories, meters, etc.
- **Operator:** displays the scanner's log. This log can only be cleared by your support personnel.
- **Meter:** displays the scanner's meter count.
- **License:** displays the scanner licensing parameters.

### Toolbar buttons



**Save As:** saves all the logs for viewing by your support personnel. When selected, a Save As window will be displayed.

- **Description:** enter a brief description of the problem/reason for saving the logs.
- **Folder:** the location to save the logs.
- **Browse:** displays the operating system's File Open window so you can find the folder that you want to use.
- **Include debug images:** includes any generated debug images with the logs. This is turned on by default and should only be turned off when recommended by your support personnel.
- **Save:** saves the logs into a file with the extension *.eklog*.



**Refresh:** refreshes the currently displayed log

**NOTE:** Refer to the [Diagnostics window](#) for information about common buttons and options

## Diagnostics window

From this window you can access the diagnostic functions of the scanner. The Diagnostics window includes the following tabs: [General](#), [Debug](#), and [Logs](#).

**Device** - allows you to select the device on which to perform diagnostics. The options are **Document Feeder** or **Flatbed**.

*NOTE:* This option is only available if you had the flatbed accessory attached when the scanning application connected to the scanner.

**Done** - returns you to the [Main Scanner window](#).

### Information icons



**About:** displays the scanner's version and copyright information



**Help:** displays help information for the driver

## 7 Procedures

### Changing Device Settings

1. Select a **Setting Shortcut** from the [main Scanner window](#) that closely describes your desired output.
2. Select **Device** to display the [Device Settings window](#).
3. Before making any adjustments, browse through the tabs on the [Device Settings window](#) to get familiar with options that are available.
4. For each option you want to use, make the appropriate selections you want the scanner to perform when scanning.
5. When finished, select **Done** to return to the main Scanner window and then select **Save** to save your selections to the shortcut.

## Changing Image settings

1. Select a **Setting Shortcut** from the main Scanner window that closely describes your desired output.
2. Select **Image** to display the Image Settings window.
3. Before making any adjustments, browse through the tabs on the Image Settings window to get familiar with options that are available.
4. For each option you want to use, make the appropriate selections you want the scanner to perform when scanning.
5. If you want to see the effect your options will have:
  - a. Place a representative document in the input tray elevator of the scanner.
  - b. Select **Preview** to perform a preview scan.

*NOTE:* If the images are not acceptable, you can either select a different *Setting Shortcut* or continue working with the current *Setting Shortcut* by reviewing each tab within the Image Settings window again. Repeat this step as needed.

6. When finished, select **Done** to return to the main Scanner window and then select **Save** to save your selections to the shortcut.

## Creating a new Setting Shortcut

1. From the main Scanner window, select a *Setting Shortcut* from the list. It is recommended that you select a shortcut that best describes the desired image output.
2. Select **Document**. The Document window will be displayed.
3. Determine if you want to capture an electronic image of the front of your document, back of your document, or both sides of your document and make the selection from the *Input document is field*.
4. Select **Image** on the main Scanner window. The General tab of the Image Settings window will be displayed.
5. Select the appropriate options on the General tab.  
*NOTE:* If necessary, review each setting on the other tabs and make any changes.
6. Place one representative document in the input tray elevator of the scanner.
7. Select **Preview** to review the resulting image.  
*NOTE:* If the images are not acceptable, you can either select a different predefined *Setting Shortcut* or make additional changes on the rest of the tabs on the Image Settings window.
8. Define the desired Device settings by selecting **Device** on the Image Settings window to display the Device Settings window.
9. Review each tab and select the appropriate options or actions you want the scanner to perform.
10. Select **Done** to return to the main Scanner window.
11. Select **Save As** to display the Save As window.
12. Enter a new shortcut name that is meaningful to you and select **Save**.

## Creating color/grayscale or black and white images based on the content of your documents

In this example, let's assume you want to configure a scan session that has a mix of color and black and white documents with information on both sides. In addition, you want the scanner to detect whether the page is color or not, and then output either a color or a black and white image based on that.

1. Select a **Setting Shortcut** from the [main Scanner window](#) that closely describes your desired output.
2. Select **Document** to display the [Document Settings window](#).
3. Select the **General** tab.
4. Select **Input document is: Two Sided**.
5. Select the **Images** tab.
6. Select **Images per side: One - based on document content**.

*NOTE:* The *Images to Configure* area will now be displayed on the Document - Images tab and will contain a color image item and a black and white image item. The Content Settings tab will also be displayed.

7. If you want a grayscale image instead of a color image, when enough color is detected in the document:
  - Make sure *Color (24-bit)* is selected.
  - Select **Change** to display a list of options.
  - Select **Grayscale**.
8. Go to the [Content Settings tab](#).
9. Select a **Sensitivity** option.
10. Select **Image** to go to the [Image Settings window](#).

*NOTE:* You will notice that the Side option now has two entries: **Both: Color (24-bit)** and **Both: Black and White (1-bit)**.
11. Select **Sides: Both: Color (24-bit)**.

