

**PANTUM**

[WWW.PANTUM.COM](http://WWW.PANTUM.COM)

---

# Pantum DS-200 Series Scanner



It is recommended that you read this Guide carefully before using the printer

# Table of Contents

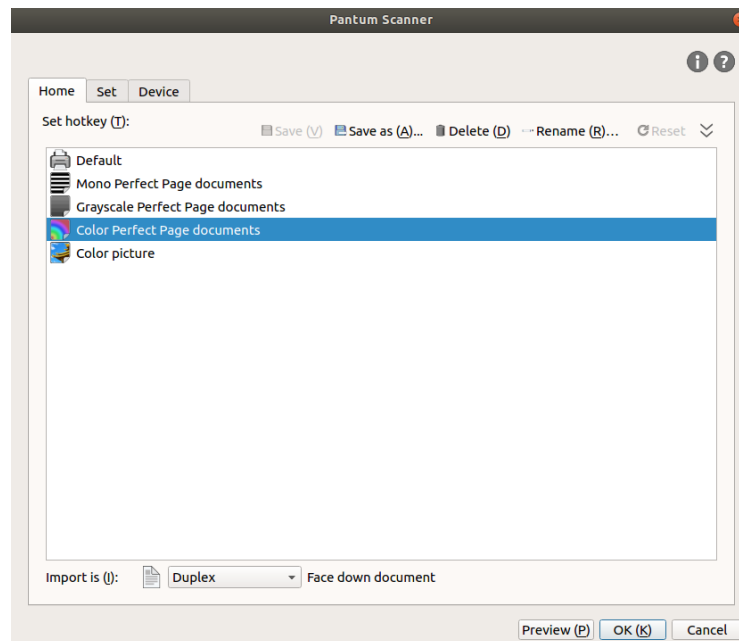
Overview .....	1
How do I begin? .....	1
Product overview .....	2
Capture system.....	2
Define your image output.....	2
Define your device settings .....	3
Windows and tabs.....	4
Main scanner window .....	4
"Rename" window .....	7
"Restore" window .....	7
"Image Settings" window .....	8
Image - "General" tab .....	10
Image - "Size" tab .....	12
Image - "Adjust" tab - Black and White .....	15
Image - "Adjust" tab - Color / Grayscale .....	17
Image - "Enhance" tab.....	19
Image - "Detect" tab .....	22
"Device Settings" window.....	24
Devices - "General" tab .....	25
Devices - "Transport" tab.....	27
Devices - "Stamp" tab .....	29
Devices - "Multifeed" tab .....	35
"Diagnostics" window .....	37
Diagnostics - "General" tab .....	38
Diagnostics - "Log" tab .....	39
"Calibration" window .....	40
Advanced image settings .....	41
Advanced - "General" tab.....	41
Advanced - "Image" tab .....	42
"Content Settings" tab .....	44
Operation Procedures.....	46
Create a new Settings Shortcut.....	46
Change Image Settings.....	46
Change Device Settings .....	47
Create multiple images for each side of the document .....	47

Make different settings for each side of the document .....	49
Troubleshooting .....	51
Troubleshooting .....	51
Vocabulary .....	53
Black and White Image .....	53
Color Image.....	53
Compression.....	53
Cropping .....	53
Dual-Stream Output.....	53
Grayscale Image .....	53
Image Processing.....	54
JPEG .....	54
Multifeed .....	54
Single Output .....	54
TIFF .....	54

# Overview

## How do I begin?

The goal is to make scanning as simple as possible. This is accomplished by selecting a “Settings Shortcut” from the [main scanner window](#) and then selecting “OK”.



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

## Product overview

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

When using the Driver / Datasource, the main scanner window will display a list of "Settings Shortcuts". Each "Settings Shortcut" is a group of specific image and device settings. The supplied "Settings Shortcuts" represent some common electronic image outputs used for a wide variety of input documents. If none of the "Settings Shortcuts" meet your scanning needs, you can Create Customized "Settings Shortcuts". For example, you could create a "Settings Shortcut" called "Invoices" and whenever you want to scan invoices, you simply select that "Settings Shortcut". For more details, please refer to Define Your Image Output and Define 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 Driver / Datasource. For more information about your scanning application, see the documentation provided with your application.
- **Driver / Datasource** - this help file provides details about using the 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 Driver / Datasource follows the standards of the "Working Group".
- **Scanner** - an image capture device. For more information about your scanner's operation and maintenance, please refer to the *User Guide* which is included with your scanner.

## Define 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, and select the number of copies and any other settings (e.g., two-sided, color, collate, staple, etc.). The result is the physical copies organized in the manner in which 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(Multiple Stream Output)。

Answering the following questions will help to select an existing "Settings Shortcut" or customize a "Settings Shortcut":

Are your documents one sided, two sided or both? (see the "Input document is" option on the [main scanner window](#))

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 [Image - "Size" tab](#))

Do you want to be able to output in color only when necessary? (see the "Images per side" option on the ["Advanced" 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 portrait or landscape? (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 [Images - "Enhance" tab](#))

## Define 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 to select an existing "Settings Shortcut" or customize a "Settings Shortcut":

Do you want to scan from a flatbed? (see the "Paper Source" option on the [Device - "General" tab](#))

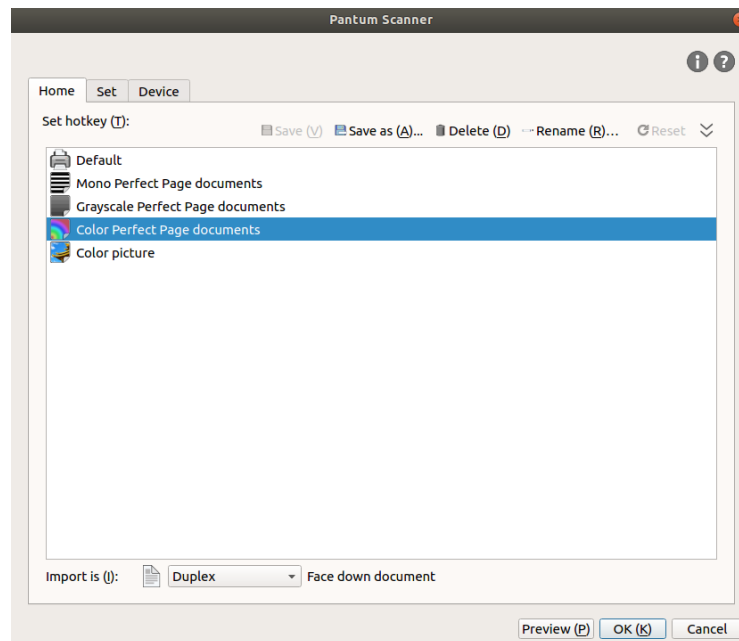
Do you want to adjust the power saver mode? (see the "Power Saver" option on the Device - "General" [tab](#))

Do you want to be notified if more than one document is scanned at the same time? (see the [Device - "Multifeed" tab](#))

# Windows and tabs

## Main scanner window

The main scanner window is the home window of the scanner's user interface. You can scan by simply selecting a "Settings Shortcut" and then selecting "OK".



**Settings Shortcuts** - provides the list of settings shortcuts. The supplied shortcuts are:

**Default: the scanner's default settings**

**Auto Color Perfect Page Document**

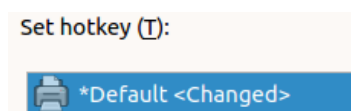
**Black and White Perfect Page Document**

**Color Perfect Page document**

**Color Photograph**

### Note:

If you have made changes to a "Settings Shortcut" and have not saved your changes, the "Settings Shortcut" will be appended with the text <changed>, and the name will be displayed in italics (e.g. \*Default <changed>).



**Save** - saves any changes made to the selected "Settings Shortcut".



**Save As** - displays the "Save As" window, allowing you to save your current settings as a new "Settings Shortcut".



**Delete** - deletes the selected "Settings Shortcut"; you will be prompted for confirmation.



**Rename** - displays the "Rename" window, allowing you to rename the "Settings Shortcut".



**Reset** - allows you to undo any unsaved changes that have been made to the selected *Setting Shortcut* (e.g., 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 *Settings Shortcuts* by replacing all current shortcuts. When the option is selected, you will be prompted for confirmation and the operating system's "File Open" window is displayed, allowing you to select the shortcut set you want to import.



**Export** - exports all the current "Settings Shortcuts" to a shortcut set. When the option is selected, the operating system's "File Save" window is displayed, allowing you to select the folder and file name for the shortcut set.

**Note:**

"Delete", "Rename", "Restore", "Import", and "Export" are not available if the selected "Settings Shortcuts" is being changed (e.g., the name is in italics and appended with "<changed>").

If you want to transfer "Settings 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 *Settings Shortcut* to an existing shortcut set:

- 1) select "**Import**" to load the shortcut set;
- 2) create the new "*Settings Shortcut*"; and
- 3) replace the shortcut set by selecting "**Export**" and save using the same name.

**Input document is** - allows you to select the sides of the document which have the information that you want an electronic image of.

**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.

**Note:**

Be sure to place your documents face down in the input tray.

The "Two Sided" and "One Sided - Back" options are only available for duplex scanner models.

**Settings** - displays the [Image Settings window](#), allowing you to make changes to the selected "*Settings Shortcut*". The Device settings and Diagnostics windows will also be accessed via this 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.

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



**Note:** If this button is *OK*, any unsaved changes will remain in effect for the current scan session.

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

### Information icons

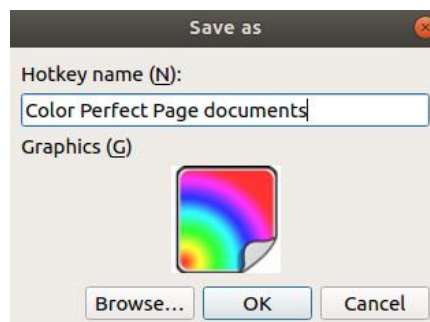


**About:** display the scanner's version and copyright information

**Help:** display help information for the window currently being displayed

### "Save As" window

When you have made changes to the *"Settings 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 *"Settings Shortcut"* list on the main scanner window.

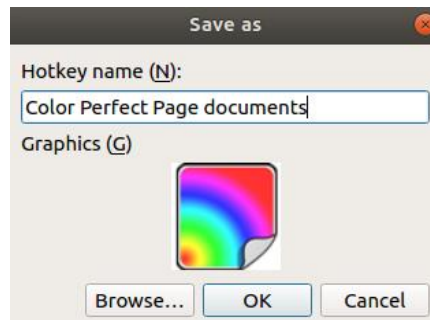
**Browse** - displays the operating system's "File Open" window so you can find a custom graphic that you want to use.

**Save** - saves the new *"Settings 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.

## "Rename" window

If you want to change the name of a *Settings Shortcut* 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 to associate with the shortcut when it is displayed in the "Settings Shortcut" list on the main scanner window.

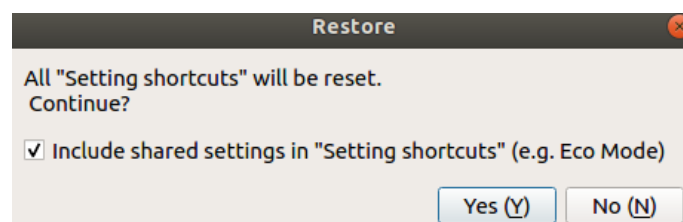
**Browse** - displays the operating system's "File Open" window so you can find a custom graphic that you want to use.

**OK** - saves the new "Settings 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 the *"Settings Shortcuts"* supplied with your scanner to their original settings, select **"Restore"** on the [main scanner window](#).



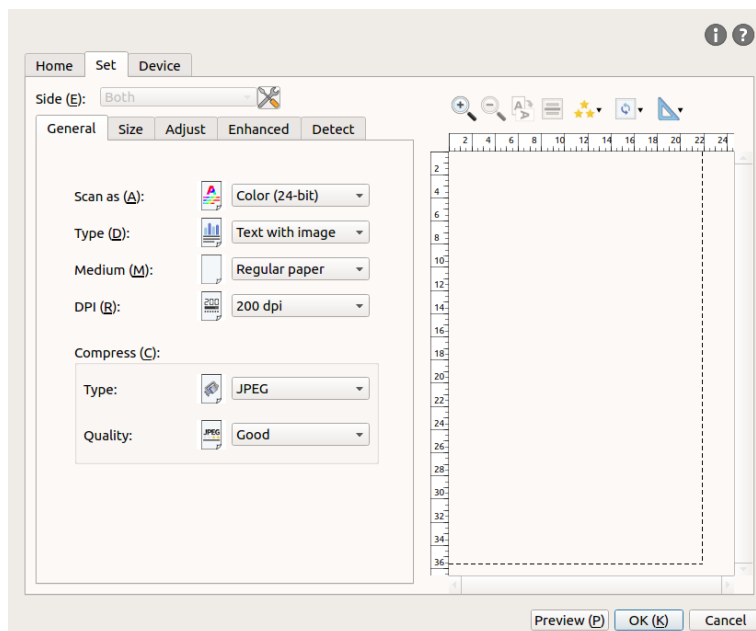
**Include settings shared across Setting Shortcuts** - when selected, the original settings for options shared across *"Settings Shortcuts"* will be also restored. Options like **"Power Saver"** and **"Document Feeder"** are included.

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

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

## "Image Settings" window

From this window you can define image processing options by using the available tabs. The values used in the "Image Settings" are saved in the selected "Settings 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 the side and image to be configured (e.g., Front, Back, Both: Color (24-bit), etc.). All image settings will be applied to the selected image.

