Kodak

i1100 Series Scanners

Scanning Setup Guide
for TWAIN Applications

Scanning Setup Guide for the TWAIN Data source

The *Kodak* i1100 Series Scanners provide the ability to process scanned images to improve their quality by using image processing features. This guide is for use with the following scanner models: *Kodak* i1150/i1150WN/i1180/i1190/i1190E/i1190WN. The procedures are the same for all scanners unless otherwise noted.

Image processing refers to features of the scanner that allow you to automatically adjust each image that may improve the resulting images (e.g., correcting any skew in the fed document, cutting the edges of the image off to remove unneeded borders or cleaning up extraneous "noise" on the image).

The information in this guide provides procedures for using the TWAIN/TWAINDSM Data source as well as descriptions of the features. The same features should be available on the user interface of the scanning application you are using (e.g., *Kodak* Capture Software).

Starting the SVT Diagnostics/Scan Validation Tool

1. Select **Start>Programs>Kodak>Document Imaging>SVT Diagnostics**. The Driver Choice window will be displayed.
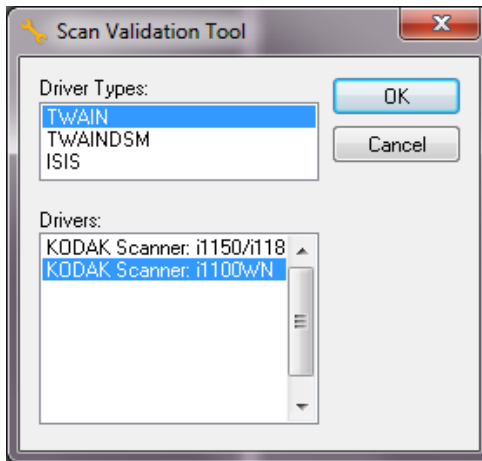
2. Select **TWAIN/TWAINDSM** (or **ISIS**) for the Driver Type and the *Kodak* **Scanner i1100** as the Driver.

   Driver Types include:
   - **TWAIN** — uses the TWAIN interface via the Windows-provided twain_32.dll. This option is only available if twain_32.dll exists in the Windows folder.
   - **TWAINDSM** — uses the TWAIN interface via the TWAIN Working Group's 2.x Data Source Manager (DSM). This option is only available if TWAINDSM.dll exists in the Windows Systems folder.
   - **ISIS** — uses the ISIS interface. this option is only available if PIXDFLTN.DLL exists in the Windows 32-bit Systems folder.

   NOTE: The TWAIN data source and ISIS driver are not available for the 64-bit version of the Scan Validation Tool.

3. The Scan Validation Tool dialog box will be displayed.

Scan Validation Tool dialog box

The Scan Validation Tool (SVT) is a diagnostic application provided by Kodak Alaris. The SVT user interface allows access to all the features of the scanner and is a good way to verify that the scanner is working properly. The Scan Validation Tool allows you to verify scanner functionality using both the TWAIN/TWAINDSM data source and the ISIS driver.

Toolbar buttons

Setup — displays the user interface for the selected driver.

Start Scanning — scans the documents in the input tray.

Scan One Page — scans only one page.

Stop Scanning — ends the scan session.

Change/Open Driver — closes the currently opened driver and displays the Driver Choice window.

Destination — allows you to select a directory to store scanned images and their file names. This option is only available when **Save Images To Files** is selected.

License Key — displays the License Key window.

No Image Display mode — closes the Image Viewer window (no images will be displayed).

One Image Display mode — displays one image at a time.

Two Image Display mode — displays two images at a time.

Four Image Display mode — displays four images at a time.

Eight Image Display mode — displays eight images at a time.

About — displays the About window.

Using the TWAIN data source

The *Kodak* i1100 Series Scanners can provide a wide variety of electronic images. This can be done by using the TWAIN data source Kodak Alaris provides in concert with your scanning application. The TWAIN data source is the part of the capture system which links the scanner to your scanning application.

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

If you are using the ISIS driver, see the *Scanning Setup Guide for the ISIS Driver* (A-61820) for more information.

How do I begin?

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

The scanner comes with some Setting Shortcuts already defined. In most cases, you will find that these shortcuts are all you will need. If you find that you need different settings, then you should create your own Setting Shortcut. Your shortcut will be added to the list of Setting Shortcuts and available for all future scanning.

Most of the options you will want are available on these two windows:

- **Image** Settings: clicking the Settings button on the main Scanner window, displays the Image Settings window. From this window you can set your image processing parameters by using the General, Size, Adjust, Enhance and Detect tabs. You can also access the Device settings by clicking the **Device** button or the Advanced settings by clicking the **Advanced Image Setup** icon.

- **Device** Settings: the Device button is located on the Image Settings window. When you select **Device**, you will have access to the General and Multifeed tabs. From the Device Settings window, you can also access Diagnostics.