*NOTE:* Make any other adjustments to the color image settings on the rest of the tabs on the Image Settings window.
12. Select **Sides: Both: Black and White (1-bit)**.

*NOTE:* Make any other adjustments to the black and white image settings on the rest of the tabs on the Image Settings window.



13. When finished, select **Done** to return to the main Scanner window and then select **Save** to save your selections to the shortcut.

## Creating different settings for each side of a document

In this example, let's assume you want to configure a two-sided document stream of business documents that have color on the front of the document, but the rear side is fine in black and white.

**NOTE:** This procedure is only valid for duplex scanners.

1. If you are not already on the Document Settings window:
  - Select a *Setting Shortcut* from the main Scanner window that closely describes your desired output.
  - Select **Document** to display the Document Settings window.
2. Select **Input document is: Two Sided**.
3. Select the **Images** tab.
4. Turn on the **Front and back sides have different imaging settings** option.
5. Select **Images per side: One**.
6. Select **Image** to display the Image Settings window.

**NOTE:** You will notice that the *Side* option now has two entries: **Front** and **Back**.
7. Select **Sides: Front**.
8. Select **Color (24-bit)** for the *Scan as option* on the General tab.

**NOTE:** Make any other adjustments to the front side settings on the rest of the tabs on the Image Settings window.
9. Select **Sides: Back**.
10. Select **Black and White (1-bit)** for the *Scan as option* on the General tab.

**NOTE:** Make any other adjustments to the back side settings on the rest of the tabs on the Image Settings window.
11. When finished, select **Done** to return to the main Scanner window and then select **Save** to save your selections to the shortcut.

**NOTE:** If you selected any option other than *Images per side: One* in step 5, two *Images to Configure* option groups would become available. You can then individually set up the images that will be produced for each side of the document.

## Creating multiple images for each side of a document

In this example, let's assume you want to configure a scan session that has documents with information on both sides and you want the scanner to produce both a color and a black and white image for each side of each document.

1. Select a **Setting Shortcut** from the [main Scanner window](#) that closely describes your desired output.
2. Select **Document** to display the [Document Settings window](#).
3. Select the **Images** tab.
4. Select **Images per side: Multiple**.  
*NOTE: The **Images to Configure** area will now be displayed on the Document - Images tab and will contain a color image item and a black and white image item.*
5. If you want a grayscale image instead of a color image, when enough color is detected in the document:
  - Make sure *Color (24-bit)* is selected.
  - Select **Change** to display a list of options.
  - Select **Grayscale**.
6. By default the scanner will produce the first image listed (black and white in this example) and deliver it to the scanning application. Then it will produce and deliver the second image listed (color/grayscale in this example). If you want the color/grayscale image to be produced and delivered first:
  - Make sure *Color (24-bit)* is selected.
  - Select **Move up** to place the color/grayscale image first in the list.
7. Select **Image** to go to the [Image Settings window](#).  
*NOTE: You will notice that the **Side** option now has two entries: **Both: Color (24-bit)** and **Both: Black and White (1-bit)**.*
8. Select **Sides: Both: Color (24-bit)**.  
*NOTE: Make any other adjustments to the color image settings on the rest of the tabs on the Image Settings window.*
9. Select **Sides: Both: Black and White (1-bit)**.  
*NOTE: Make any other adjustments to the black and white image settings on the rest of the tabs on the Image Settings window.*
10. When finished, select **Done** to return to the main Scanner window and then select **Save** to save your selections to the shortcut.

## 8 Troubleshooting

### Online Technical Support

For Online Technical Support, including software updates and documentation, visit <http://www.kodakalaris.com/go/scanners>.

## Problem Solving

In addition to the table below, refer to the Troubleshooting section of your scanner's User Guide.

Problem	Possible solution
The scanner will not scan/feed documents.	<p>Make sure that:</p> <ul style="list-style-type: none"><li>• the power cord is plugged in and the power is on.</li><li>• the scanner cover is completely closed.</li><li>• the proper power-up sequence was followed,</li><li>• the scanner's green light is on, and the software has enabled scanning.</li><li>• documents meet specifications for size, weight, and type, etc.</li><li>• documents are placed in the input tray elevator so that they are in contact with the feeder and the height of the stack of documents does not exceed the capacity of the scanner.</li><li>• you check the feeder items for signs of wear and replace the part(s) if necessary. Examples of feeder items (which are not applicable to all scanner models) are the feed module, separation module/rollers, and pre-separation pad.</li></ul> <p>You can also power the scanner down and power it up again.</p>
Image quality is poor or has decreased.	<p>Make sure that the scanner is clean, including the imaging guides.</p> <p>Refer to the Maintenance section in your scanner's User Guide.</p>
Document jams occur.	<p>Make sure that:</p> <ul style="list-style-type: none"><li>• the power cord is plugged in, and the power is on.</li><li>• the scanner cover is completely closed.</li><li>• the proper power-up sequence was followed,</li><li>• the scanner's green light is on, and the software has enabled scanning.</li><li>• documents meet specifications for size, weight, and type, etc.</li><li>• documents are placed in the input tray elevator so that they are in contact with the feeder and the height of the stack of documents does not exceed the capacity of the scanner.</li><li>• you check the feeder items for signs of wear and replace the part(s) if necessary. Examples of feeder items (which are not applicable to all scanner models) are the feed module, separation module/rollers, and pre-separation pad.</li></ul>
False document jams occur.	<p>Make sure that the paper transport area is clean.</p>