### Note:

This option is only available when advanced settings have been selected on the Advanced tab. The "Both" and "Back" options are only available for duplex scanner models.



**Advanced Image Settings:** displays the Advanced tab

## Toolbar buttons



**Zoom In:** enlarges the image that is currently being displayed in the preview area.



**Zoom Out:** reduces the image that is currently being displayed in the preview area.



**Rotate Outline:** rotates the outline 90 degrees.

**Note:** This option is only available if the rotated outline will fit in with the scanner's maximum width.



**Center Outline:** adjusts the X origin of the outline so that the outline is centered within the scanner's maximum width.



**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 displayed in the preview area is a good representation of what the final image will look like.

**Note:** Depending on your document content, you may need to zoom in to see a true representation of the image.



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

On: the displayed image will automatically show the effects of changes to your settings, in most cases, without having to rescan the document. If a rescanning is necessary, you will be prompted to reinsert the document.

Off: the displayed image will not update until another "Preview" scan is performed.



**Units:** selects the unit of measurement for the scanner; this includes the preview area and any size-related options. The "Units" options are: "**Inches**", "**Centimeters**" and "**Pixels**".

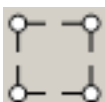
## Preview area

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.

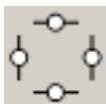
**Outline:** if you select "**Document: Manually Select**" or "**Image: Part of a Document**" (on the "Size" tab), the preview area will also show the current "Outline" selections. If the outline is not aligned with your preview image, you may use the mouse to adjust the size and location of the outline. 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.



**Home** - return to the [main scanner window](#).

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

**Preview** - initiates a scan and places the image in the preview area. The image displayed is a sample based on your current shortcut settings.

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

**Note:** If this button is **OK**, any unsaved changes will remain in effect for the current scan session.

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

## Information icons

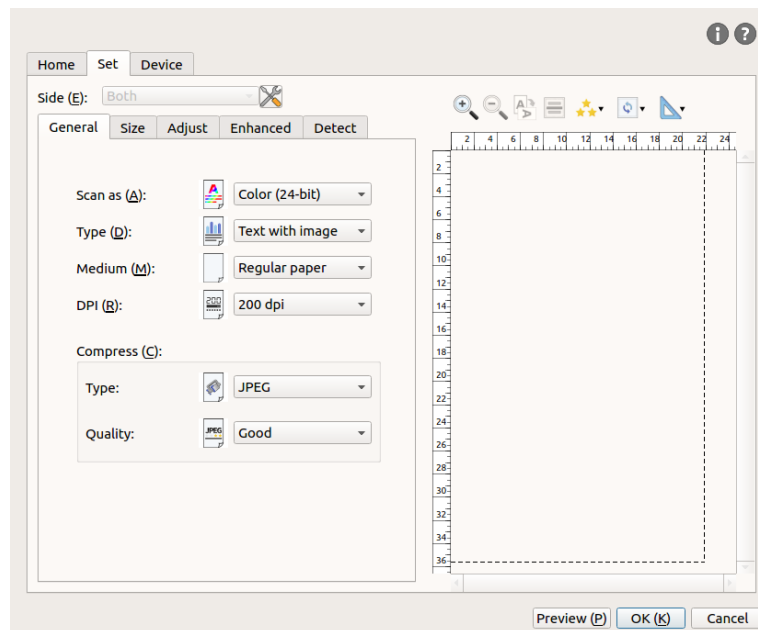


**About:** display the scanner's version and copyright information

**Help:** display help information for the window currently being displayed

## Image - "General" tab

The "General" tab contains commonly used image options. In most cases, you will not have to change the 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.

**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.

**Photos:** the documents contain mostly photographs.

**Media type** - allows you to select the type of paper you are scanning, based on the texture/weight. 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. Scanning at a greater resolution produces an image of better quality, and also increases scanning time and image size. Options are: **75, 100, 150, 200, 240, 250, 260, 300, 400, 500, 600** and **1200 dpi**.

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

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

**Type:** the scanner will produce a color version of your document.

**(none):** no compression, which may produce an image of large size.

**Group 4:** uses the CCITT standard for image compression, usually used in conjunction with TIFF files.

**Note:** This option is only available for "*Scan as: Black and White (1-bit)*".

**JPEG:** compresses images using JPEG techniques.

**Note:** This option is not 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 an acceptable image quality.

**Better:** some compression, which produces a decent image quality.

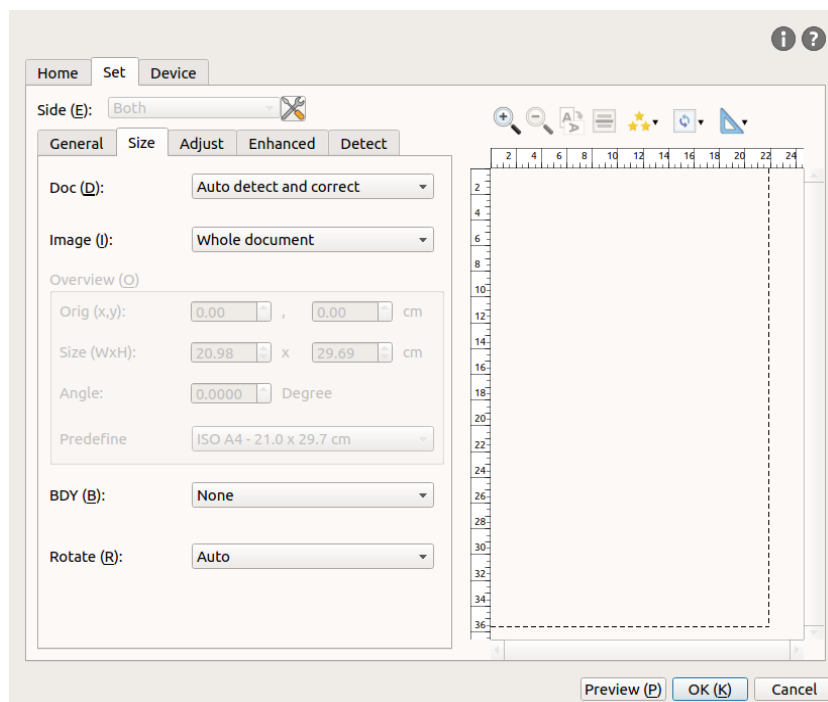
**Best:** minimal compression, which produces very good image quality.

**Superior:** the least amount of compression, which produces the largest image size.

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

For information on common buttons and options, please refer to ["Image Settings" window](#).

## Image - "Size" tab



**Document** - allows you to select how the scanner will detect your document as it is being fed through the scanner.

**Automatically Detect and Straighten:** when selected, the scanner will automatically find each document (regardless of size) and will straighten any document that may have been fed crookedly.

**Automatically Detect::** the scanner will automatically find each document (regardless of size). If a document is fed crookedly, 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 will still be 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 recommended that you only use this option for scanning jobs that contain same-sized documents.

**Image** - allows you to select the 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**", the entire document will be returned.

If you select "**Document: Photograph**", the entire document will be used to locate the photograph.

**Part of the document:**

If you select "Document: Automatically Detect and Straighten", the portion of the document which you specified with the *Outline* options will be returned.

If you select "Document: Photograph", only the portion of the document which you specified with the "Outline" options will be used to locate the photograph.

**Summary-** allows you to select the location and size for creating your electronic image. The outline will be displayed in the preview area.

**Origin (x, y):**

If you select "Document: Automatically Detect and Straighten" or "Document: Photograph", (x) is the distance to the left edge of the scanner and (y) is the distance to the top edge of the scanner.

If you select "Document: Manually Select", (x) is the distance to the left edge of the scanner's paper path and (y) is the distance to 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 document area used to locate the photograph.

**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 the one you selected. Custom will be displayed when the outline size does not match any options 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.

**(N/A)**

**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:** removes 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, when a document is not a perfect rectangle and/or was fed crookedly.



**Note:**

Although 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.

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.

**(N/A)**

**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.

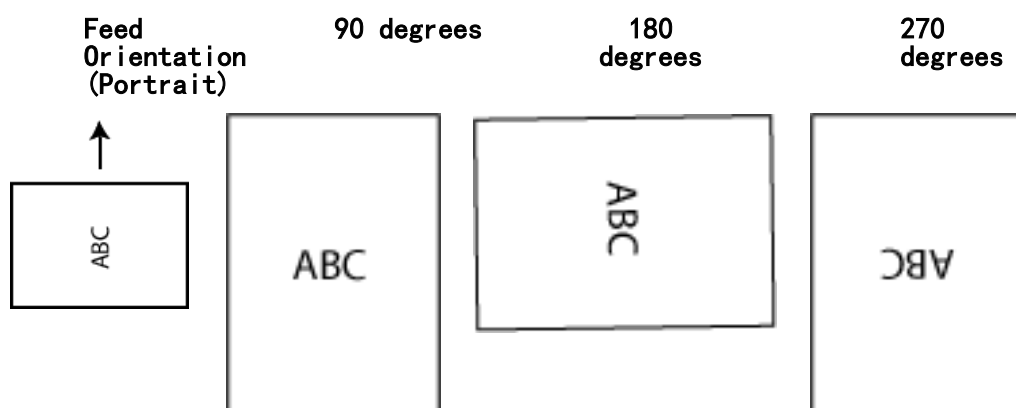
**Automatic - default 90:** the scanner will analyze the content of each document to determine how it was fed and will rotate the image to the proper orientation. If the scanner cannot determine how the document was fed, it will rotate the image by 90 degrees.

**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 by 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 by 270 degrees.

**90, 180, 270 degrees:** the amount of rotation.

The following examples show how these settings affect a document that was fed in a landscape manner:

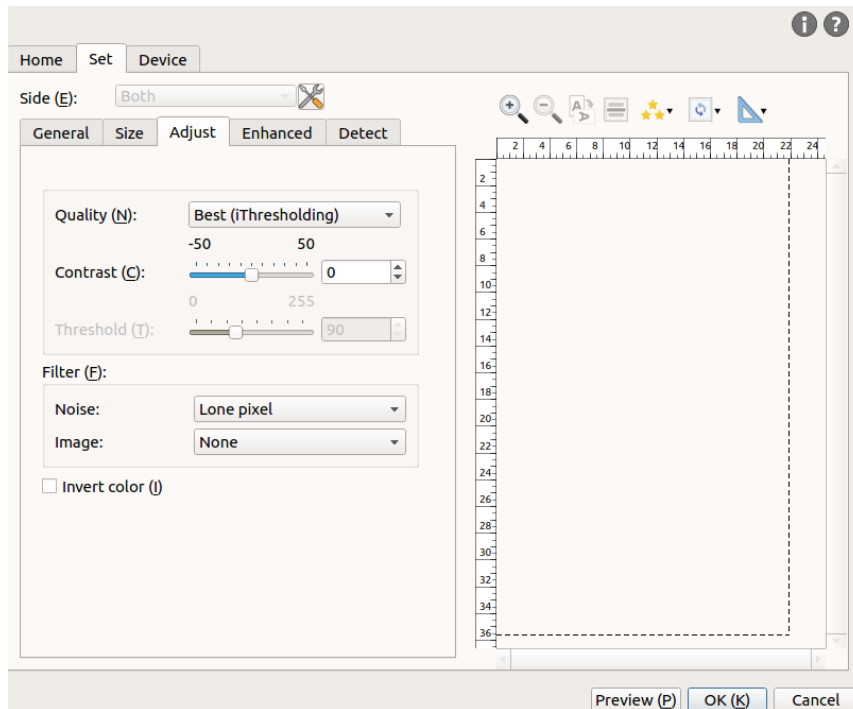


**Note:** This option is not applied to the preview image.

For information on common buttons and options, please refer to "[Image Settings](#)" window.

## Image - "Adjust" tab - Black and White

The availability of the options on the "Adjust" tab depends on the "Scan as" selection on the [General tab](#). The following options are only available when "Black and White" is selected in the "Scan as" option.



**Conversion quality** - these settings affect the way the scanner analyzes a grayscale version of the document which will be used to generate the black and white electronic image.

**Best** (iThresholding - Intelligent Threshold Processing): the scanner analyzes each document to determine the optimal settings to produce images of the highest quality. This option allows the scanning of mixed documents with varying quality (i.e., blurred text, shaded backgrounds, color backgrounds), and allows you to use consistent document settings when scanning such mixed documents.

**Normal** (ATP - Adaptive Threshold Processing): allows you to determine the optimal settings to produce the desired image quality. This option works best when the consistent document settings are used for scanning. You may also select this option if you have difficulty in scanning your documents as 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 sharper or softer. Decreasing this setting will make the image softer and reduce noise in the image. Increasing this setting will make the image clearer and the light information more visible. The options range from **-50** to **50**. The default is 0.

**Note:** This option is only available for "Conversion quality: Best" 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 greater in brightness, and can be used to subdue background noise. Increasing this setting will make the image darker and can be used to help pick up light information. The options range from **0** to **255**. The default is 90.

**Note:** This option is only available for "Conversion quality: Normal" and "Conversion quality: Draft".

## Filters

### Noise

(N/A)

**Lone Pixel:** reduces random noise by converting a single black pixel to white when it is completely surrounded by white pixels or by converting a single white pixel to black when it is completely surrounded by black pixels.

**Majority Rule:** sets each pixel based on its surrounding pixels. The pixel will become white if the majority of the surrounding pixels are white and vice versa.