The procedures that follow describe how to configure a customized Setting Shortcut. Complete descriptions of the features and options on the main Scanner window and tabs are found in the section entitled, "The main Scanner window".

NOTE: Setting Shortcuts can sometimes be overridden by your scanning application. If this happens, the Shortcut you select will appear in the main Scanner window in italics with the word *<Changed>* next to it. This is normal behavior for an application that does not use Setting Shortcuts and downloads its preferred individual settings to the scanner first and then provides access to the TWAIN data source.

When you click **OK** to begin scanning, you will be asked if you want to save the changed settings. When using an application that does not use Setting Shortcuts, select **No** to this prompt and continue scanning.

Selecting Image settings

From the main Scanner window:
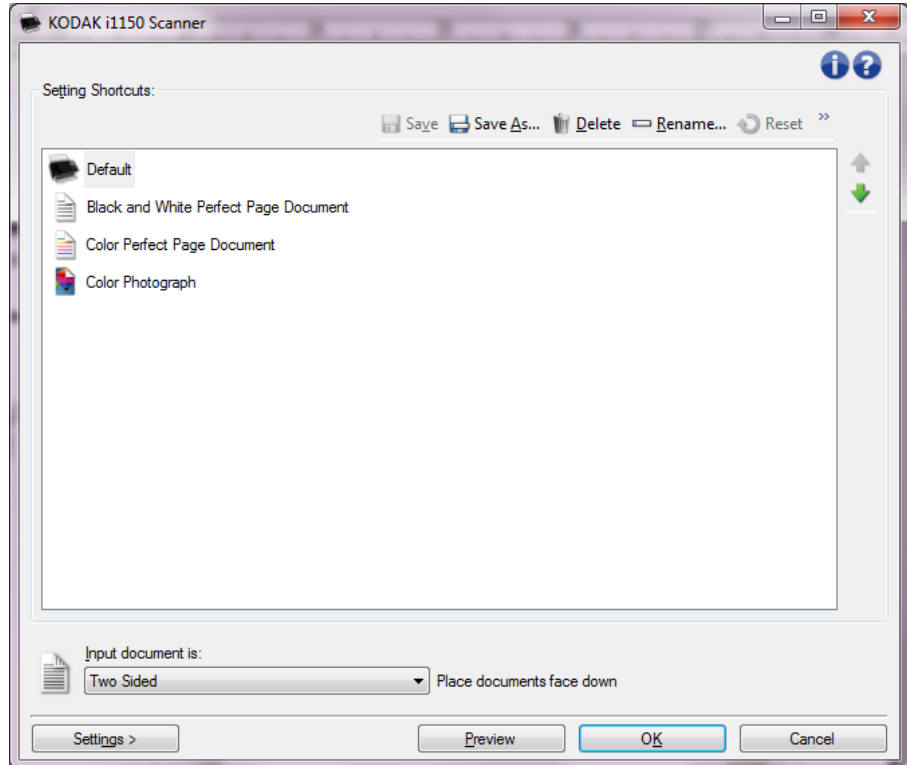
1. Select a **Setting Shortcut** from the main Scanner window that closely describes your desired output.

2. Select an **Input document is** option from the main Scanner window.

3. Select **Settings** to display the Image Settings window.

4. Before making any adjustments, browse through the tabs on the Image Settings window to get familiar with options that are available.

5. For each option you want to use, make the appropriate selections you want the scanner to perform when scanning.

6. If you want to see the effect your options will have:

   - Place a representative document in the input tray of the scanner.
   - Select **Preview** to perform a preview scan.