Problem	Possible solution
Documents are skewed during scanning.	<p>Make sure that:</p> <ul style="list-style-type: none"> <li>• the document side guides are adjusted to fit the documents being fed.</li> <li>• documents are being fed perpendicular to the feed module.</li> <li>• documents are being fed in the center of the input tray elevator.</li> <li>• all staples and paper clips have been removed from the documents.</li> <li>• the feeder items are clean and properly installed.</li> <li>• Examples of feeder items (which are not applicable to all scanner models) are the feed module, separation module/rollers, and pre-separation pad.</li> <li>• the scanner cover is firmly closed and latched.</li> </ul>
Documents are multifeeding.	<p>Make sure that:</p> <ul style="list-style-type: none"> <li>• the leading edges of all documents are centered in the input tray elevator so that each document comes in contact with the feeder.</li> <li>• the feeder items are clean and not worn. Examples of feeder items (which are not applicable to all scanner models) are the feed module, separation module/rollers, and pre-separation pad.</li> <li>• documents with an unusual texture or surface are fed manually.</li> </ul>
The scanner reported an unexpected error.	<p>This error should rarely be seen, but if it is, do the following:</p> <ul style="list-style-type: none"> <li>• power off the scanner.</li> <li>• restart your PC.</li> <li>• power on the scanner.</li> <li>• try again.</li> </ul> <p>If this problem persists, contact Service.</p>

## 9 Glossary

### Auto Color Detection

Based on the color content of a document, auto color detection makes it easier for you to capture color/grayscale only when required, reducing document prep time and storage requirements.

The scanner will be automatically triggered to change from the current image stream (black and white) to the alternative image stream (color/grayscale) based on the values set in *Color amount* and *Color threshold*. This is done on a document-by-document basis by scanning each document and determining the color content.

If you want to use auto color detection, select the **One - based on document content** option on the Document - Images tab.

### Black and White image

An electronic image consisting of pixels that are assigned values based upon black and white only. Also referred to as a *bi-tonal image* because each pixel is assigned a value of 0 or 1 using 1 bit. 0 and 1 are used to represent black and white.

### Color image

An electronic image consisting of pixels that are assigned values based upon a range of color shades. Also referred to as *24-bit color* because each pixel is assigned an 8-bit red value, an 8-bit green value, and an 8-bit blue value for a total of 24 bits. For each color (red, green, blue) a value of 0 is the least amount of color and a value of 255 is the most amount of color.

### Compression

Compression is used to reduce the number of bytes needed for scanned document images, thus saving storage space and/or transmission time. This is accomplished with special algorithms that use run-length encoding.

### Cropping

A technique used to capture a desired portion of an image. It allows the entire document to be scanned without all document data being stored. Use the **Automatically Detect and Straighten** or **Automatically Detect** options on the [Image Settings - Size tab](#) to apply cropping options.

### Dual stream output

A scanner configuration that produces two electronic images per document side. Valid combinations are black and white with color, and black and white with grayscale.

### Grayscale image

An electronic image consisting of pixels that are assigned values based upon a range of gray shades. Also referred to as *8-bit grayscale* because each pixel is assigned a value from 0 to 255 using 8 bits. A value of 0 is the darkest and a value of 255 is the lightest.

## Image processing

Refers to the features of the scanner that create the electronic image from the documents that are scanned. By default the scanner is set up to create the best electronic image. For example, it automatically determines the size of the document, straightens the image for any document that was not fed straight, and can even improve poor quality original documents.

## JPEG

*Joint Photographic Editor Group.* This group developed and lent their name to a file compression standard for color and grayscale images that is widely used by scanners, digital cameras, and software applications. On Microsoft Windows-based systems, a file with the extension .jpg has normally been compressed using this standard.

## Multifeed

A condition where more than one document is scanned at the same time. This can be caused by poor document preparation (staples), static, poor document separation, "sticky" notes, envelopes, lack of lead edge alignment, etc. Multifeed detection aids in scanning by notifying you when a multifeed occurs.

## Single output

A scanner configuration that produces one electronic image per document side. This electronic image can be black and white, color, or grayscale.

## TIFF

*Tagged Image File Format.* TIFF is a file format standard commonly used for black and white images. It is often used in conjunction with the CCITT Group IV compression standard to reduce image file size. Color/grayscale images can be saved in this format too, but they are usually found uncompressed and can therefore be quite large.