### Image

(N/A)

**Halftone Removal:** enhances dot matrix text and images made with halftone screens (e.g., newspaper photographs).

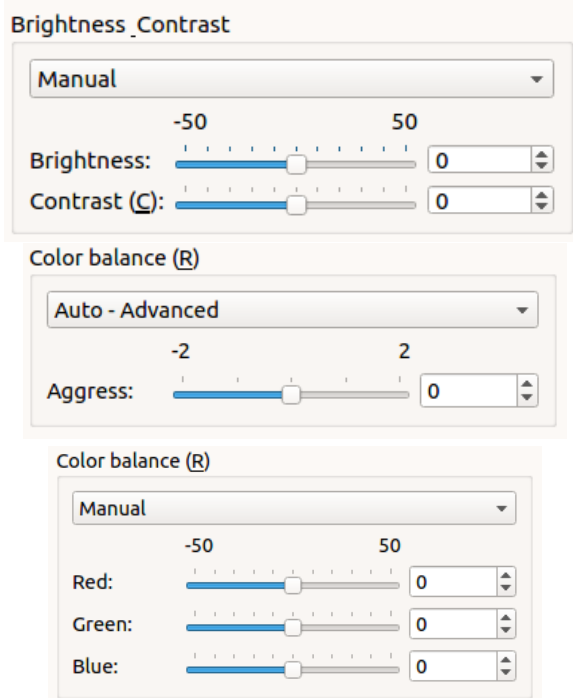
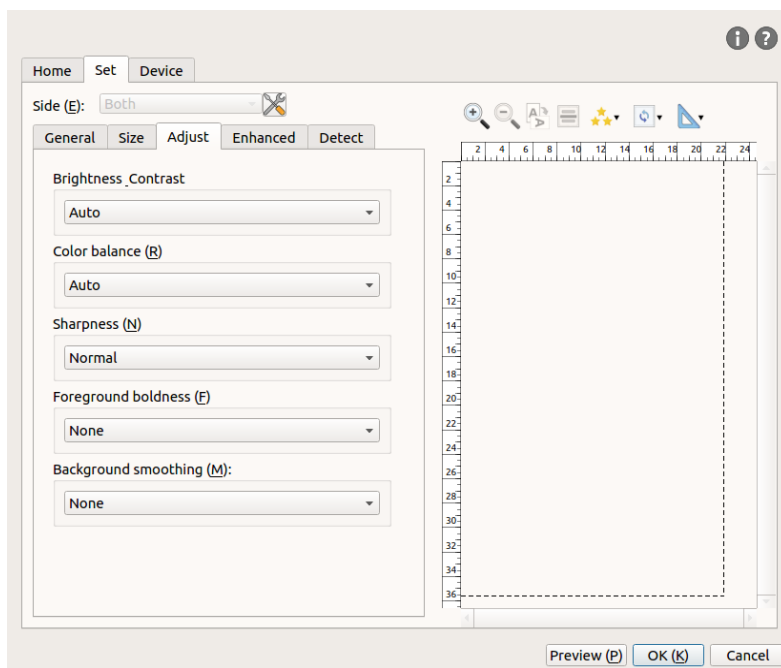
**Invert Colors** - allows you to select the way the black pixels will be stored in the image. By default, the black pixels are stored as black and the white pixels are stored as white. Enable this option if you want to have the black pixels stored as white and the white pixels stored as black.

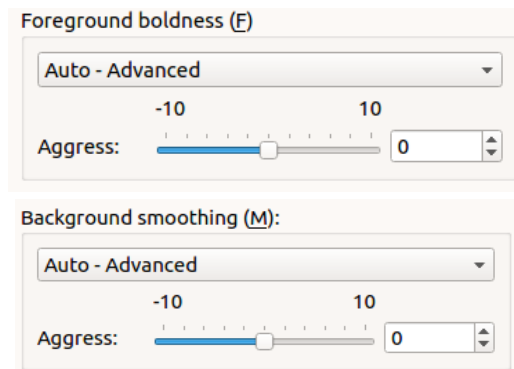
**Note:** For information on common buttons and options, please refer to ["Image Settings" window](#).

## Image - "Adjust" tab - Color / Grayscale

The availability of the options on the "Adjust" tab depends on the "Scan as" selection on the [General tab](#). The following options are only available when "Color" or "Grayscale" is selected in the "Scan as" option.

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





## Brightness and Contrast

(N/A)

**Automatic:** automatically adjusts each image.

**Manual:** enables you to set 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.

**Contrast** - makes the images sharper or softer. The values range from -50 to 50.

## Color Balance

(N/A)

**Automatic:** adjusts the white background of each document to pure white. This option compensates for the variations among the paper of different weights and brands. 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:** enables you to set 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.

(N/A)

**Normal**

**High**

**Exaggerated**

**Foreground Boldness** - for documents or forms where you want the foreground (e.g. text, lines, etc.) to be more prominent.

(N/A)

**Automatic:** 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 will improve image quality and may reduce file size.

(N/A)

**Automatic**: smooths up to three background colors.

**Automatic - Advanced**: for advanced users who want to further adjust the "**Automatic**" option

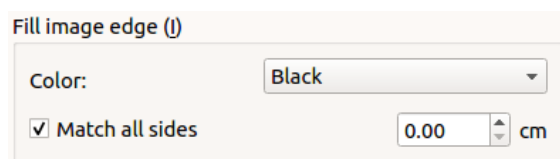
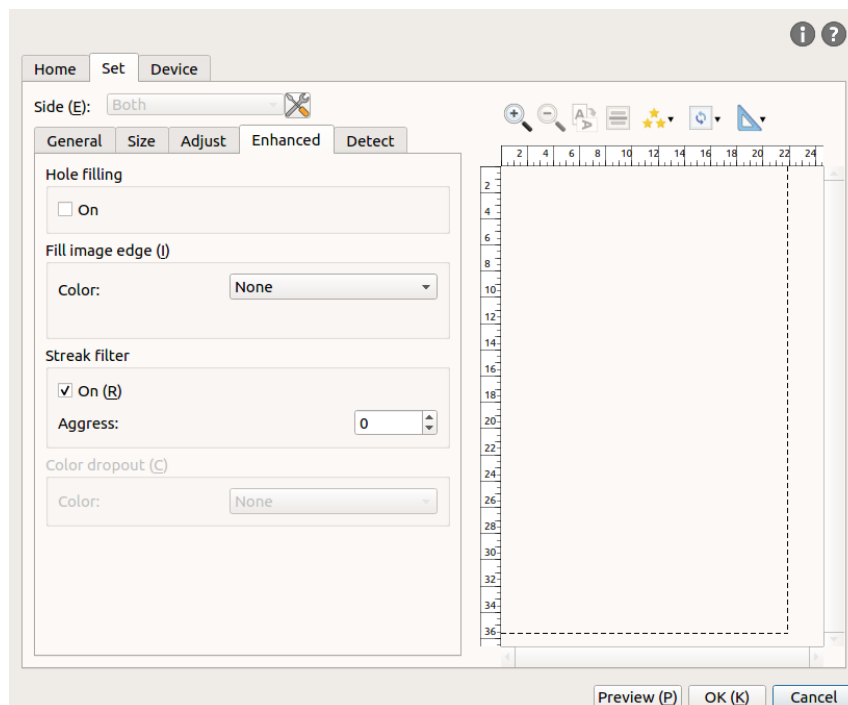
**Aggressiveness** - allows you to adjust the extent at which the background(s) is/are determined. The values range from **-10** to **10**.

**Note**: For information on common buttons and options, please refer to ["Image Settings" window](#).

## Image - "Enhance" tab

The availability of the options on the "Enhance" tab depends 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 enabled. If all settings do not fit on the screen, a scroll bar will appear to give you access to all settings.



**Fill image edge (I)**

Color: Black

☐ Match all sides

Top: 0.00 cm

L/R: 0.00 0.00

Bottom: 0.00

**Streak filter**

☒ On (R)

Aggress: 0

**Color dropout (C)**

Color: Predominant

Aggress: 0

**Hole Fill** - fill in the holes that are around the edges of your document. The types of holes to be filled include: round, rectangular, and irregularly shaped holes (e.g., those on double-punched documents or on documents having a slight tear that could have occurred when the documents were removed from a binder).

**On:** enables the Hole Fill function.

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

## Color

(N/A)

**Automatic:** the scanner will automatically fill the edges of the image using the surrounding color.

**Note:** If images show any unwanted border, use "Automatic" to remove it.

**Automatic - includes tears:** in addition to filling the edges, Scan Station will also fill in tears along the edge of document.

**White**

**Black**

**All sides match:** when enabled, all sides will be filled in with an equal amount.

**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 if the "All sides match" option is enabled.

**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 will not be available if the "**All sides match**" option is enabled.

**Bottom:** determines how much of the top edge will be filled in.

**Note:** This option is not available if the "**All sides match**" option is enabled.

When enabling the "[Image Edge Fill](#)" option, be careful not to enter a value that is too large, as it may fill up the image data you want to keep.

This option is not applied to the preview image.

**Streak Filter** - allows you to configure the scanner to filter vertical streaks from your images.

Streaks are lines which may appear on an image and are not part of the original document. Streaks may be caused by contaminants on your documents (e.g., dirt, dust, or frayed edges) or by the failure to follow the recommended cleaning process for your scanner.

**On:** enables the Streak Filter function.

**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 you scan photographs, select "Photograph" as the document type on the ["Image - General" tab](#) to get better photographic images than you would from the choice of a different document type.

**Color Dropout** - used to eliminate the background of a form so that only the entered data is included in the electronic image (i.e., remove the lines and boxes of a form).

**Color Dropout is available in Black and White or Grayscale mode**

(N/A)

**Multiple:** drops out colors other than dark shades (e.g., black or dark blue ink)

**Predominant:** drops out the predominant color

**Red**

**Green**

**Blue**

**Orange**

**Orange and Red**

**Aggressiveness:** allows you to adjust the extent at which the colors are dropped out. The values range from **-10** to **10**. The default is 0.

**Note:**

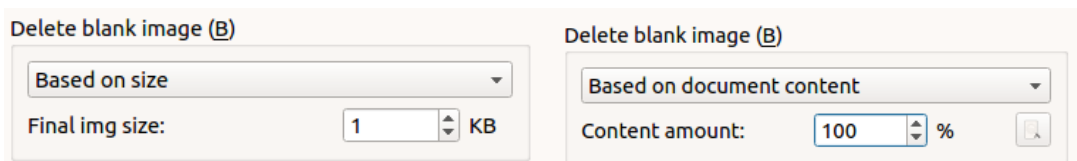
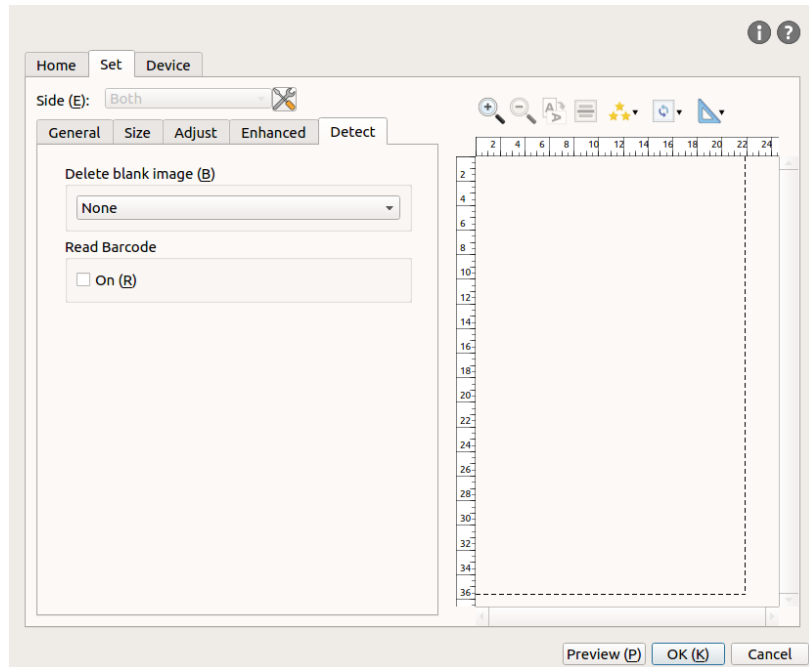
This option is only available when "*Color*" is set to "**Multiple**" or "**Predominant**".

For information on common buttons and options, please refer to ["Image Settings" window](#).



## Image - "Detect" tab

**Note:** Some options have additional settings. Those settings will only be visible when the option is enabled. If all settings do not fit on the screen, a scroll bar will appear to give you access to all 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 contents that the scanner will consider to be blank. Any image that has more contents than this value will be considered non-blank and will be given to the scanning application. The values range from **0%** to **100%**.



: *Content amount* will be filled in with the amount of contents in the preview image. If you have a representative blank document (e.g. a blank sheet of paper with letterhead), this can be used to help determine the setting for *Content amount* (i.e. perform a preview scan and adjust *Content amount* as appropriate by clicking this button).

**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 (i.e. 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 of a smaller size 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:** enables the function of barcode reading.

**Type:** selects one or more barcode types you want the scanner to search for.

**Interleaved 2 of 5**

**Code 3 of 9**

**Codabar**

**Code 128**

**EAN-13**

**EAN-8**

**UPC-A**

**UPC-E**

**PDF417**

**QR Code**

**Quantity:** selects the number of barcodes the scanner will search for.

**Orientation:** selects the orientation of the barcode to be searched.

**Horizontal**

**Vertical**

**Both**

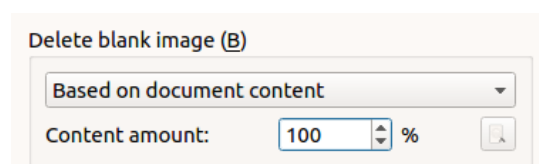
**Note:** This is relative to the final image (i.e. after any cropping and rotation has been performed).

**Search Area:** selects the area of the image to search.

**Entire document**

**Part of the document**

- **Origin (x, y):** (x) is the distance to the left edge of the image and (y) is the distance to the top edge of the image.



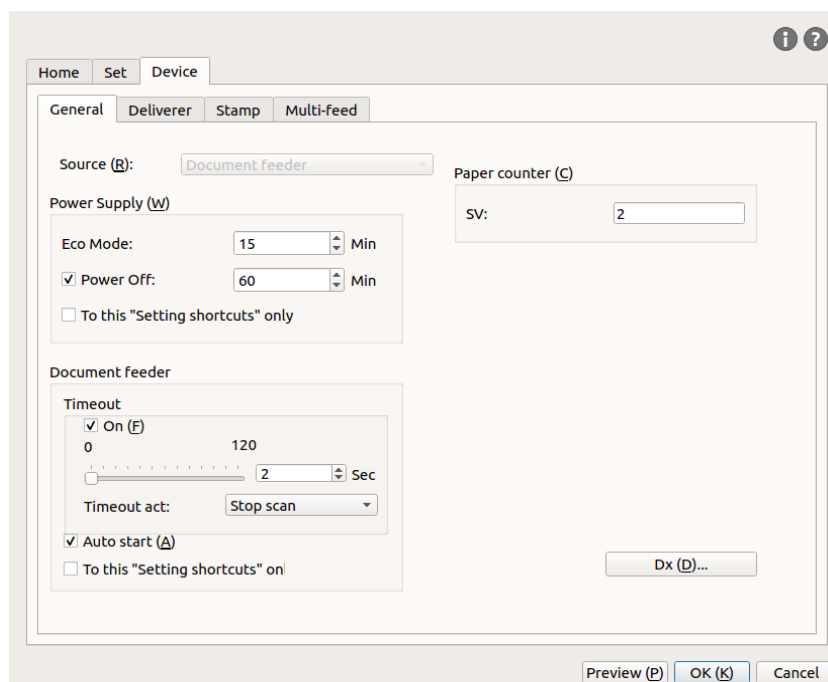
- **Size (W × H):** the width and height of the area to search.

**Note:** These are relative to the final image (i.e. after any cropping and rotation has been performed).

For information on common buttons and options, please refer to ["Image Settings" window](#).

## "Device Settings" window

From this window you can set all scanner-specific options, as well as conduct diagnostics, by using the available tabs. The values used in "Device Settings" are saved in the selected "Settings *Shortcut*". The "Device Settings" window includes the following tabs: General, Transport, Stamp, and Multifeed.



**Home** - returns you to the [main scanner window](#).

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

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

**Note:** If this button is OK, any unsaved changes will remain in effect for the current scan session.

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

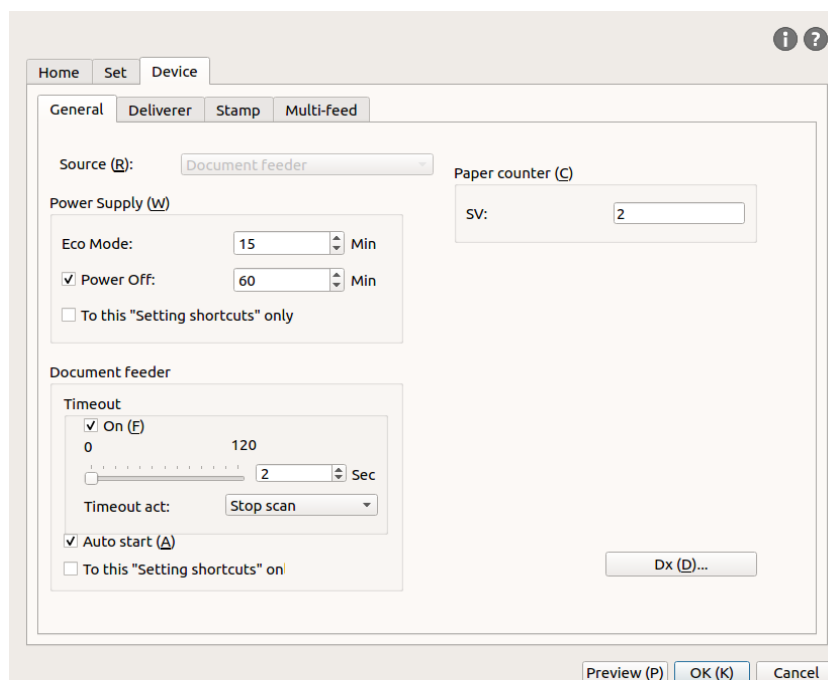
### Information icons

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

**Help:** display help information for the window currently being displayed

## Devices - "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.

**Document Feeder:** scanner will only scan documents from the input tray.

**Flatbed:** scanner will scan from the flatbed.

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

### Power

**Power Saver:** allows you to set the amount of time (in minutes) the scanner has to be inactive before going into power saver mode.

**Power Off:** allows you to set the amount of time (in minutes) the scanner has to be in power saver mode before it automatically turns off. This option can also be turned off.

**Note:** The "Power" settings are shared among all the "Settings Shortcuts". Any changes will affect other shortcuts unless you check the option "Only save to this Settings Shortcut".

## 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.

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

**Stop Scanning:** - scanning will be stopped and control will return to the scanning application (i.e. ending the operation).

**Pause Scanning:** scanning will be stopped but the scanning application will wait for additional images (i.e. stopping the feeder). 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.

**Pause Scanning - wait for paper:** scanning will be stopped but the scanning application will wait for additional images (i.e. stopping the feeder). Scanning may be resumed by placing documents into the input tray. Scanning may be stopped by pressing the "Stop" button on the scanner or via the scanning application.

**Automatically start scanning** - when selected, the scanner will wait up to 10 seconds for documents to be placed in the input tray before the start of scanning. In addition, once the input tray has been emptied, the scanner will automatically resume scanning when additional paper is placed in the input tray. The scanner will wait the amount of time specified by the document feeder timeout.

**Note:** The "*Document Feeder*" settings are shared among all "*Settings Shortcuts*". Any changes will affect other shortcuts unless you check the option "Only save to this Settings Shortcut".

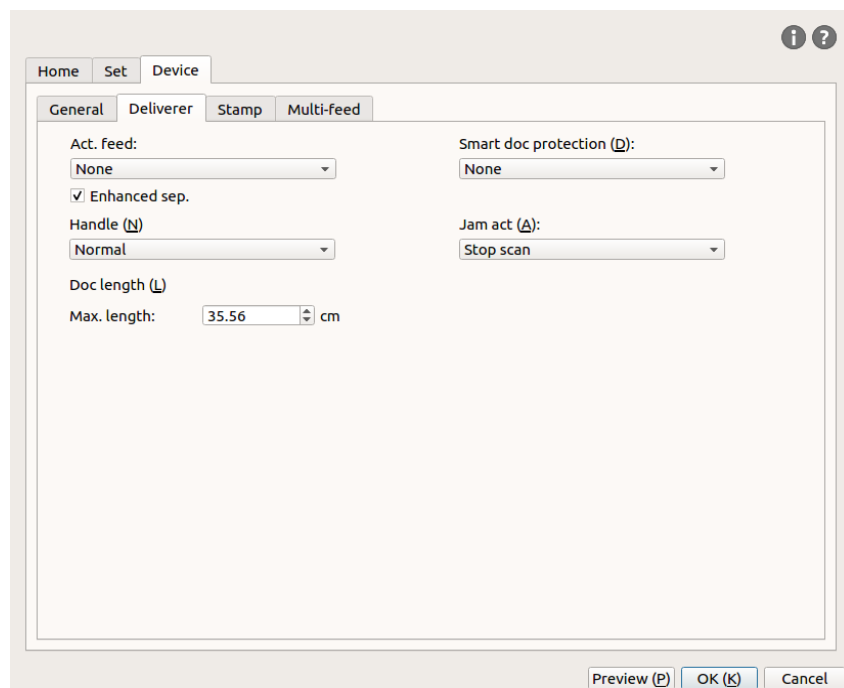
**Sheet Counter** - enters the number to be assigned to the next physical sheet of paper entering the scanner. This is incremented sequentially by the scanner and is returned in the image header. If the sheet counter reaches its maximum value (999,999,999), the sheet counter value for the next sheet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

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

**Note:** For information on common buttons and options, please refer to ["Device Settings" window](#).

## Devices - "Transport" tab

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



**Active Feeding** - may be useful to help straighten paper before feeding, especially fairly smooth paper of mixed sizes. Paper should be at least 4-5 inches (12 cm) wide and centered in the input tray. Stack of pages should be no taller than 1/8 inch (3 mm), e.g. 30 pages of 20 pound paper.

**None:** default: recommended for lightweight or delicate paper (13 lb/37.7 g or lighter), and paper that has been manually straightened before being placed in the input tray.

**Gentle:** light jogging of the pages in the input tray, before feeding begins. It may be useful for 13 pound paper or heavier.

**Normal:** jogging of the pages in the input tray, before feeding begins. It may be useful for 13 pound paper or heavier.

**Enhanced Sheet Separation**- helps avoid multifeeding at start of scanning. If you are feeding hard cards or paper that separates easily, enhanced sheet separation may not be helpful.

**Enhanced Sheet Separation:** slows feeding of the initial page in the input tray, to avoid multifeeding.

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

**Normal:** Not execute additional handling This option works best when all documents are similar in size.

**Improved Stacking:** help control the stacking/sorting method of documents in the output tray when a mixed document set is scanned. It can be used for most of the mixed document sets.

**Optimal Stacking:** if your document set contains a great variability in size, this option will enable the best control of paper stacking/ordering within the output tray

### Document length

**Maximum** - select to indicate the maximum document length in the document set.

**Note:**

Changing this value will affect the maximum value of the following settings: Image size - Outline; Multifeed - Length detection.

Not all combinations of "Scan as" and "Resolution" settings are supported when longer lengths are scanned. To allow for greater flexibility, the scanner will not generate an error message until it finds a document whose length is not supported.

Scanner throughput may be reduced in the event of larger lengths.

**Intelligent document protection** - you may choose the way how aggressively the scanner detects documents that erroneously enter the scanner. This can occur when documents are not properly prepared for scanning (for example: documents that are stapled or jammed together).

**(N/A)**

**Minimum:** select this option if the scanner stops too frequently on documents that you do not want it to detect.

**Note:** documents may become more vulnerable before detection.

**Normal:** this is the recommended option because it offers a balance between minimized document damage and unnecessary scanner shutdown.

**Maximum:** this option may minimize document damage.

**Note:** this will lead to unnecessary scanner shutdown.

**Countermeasures for paper jam** - your action to be taken when the scanner detects a jam.

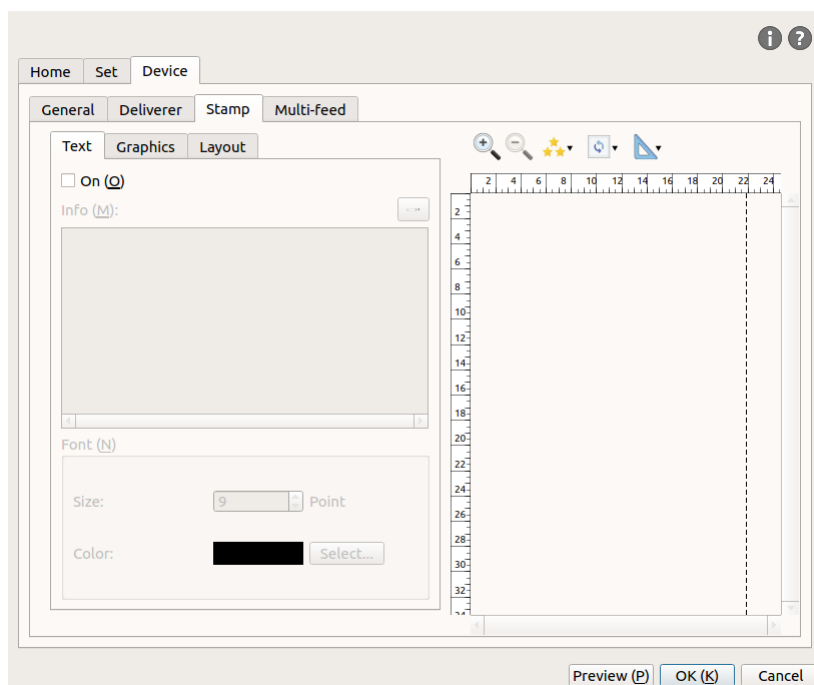
**Stop scanning** - scanning will stop and control will return to the scanning application (i.e. job termination). Inspection will be made to ensure the paper path is cleared, and then the scan session will restart from the scanning application.

**Pause Scanning:** scanning will stop but the scanning application will wait for additional images (i.e. stopping the feeder). Scanning may be resumed by clearing the paper path and 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:** For information on common buttons and options, please refer to ["Device Settings" window](#).

## Devices - “Stamp” tab

The “Stamp” tab enables you to overlay your graphics and a small amount of text on the image. You can also add a rectangular outline to the stamp. The defined stamps are linked to the settings profile, enabling you to define multiple digital stamps for the user. When the profile is exported, the digital stamps saved with the profile will also be exported.



Stamp options are contained within sub-tabs: Text, Graphics and Layout.

### Preview

The preview area displays a sample image that is based on your current stamp settings. The preview pane shows the position, orientation, opacity, and content of your digital stamp. Position, orientation and opacity are all controlled in Layout.

Pressing the “Preview” button will initiate the scan. The scanned image is used to display your digital stamp on the actual image.



**Zoom In:** enlarges the image that is currently being displayed in the preview area.



**Zoom Out:** reduces the image that is currently being displayed in the preview area.



**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 displayed in the preview area is a good representation of what the final image will look like.



**Note:** you may need to zoom out to see a true representation of the image. The quality setting affects the display and resolution of the final image.



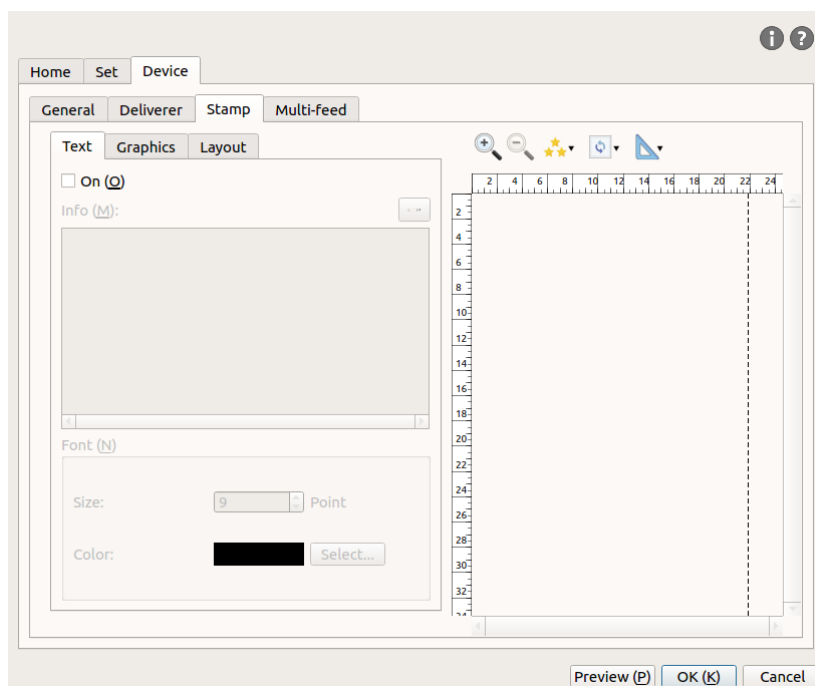
**Automatic Preview Update:** allows you to select how the displayed image is updated.  
**On:** the displayed image will automatically show the effects of changes to your settings.  
**Off:** the displayed image will not update until another “Preview” scan is performed.



**Units:** measurement units include “Inches”, “Centimeters”, and “Pixels”.

**Note:** some of the above icons are only available when a preview image is displayed.  
For information on common buttons and options, please refer to ["Device Settings" window](#).

## Stamps - “Text” tab



**On** - Enable digital stamps containing texts.

## Information

This display area shows the format of any text messages you create. This Toolbar button is used to edit information:



**Change:** change the digital stamp text message. The “Stamp - Text message” window will be displayed with editable text message.

## Font

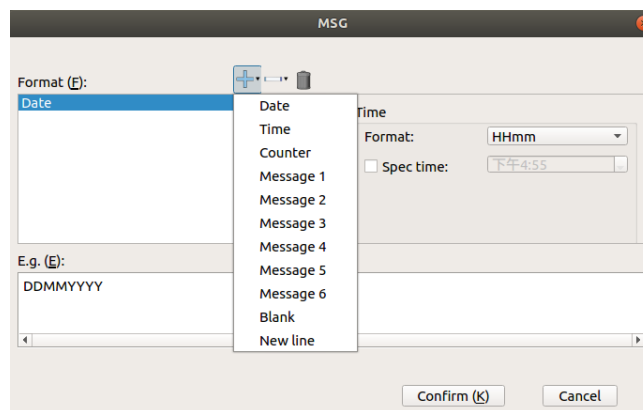
**Size** - point size of the text.

**Color** - color of the text; the “Select” button is pressed to select a color in a pop-up window.

**Note:** for information on common buttons and options, please refer to [Device - “Settings” tab](#).

## Stamps - “Text message” window

You can create, change or delete the digital stamp text message for this scan profile on this screen. Digital stamp text message supports date, time, document count, and custom information.



The maximum number of characters per line of text message is 40 (including spaces).

## Toolbar buttons



**Add:** display a list of items that can be added to the message. An item selected will appear at the end of the *format* list.



**Change:** this option allows you to change the currently selected item in the *format* list with an item in the displayed list.



**Delete:** this option allows you to delete the currently selected item from the *format* list.

**Note:** items in the “Add” and “Change” lists have a 40-character limit for information settings.

**Item** - when an item is selected, all related options will appear to the right of the "Format" list.

## Format

One or more elements should be selected to define the text portion of the digital stamp. You can add the same element multiple times, for example, if you want the text to contain multiple spaces, a maximum of 6 **message** elements are allowed per text message; and these elements can be repeated.

For digital stamps, selection should be made among the following elements:

**Date:** select the date format and delimiter to add (for example, YYYYMMDD with a hyphen as the delimiter: 2017-04-28); or choose to enter a specific date.

**Time:** select the time format to add; or choose to enter a specific time.

**Counter:** this value increases sequentially as each paper is scanned.

**Field width:** this option allows you to configure the width of the counter from 1 to 9. However, the field width will be limited to 6 when there are only 6 characters left in the digital stamp on this row.

**Leading zero:** this option allows you to configure the format of the counter when the width of the value is less than that of the field (in the example the field width is 3 and the counter width is 4).

- **Display:** "004"

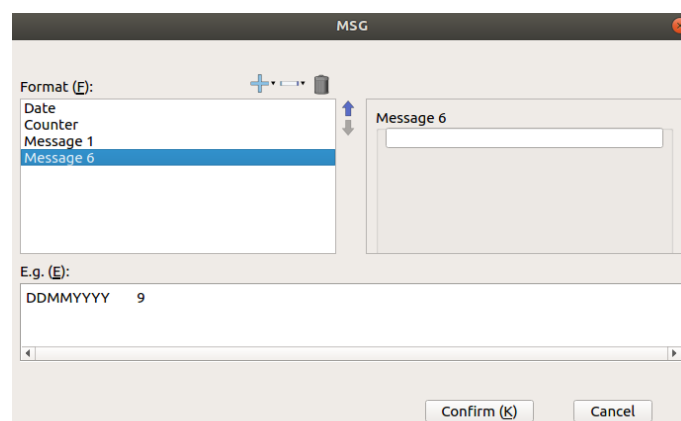
- **No display:** "4"

- **Displayed as spaces:** "4"

**Message:** this option allows you to specify custom text included in the digital stamp. You can have up to six unique messages. Each message cannot have more than 20 characters.

**Spaces:** add spaces.

**New line:** go to another line before arrival of the next element in the message.



## Up and Down arrows

Arrows are used to rearrange the elements in this message (as shown in the **Example** field).

## Example

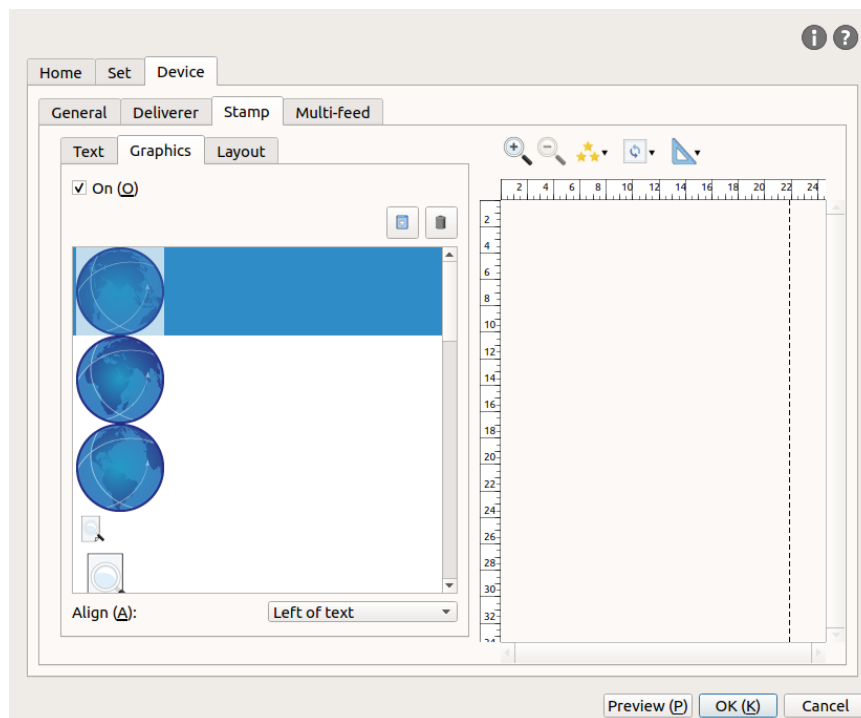
A sample showing text message. When an item in the "Format" list is selected, the corresponding section in the example will be highlighted.

**OK** - save your changes.

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

**Stamps** - "Graphics" tab

**On** - Enable the graphical part of digital stamps.



## Toolbar buttons



**Add:** display the operating system's "File Open" window so you can browse and locate the desired graphics. If you have included a graphic in the message and want to replace it, you may select "Add", and then browse to the alternate graphic.



**Delete:** remove the graphic from this stamp and all other digital stamps that use it. To remove a graphic from this stamp - without removing it from other digital stamps - you may uncheck the "On" checkbox on this tab.

**Graphic selection** - scroll the list to select the graphic for the digital stamp.

The graphic will be displayed at the size it will be used on the scanned image.

If the graphic fails to fit in the Preview display area due to oversize, the graphic will be clipped.

The ratio of stamp resolution to scanned image resolution determines the final graphic size on the scanned image. Higher image resolution (dpi) for a scan profile indicates smaller graphics on the image.

A 1x1 300 dpi digital stamp on a 300 dpi image will be 1x1

A 1x1 300 dpi digital stamp on a 200 dpi image will be 1.5x1.5

A 1x1 200 dpi digital stamp on a 300 dpi image will be 0.67x0.67

**Align** - Choose where to place the graphic - to the left or right of the text in this stamp.

## Description on the file format of digital stamp graphics

Graphics files must be in .png, RGB or RGBA format. Black, white or gray .png files are not supported. During scanning in grayscale or black and white, the scanner will convert the .png file to grayscale or black and white for the digital stamp.

Opacity (alpha channel) in RGBA files will be ignored. The “Opacity” settings on the Stamps - “Layout” tab can be used to achieve the desired effect.

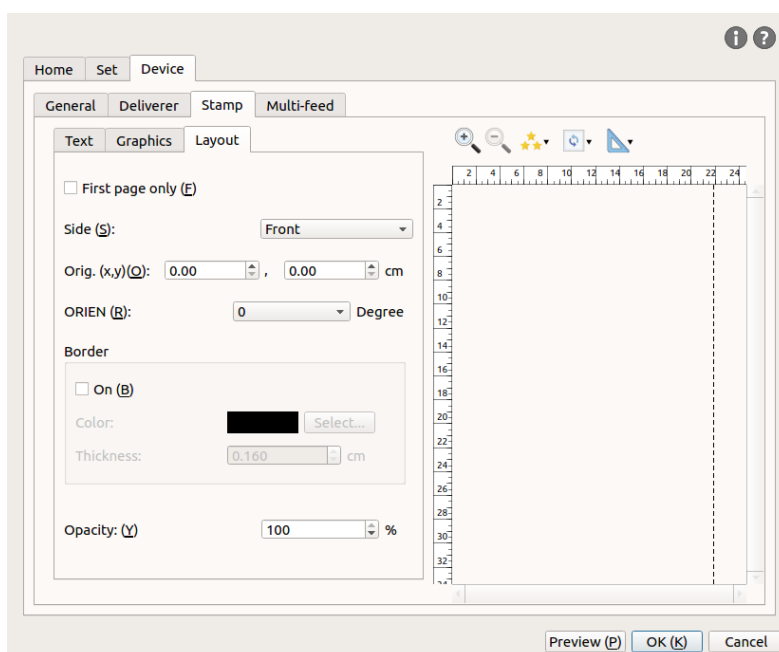
Graphics files must be less than 360,000 color pixels.

**Note:** for information on common buttons and options, please refer to [Device - “Settings” tab](#).

## Stamps - “Layout” tab



The “Layout” tab enables you to specify where the digital stamp appears, as well as other details about its appearance. To preview the stamp you created, you can press the “Preview” button and enable automatic preview updates to check the effect of changes. Refer to [Devices - “Stamps” tab](#) for more instructions on “Preview”.



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

**Side** - place a digital stamp on images from the following sources: **Double-sided, Front, Back**.

**Note:** options may vary depending on the scan setup shortcut.

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

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

## Border

**On** - check this option to add a rectangular outline around the stamp.

**Color** - press the **"Select"** button to choose a outline color.

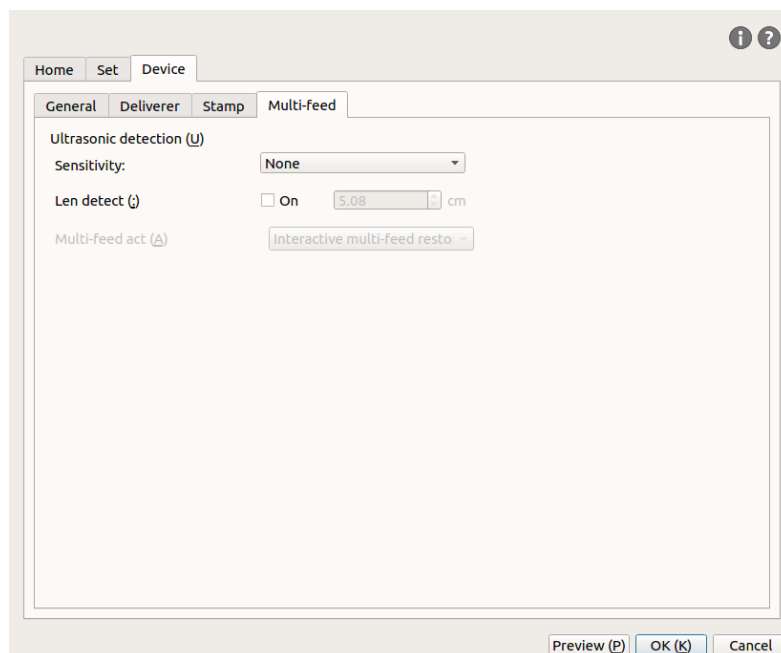
**Thickness** - choose the thickness of the outline.

**Opacity** - 0% will make the digital stamp fully transparent; 100% will make the digital stamp fully opaque (no image data under this stamp will be visible).

**Note:** for information on common buttons and options, please refer to [Device - "Settings" tab](#).

## Devices - "Multifeed" tab

"Multifeed detection" can facilitate document handling by detecting documents that may overlap into the feeder. "Multifeed" may occur due to documents to be stapled, document adhesion, or electrostatic charges between documents.



## Ultrasonic test

**Sensitivity** - the execution strength under which the scanner is controlled to detect if multiple documents are fed into the scanner. Multifeeds are triggered by detecting air gaps between documents, which makes multifeed detection useful for job sets with mixed document thicknesses.

**(N/A)**

**Low:** the lowest intensity setting under which the scanner is less likely to detect labels, poor quality, thick or wrinkled documents on multifeeds.

**Medium:** this option is used for worksets with documents of varying thickness or documents with labels attached. Depending on the label material, most documents with labels will not be detected on a multifeed.

**High:** the highest intensity setting. This is a good setting if all documents are less than the thickness of the 20-pound bond paper.

**Note:** "sticky" notes will be detected as multified documents regardless of the setting.

**Length detection** - this option allows you to select the maximum length of documents in the workset. If the scanner detects a document that is longer than this value, it determines that a multifeed has occurred. You can “Disable” this option or set a length.

**Actions on multifeed** - select the action you want the scanner to take when a multifeed is detected. For all options, the conditions will be logged in the scanner.

**Stop Scanning:** - scanning will be stopped and control will return to the scanning application (i.e. ending the operation). Images of multi-fed documents will not be generated. Inspection will be made to ensure the paper path is cleared, and then the scan session will restart from the scanning application.

**Stop scanning - Generate image:** - scanning will stop and control will return to the scanning application (i.e. job termination). Images of multi-fed documents will be generated. Inspection will be made to ensure the paper path is cleared, and then the scan session will restart from the scanning application.

**Stop scanning - Leave paper in path:** scanning will stop immediately (i.e. no attempt is made to clear the paper path) and control will return to the scanning application (i.e. job termination). Images of multi-fed documents will not be generated. All documents in the paper path will be cleared and the scan session will restart from the scanning application.

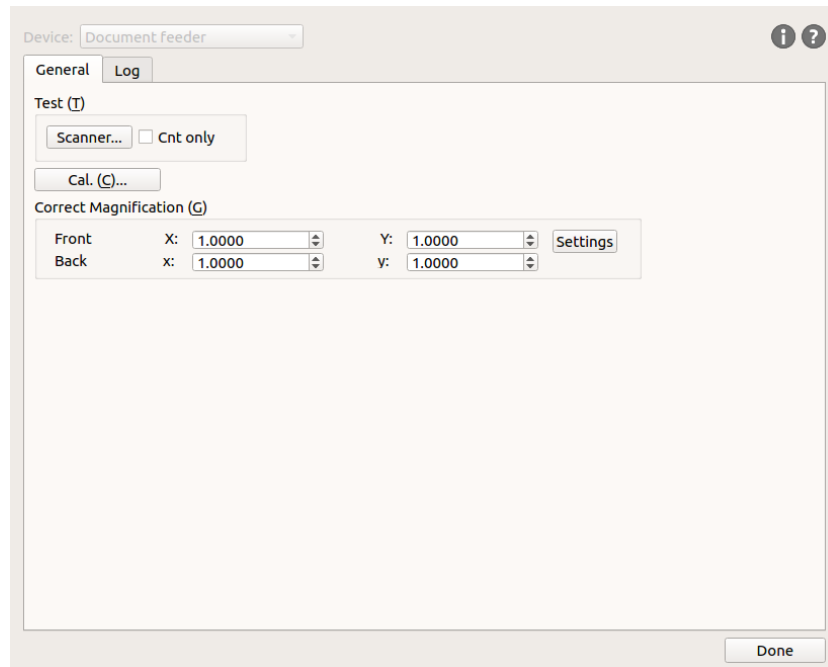
**Continue scanning:** the scanner will continue scanning. Images of multi-fed documents will be generated.

**Interactive multifeed recovery:** scanning will stop, but the scanning application will wait for additional images (i.e. stopping the feeder). Images of the multifeed documents will be displayed on the computer. You can accept these images or rescan to replace them. You can choose between a computer or a scanner. You can send the image to the application and resume scanning by selecting “Accept”. Selecting “Rescan” will discard the image and resume the scan. To stop scanning, you can select “Stop”.

**Note:** For information on common buttons and options, please refer to ["Device Settings" window](#).

## “Diagnostics” window

From this window you can access the scanner’s diagnostic functions. The “Diagnostics” window includes the following tabs: General, Debug, and Log. The “Diagnostics” window can be accessed via the “Diagnostics” button on the “General” tab of the “Device settings” window.



**Devices** - this option allows you to choose the device to be diagnosed. Options include: “**Document feeder**” or “**Flatbed**”.

**Note:** this option is only available if the flatbed accessory has been attached when the scanning application is connected to the scanner.

**Finish** - Return to [“Device settings” window](#).



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

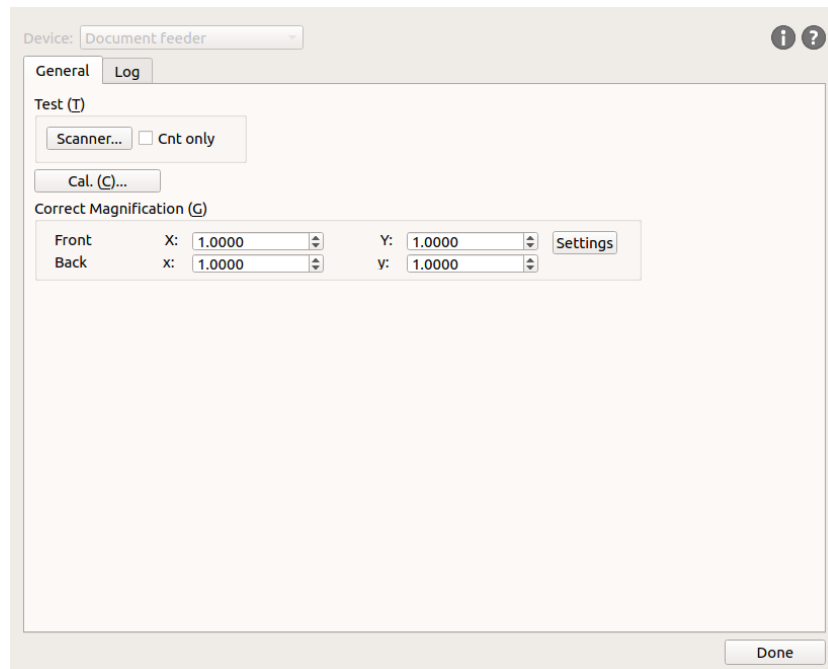


**Help:** display help information for the window currently being displayed.



## Diagnostics - “General” tab

The “General” tab allows you to perform scanner tests and calibrate the scanner.



### Test

**Scanner:** this option is similar to POST, but more extensive than POST. Selecting this option will immediately perform a series of checks on the device to determine if all scanner hardware is functioning properly.

**Count only:** count the number of documents entering the scanner. However, images will not be sent to the scanner application. This test is performed during any scan session with this option enabled.

**Note:** this test will automatically end when the scanning application is disconnected with the scanner.

**Calibration** - display [“Calibration” window](#).

**Note:** frequent calibration is not required or recommended. Calibration is required only when indicated by support personnel/service representatives.

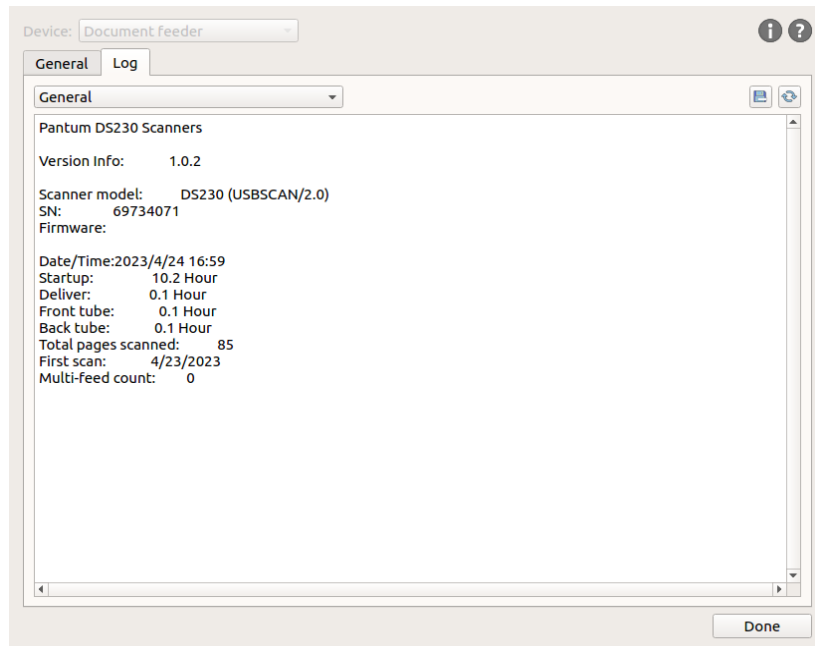
**Correct magnification** – this option allows you to customize the X and Y dimensions of the final image size.

**Note:** magnification correction is required only when indicated by support personnel/service representatives.

for information on common buttons and options, please refer to [“Diagnostics” window](#).

## Diagnostics - “Log” tab

With the “Log” tab, you can view scanner information.



### Log

**General:** display scanner version information, serial number, additional/installed accessories, gauges, etc.

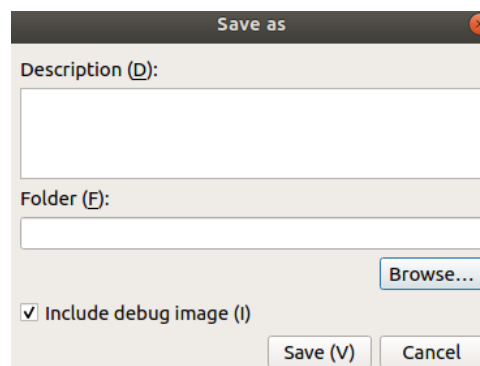
**Operator:** display the scanner log. This log can only be cleared by your support personnel.

**Scanning Log:** Display the scanning log of the scanner.

### Toolbar buttons



**Save as:** save all logs for viewing by support personnel. When this option is selected, the “Save as” window will pop up:



**Description:** enter a short description of the problem/reason for saving the log.

**Folder:** the location where logs are saved.

**Browse:** display the operating system’s “File open” window, so you can find the desired folder.

**Include debug images:** include any generated debug images and logs. This option is enabled by default and should only be disabled at the suggestion of support personnel.

**Save:** save the log to a file with the .eklog extension.



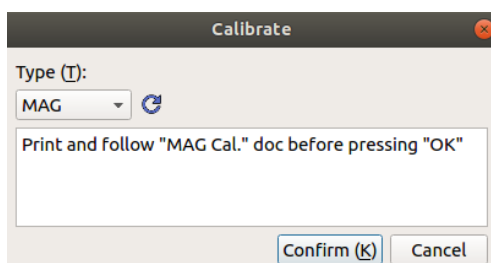
**Refresh:** refresh the currently displayed log

**Note:** for information on common buttons and options, please refer to [“Diagnostics” window](#).

## “Calibration” window

When calibration is required, you can select **Calibration** on the Diagnostics - “General” tab.

**Note:** frequent calibration is not required or recommended. Calibration is required only when indicated by your support personnel.



**Type** - this option allows you to select the calibration to perform.

**UDDS** - ensure the ultrasonic system used to detect multifeeds and document edges is properly tuned for optimum performance.

**Note:** be sure to use 20 lb or 75 g/m<sup>2</sup> bond paper.

**Magnification** - determine the amount of reduction/enlargement that the scanner applies to the image.

### Test magnification

**OK** - initiate calibration. If the scanner cannot detect the target, you will be prompted to insert the target. You will be notified after a successful calibration.

**Cancel** - close the “Calibration” window without performing calibration.

## Advanced image settings

"Advanced image settings" can be accessed via the icon next to the "Side" option at the top of the ["Image settings" window](#).



When the "Advanced image settings" icon is selected, the Advanced - "General" tab will pop up.

**Finish** - return to ["Image settings" window](#).

### Information icons



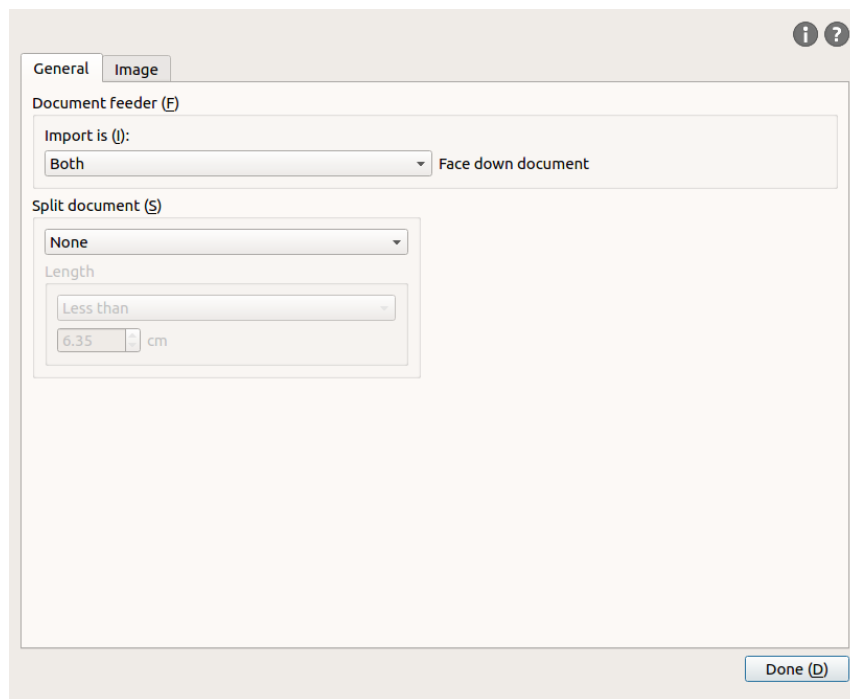
**About:** display the scanner's version and copyright information



**Help:** display help information for the window currently being displayed.

## Advanced - "General" tab

Under "General", you are allowed to define more complex settings that the scanner can detect.



**Document Feeder** - allows you to select pages entering the scanner's paper feed tray.

**Input Document** - is to select "**Two Sided**", "**One Sided - Front**", or "**One Sided-Back**" depending on the page you want to configure.

**Note:** The "*Two Sided*" and "*One Sided - Back*" options are only available for duplex scanner models.

**Split Document** - The scanner can split an image into two or three equivalent parts, provided that they meet the length attributes you set here.

Select the number of images:

**(None)**: An image is the default.

**Split into 2 images**

**Split into 3 images**

**Length**: Select the page length attributes, which will be prompted for automatic split:

**Less than**: If you want to split shorter pages, select this option and enter the length.

**Greater than**: If you want to split longer pages, select this option and enter the length.

**Between**: Enter two lengths, then the pages will be split into the lengths between these two lengths.

**Note**: For information on common buttons and options, please refer to [Advanced Image Settings](#).

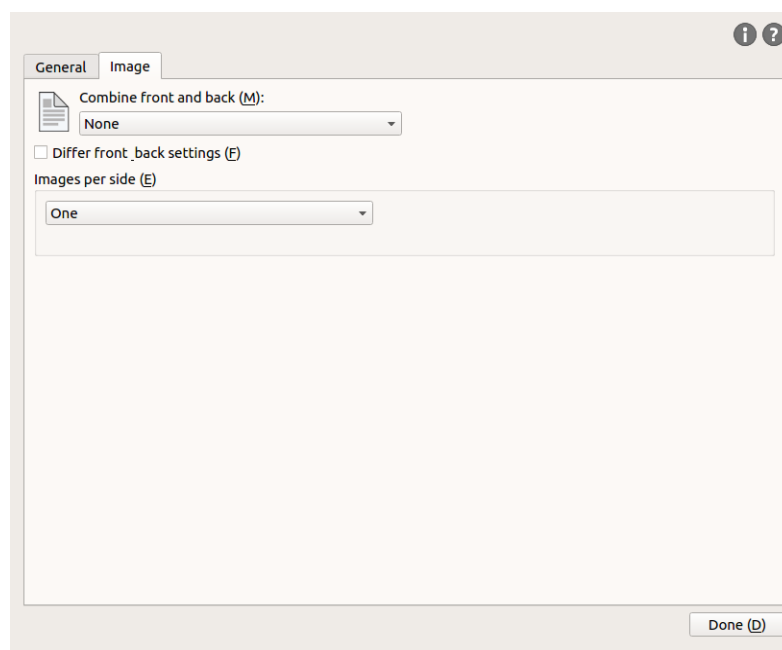
## The documents scanned by the flatbed scanner are

**Multiple Documents**: Turn on this option if multiple items can be placed on the flatbed and you want each to be a separate document.

After the image splitting function is enabled, the splitting is available under the combination of "Document: Automatically Detect and Straighten" and "Image: Entire Document"

## Advanced - "Image" tab

Under "Image", you are allowed to define more complex settings for images created by the scanner.



**Merge Front and Back Images** - Generally, for a document, one image will be created for its front side, and another image will be created for its back side. Turn on this option if you want an image with front and back of document. These options include:

**Front on the upper part:** Front on the upper part - the front will be above the back in the image.

**Front on the lower part:** Front on the lower part - the back will be above the front in the image.

**Front on the left:** The front will be on the left side of the back in the image.

**Front on the right:** The back will be on the left side of the front in the image.

**Note:**

This option is only available for duplex scanner models.

This option is only available when "**Input Document**" is set to be "*Two Sided*", "different imaging settings for front and back" is turned off, "**Image Per Side**" is set to be "*one*", and the documents are scanned from the "*Document Feeder*".

This option is not applied to the preview image.

This option is only applicable to i5x50 scanners.

**Different Imaging Settings for Front and Back** - By default, the settings you select in the driver/data source will apply to both sides of the image. Turn on this option if you want to select different imaging settings for each side of the scanned document. For example, if you want the front side to be colored and the back side to be black and white, make sure you have selected the "Two Sided" under "Input Document" (on the General tab), and then turn on "Different Imaging Settings for Front and Back".

Then, the "Side" option on the ["Image Settings" window](#) is no longer grayed out, and you can choose a different setting for each side. Now that you have turned on the different image settings for each side, your selection will only apply to the front side of the scanned document. After you have made a selection for the front side, you can select the back side under the "Side", and then make the settings you want to apply to the back side.

**Note:** The "*Different Imaging Settings for Front and Back*" option is only available for duplex scanner models.

**Image Per Side** - Indicate the number of images per side to be created by the scanner based on your selection under image.

**One:** indicates that you want the scanner to create one image.

**One - Depend on Document Content:** indicates that you want the scanner to automatically detect whether the document is color/grayscale or black and white.

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

**Multiple:** indicates that you want the scanner to create multiple images.

**Note:** If you select "**One - Depend on Document Content**" under the "*Image Per Side*", the ["Content Settings" tab](#) will be displayed.

**Image to be Configured** - indicates the electronic image to be configured.

**Note:** This option is only available when an option other than "One" under the "*Image Per Side*".

Please refer to the following examples for steps on configuration of advanced options:

[Create color/grayscale or black-and-white images based on document content](#)

[Create multiple images for each side of the document](#)

[Make different settings for each side of the document](#)

If available, use the up or down arrows to select the order in which the scanner transmits the images to the scanning application.

### Toolbar buttons



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



**Change:** Change the currently selected image type.

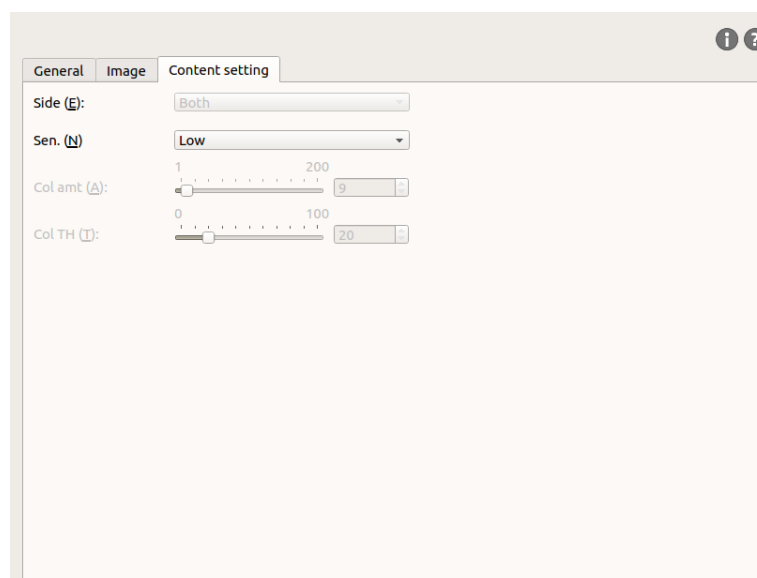


**Delete:** Delete the selected image type.

**Note:** For information on common buttons and options, please refer to [Advanced Image Settings](#).

## "Content Settings" tab

The options under the "Content Settings" can be available for one-sided or two-sided operation.



**Side** - determines which side the "Sensitivity" setting is applied to. This option is only available when "Different Imaging Settings for Front and Back" is turned on under the "Advanced".

## Sensitivity

**Low:** Documents that only have few colors are saved as the color or grayscale images. It is used to capture documents that are mainly in black text and have small logos, or contain a few highlighted texts and small-sized color pictures.

**Medium:** Documents that should have more colors than that in the "Low" option are saved as color or grayscale images.

**High:** Documents that should have more colors than that in the "Medium" option are saved as color or grayscale images. It is used to distinguish documents containing medium to large-sized color photos from all-black text documents. The photos with neutral colors may not be captured correctly unless the values of "Color Threshold" or "Number of Color" are adjusted.

**Custom:** allows you to manually adjust the "Color Threshold" and/or "Number of Color".

**Note:** When the "Sensitivity" value is set, the "Medium" will be recommended to scan the typical working set. If too many color/grayscale documents are returned when compared to black-and-white documents, change to the option of "High" and re-scan. If too few color/grayscale documents are returned when compared to black-and-white documents, change to the option of "Low" and re-scan. If none of these options can give the desired results, select "Custom" to manually adjust the "Number of Color" and/or "Color Threshold". "Custom" also offers you "Learn" mode to provide you with methods of a scanner to analyze the documents and recommended settings.

Sen. (N) Custom

Col amt (A): 1 200 9

Col TH (T): 0 100 20

For the scanner to learn custom settings, you need at least five representative color documents, which you wish to be auto-scanned and saved as color/grayscale images. Place the documents in the output tray, and click on "Learn".

Learn (L)...

**Number of Color** - refers to the number of colors required in a document before it can be saved as a color or grayscale document. If the value of "Number of Color" is increased, more color pixels will be needed, ranging from 1 to 200.

**Note:** This option only available for "Sensitivity: Custom".

**Color Threshold** - refers to the value of the specified color when the color threshold or saturation (i.e., light blue versus dark blue) is reached for calculation of number of colors. The higher the value, the stronger the color is required. ranging from 0 to 100.

**Note:** This option only available for "Sensitivity: Custom".



**Understand** - allows you to calculate the settings based on the scanned typical color documents. Before the "Learn" is selected, please place at least 5 typical color documents in the input tray. The system will scan and analyze the documents to determine the recommended "*Number of Colors*".

**Note:**

This option only available for "*Sensitivity: Custom*".

The "*Number of Color*" and "*Color Threshold*" sliders will be updated automatically. If none of these values provide the results required by your working set, you may need to manually adjust the "*Color Threshold*".

**Note:** For information on common buttons and options, please refer to [Advanced Image Settings](#).

## Operation Procedures

### Create a new Settings Shortcut

1. Select the "Settings *Shortcut*" from the list in the main scanner window. It is recommended to select the shortcut that can best describes the desired image output.
2. Decide whether you want to capture the electronic images of the front, back, or both sides of the document, and then make the corresponding selections in the "Input Document" field.
3. Select "**Settings**" on [the main scanner window](#). The General tab on the "[Image Settings](#)" window will be displayed.
4. Select the appropriate options on the "General" tab.

**Note:** If necessary, you can recheck the options on other tabs and make corresponding changes.
5. Place a representative document on the input tray of the scanner.
6. Select "**Preview**" to view the generated image.

**Note:** If the image is not acceptable, you can select a different predefined "Settings *Shortcut*" or make other changes to the remaining tabs on the "Image Settings" window.
7. Pop up the "[Device Settings](#)" window by selecting "Device" on the Image Settings window to define the settings of desired device.
8. Recheck each tab and select the appropriate option or operation you want the scanner to perform.
9. Click "**Home**" and return to the main scanner window.
10. Select "Save As" to pop up the "Save As" window.
11. Enter the name of the new shortcut (which is meaningful to yourself), and then select "**Save**".

### Change Image Settings

1. Select "**Settings Shortcuts**" which can exactly describe the desired output from the [Main Scanner window](#).
2. Select the "**Input Document**" from the main scanner window.
3. Select "Settings" to display the "[Image Settings](#)" window.

4. Before adjustments, browse the tabs on the "Image Settings" window to be familiar with the available options.

5. Make the appropriate selection for each option you want to use based on what you want the scanner to do while scanning.

6. If you want to view the effect of the options, please:

Place a representative document on the input tray of the scanner.

Select "**Preview**" to perform a preview scanning.

**Note:** If the image is not acceptable, you can select a different "Settings Shortcut" or continue to use the current "Settings Shortcut" after rechecking all tabs on the "Image Settings" window. Repeat this step as needed.

7. Upon completion, select "**Home**" to return to the main scanner window, and then select "**Save**" to save your selection to the shortcut.

## Change Device Settings

1. Select "**Settings Shortcuts**" which can exactly describe the desired output from the [Main Scanner window](#).

2. Select "Settings" to display the ["Image Settings" window](#).

3. Select "**Device**" to display the ["Device Settings" window](#).

4. Before adjustments, browse the tabs in the "Device Settings" window to be familiar with the available options.

5. Make the appropriate selection for each option you want to use based on what you want the scanner to do while scanning.

6. Upon completion, select "**Home**" to return to the main scanner window, and then select "**Save**" to save your selection to the shortcut.

## Create multiple images for each side of the document

In this example, you are supposed to configure a scan session that has information on both sides of the document, and that the scanner is required to produce both color and black-and-white images on each side of the document.

1. Select "**Settings Shortcuts**" which can exactly describe the desired output from the [Main Scanner window](#).

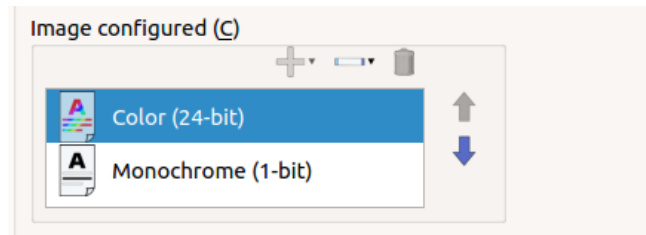
2. Select "Settings" to display the ["Image Settings" window](#).

3. Select the "Advanced Image Settings" icon on the "Image Settings" window to display the "Advanced" tab.

4. Select "**Input Document: Two Sided**".

5. Select "**Image Per Side: Multiple**".

**Note:** The "Configure Images" area will display on the "Advanced" tab and will contain a color image item and a black-and-white image item.



6. When sufficient colors are detected in the document, if you want a grayscale image instead of a color image:

Make sure you select "*Color (24 Bits)*"

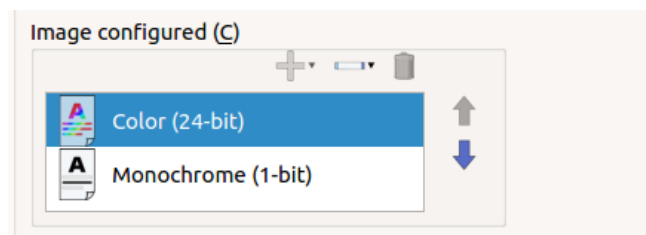
Select "**Change**" to display the list of options

Select "**Grayscale**"

7. By default, the scanner will make and transmit the first listed image (black-and-white image in this example), and then it will make and transmit the second listed image (color/grayscale image in this example). If you want to make and transmit black-and-white images first:

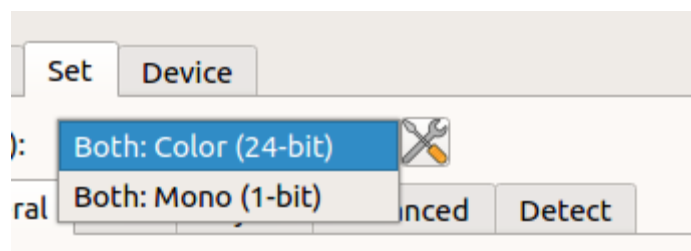
Make sure you select "*Color (24 Bits)*"

Select "**Move Up**" to shift color/grayscale images to the top of the list



8. Select "**Finish**" to return to the "Image Settings" window.

**Note:** You will see that there are two entries in the "Side" tab now: "**Two Sides: Color (24 Bits)**" and "**Two Sides: Black and White (1 Bit)**".



9. Select "**Side**": "**Two Sides: Color (24 Bits)**".

**Note:** Make any additional adjustments to the color image settings on the remaining tabs on the "Image Settings" window.

10. Select "**Side**": "**Two Sides: Black and White (1 Bit)**".

**Note:** Make any additional adjustments to the black-and-white image settings on the remaining tabs on the "Image Settings" window.

11. Upon completion, select "**Home**" to return to the main scanner window, and then select "**Save**" to save your selection to the shortcut.

## Make different settings for each side of the document

In this example, you are supposed to configure a two-sided document flow for a business document, with the front of the document in color and the back in fine black and white.

**Note:** This program is only available for duplex scanners.

1. If you have not yet opened the "Advanced" tab:

Select "**Settings Shortcuts**" which can exactly describe the desired output from the [Main Scanner window](#).

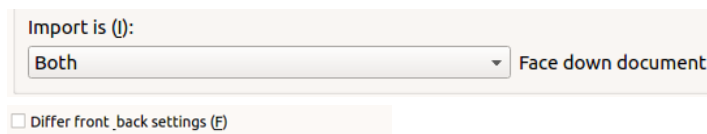
Select "Settings" to display the ["Image Settings" window](#).

Select the "Advanced Image Settings" icon on the "Image Settings" window to display the "Advanced" tab.

2. Select "**Input Document: Two Sided**".

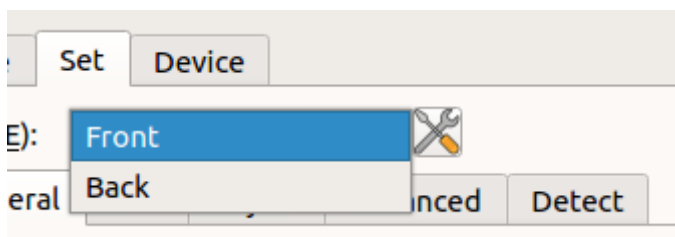
3. Turn on the option of "Different Imaging Settings for Front and Back".

4. Select "**Image Per Side: One**".



5. Select "**Finish**" to return to the "Image Settings" window.

**Note:** You will see that there are two entries in the "Side" tab now: "**Front**" and "**Back**".



6. Select "**Side**": "**Front**".

7. Select "**Color (24 Bits)**" for "Scan As" on the "General" tab.

**Note:** Make any additional adjustments to the front settings on the remaining tabs on the "Image Settings" window.

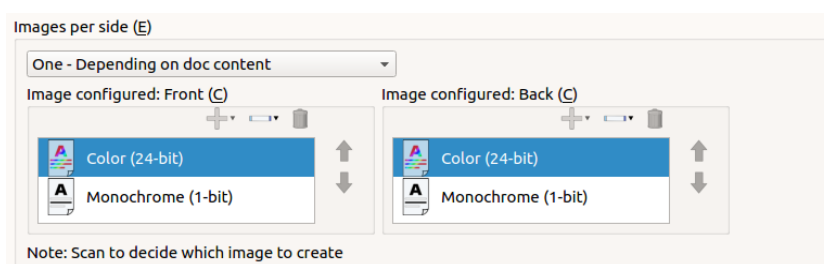
8. Select **"Side": "Back"**.

9. Select **"Black and White (1 Bit)"** for "Scan As" on the "General" tab.

**Note:** Make any additional adjustments to the back settings on the remaining tabs on the "Image Settings" window.

10. Upon completion, select **"Home"** to return to the main scanner window, and then select **"Save"** to save your selection to the shortcut.

**Note:** If you select any option other than "Image Per Side: One" in Step 4, the two options of "Configure Images" will become available. This allows you to individually set the images to be generated on each side of the document.



# Troubleshooting

## Troubleshooting

In addition to the following table, please refer to the "Troubleshooting" of the *User Guide*.

Problems	Possible solutions
The scanner cannot scan/feed documents	<p>Please make sure that:</p> <ul style="list-style-type: none"><li>•The power cord is plugged in and the scanner is powered on.</li><li>•Close the scanner cover completely.</li><li>•Follow the correct power-up sequence that the scanner's white indicator lights up and the software has started scanning.</li><li>•Documents meet specifications such as size, weight and type.</li><li>•Documents are placed in the input tray, and the height of the document stack does not exceed the capacity of the scanner.</li><li>•You have checked the feeder assembly for any wear and replace the parts if necessary. Examples of feeder items (not applicable to all scanner models): feeder module, separation module/roller, pre-separation pad.</li><li>•You can also turn off the scanner power and power it on again.</li></ul>
Poor or degraded image quality	<p>Make sure the scanner is clean, including the imaging guide. Please refer to the "Maintenance" of the <i>User Guide</i>.</p>
The document is jammed.	<p>Please make sure that:</p> <ul style="list-style-type: none"><li>•Adjust the output tray and guide to fit the length and width of the scanned document.</li><li>•All jammed documents in the paper conveyor area have been removed.</li><li>•Documents meet specifications such as size, weight and type.</li><li>•All staples and paper clips have been removed from the document.</li><li>•The feeder assembly is clean and installed correctly. Examples of feeder items (not applicable to all scanner models): feeder module, separation module/roller, pre-separation pad.</li><li>•The roller is clean.</li><li>•The imaging guide is clean.</li></ul>
There is a "fake" paper jam.	<p>Make sure the paper conveyor area is clean.</p>
Paper is twisted during scanning	<p>Please make sure that:</p> <ul style="list-style-type: none"><li>•Adjust the side guides of document to accommodate the conveyed document.</li><li>•Documents are fed at right angles to the feed module.</li><li>•The document is conveyed to the center of the input tray.</li><li>•All staples and paper clips have been removed from the document.</li><li>•The feeder assembly is clean and installed correctly. Examples of feeder items (not applicable to all scanner models): feeder module, separation module/roller, pre-separation pad.</li><li>•The scanner cover is tightly closed and locked in place.</li></ul>

---

Multi-feed occurs	<p>Please make sure that:</p> <ul style="list-style-type: none"><li>•The front edge of all documents is located in the center of the input tray, so that each document can touch the feeder.</li><li>•The feeder assembly is clean without wear. Examples of feeder items (not applicable to all scanner models): feeder module, separation module/roller, pre-separation pad.</li><li>•Documents with special texture or surface are fed manually.</li></ul>
An unexpected error is received from the scanner.	<p>This error should be rare, but if it occurs, please execute the following operations:</p> <ul style="list-style-type: none"><li>•Turn off the scanner power</li><li>•Restart your computer</li><li>•Power on the scanner</li><li>•Try again</li></ul> <p>If this problem continues, please contact the service center.</p>

---

# Vocabulary

## Black and White Image

Refer to an electronic image containing pixels, the value of which is specified only by black and white. Also refer to a "two-tone" image, because each pixel uses 1 bit to specify the value 0 or 1. 0 and 1 are used to represent black and white.

## Color Image

Refer to an electronic image containing pixels with values specified by color shadows. Also refer to "24-bit color", as each pixel specifies 8-bit red, 8-bit green, and 8-bit blue values for a total of 24 bits. For each color (red, green and blue), the value of 0 is the minimum number of colors and the value of 255 is the maximum number of colors.

## Compression

Compression is used to reduce the bytes required for scanned images, thereby saving storage space and/or transmission time. This function is accomplished by using a special algorithm that runs length coding.

## Cropping

Refer to a technique for capturing the required part of an image. It allows to scan the entire document without storing all document data. Use the "**Automatically Detect and Straighten**" or "**Automatically Detect**" on the [Image Settings - "Size" tab](#) to apply the cropping option.

## Dual-Stream Output

Refer to a scanner configuration that can generate two electronic images on each side of a document. The effective combinations include: black and white and color, and black and white and grayscale.

## Grayscale Image

Refer to an electronic image containing pixels with values specified by grayscale shadows. Also refer to an "8-bit grayscale" image, as each pixel uses 8 bits to specify values from 0 to 255. The value of 0 is the darkest and the value of 255 is the brightest.



## **Image Processing**

Refer to the function of a scanner to create electronic images from scanned documents. By default, the scanner is set to create the best electronic image. For example, automatically determining the document size, correcting any document images without straight feed, and even improving original low-quality documents.

### **JPEG**

Joint Photographic Experts Group. This group developed and referenced its name to the standard to compress the files of color and grayscale images, which are widely used in scanners, digital cameras and software applications.

### **Multifeed**

Refer to the situation where more than one sheet is scanned at the same time. This may be caused by poor document preparation (classification), static electricity, poor document separation, "sticky" notes, envelopes, lack of front edge alignment, etc. Multifeed detection can notify you when multifeed occurs to give you assistance in scanning.

### **Single Output**

Refer to a scanner configuration that can generate one electronic image on each side of a document. Such electronic image can be a black-and-white, color or grayscale image.

### **TIFF**

Mark the image file format. TIFF is a file format standard commonly used for black-and-white images. It is often jointly used with the CCITT compression standard of Group IV to reduce the image file size. Color/grayscale images can also be saved in this format, but they are usually not compressed, so files can be quite large.

All trademarks and trade names are property of their respective owners.  
Pantum and the Pantum logo are registered trademarks of Zhuhai Pantum Electronics Co., Ltd.

PANTUM