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

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

Selecting Device settings

1. Select a **Setting Shortcut** from the main Scanner window that closely describes your desired output.

2. Select **Settings** to display the Image Settings window.

3. Select **Device**. The Device Settings window will be displayed.
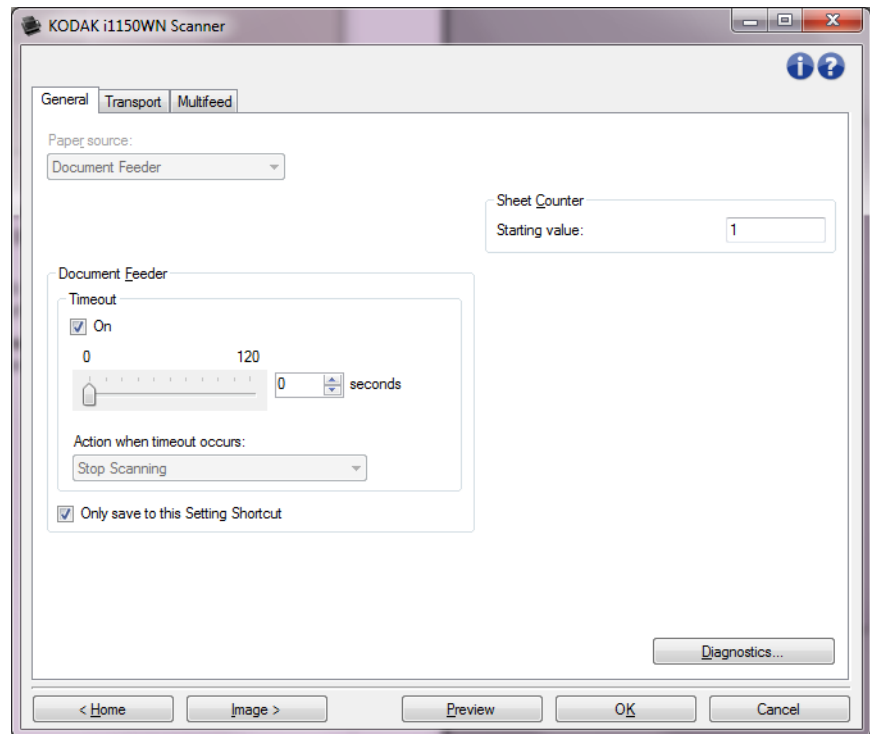
4. Before making any adjustments, click through the tabs on the Device Settings window to get familiar with features that are available. See the section entitled "The Device Settings window" for information about these features.

5. Determine which features you want to use when scanning and select the appropriate tab.

6. On each tab, select the desired options or action you want the scanner to perform.

7. When finished, select **Home** to return to the main Scanner window and click **Save** to save your selections to the shortcut.

The main Scanner window

The main Scanner window is the home window of the scanner's user interface. You can scan by simply selecting a Setting Shortcut and then selecting **OK/Scan**.
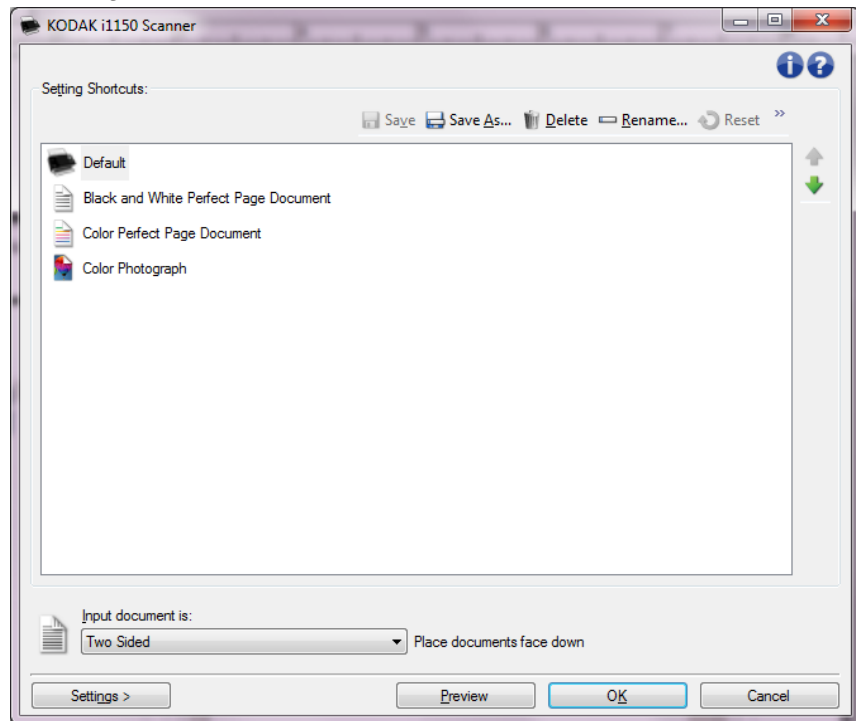
Setting Shortcuts — provides a listing of the Setting Shortcuts currently set up. The supplied shortcuts are:

- **Default** — the scanner's default settings
- **Black and White Perfect Page Document**
- **Color Perfect Page Document**
- **Color Photograph**

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

Input document is — allows you to select which sides of the document has 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.

NOTES:

- 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.

Save — saves any changes made to the current Setting Shortcut. This is only available for shortcuts you have created.

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

Delete — deletes the selected Setting Shortcut; you will be prompted for confirmation. This is only available for shortcuts you have created.

Rename — displays the Rename window allowing you to rename a Setting Shortcut. This is only available for shortcuts you have created.

Reset — allows you to undo any changes that have been made to the selected Setting Shortcut. This is only available for shortcuts you have modified (e.g., are 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 the only available when one or more supplied shortcuts have been changed or removed.

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

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

Move Up — moves the selected Setting Shortcut up one position in the Setting Shortcuts list. When you move a Setting Shortcut, it will stay in that position until you move it again.

Move Down — moves the selected Setting Shortcut down one position in the Setting Shortcuts list. When you move a Setting Shortcut, it will stay in that position until you move it again.

NOTES:

- If you want to transfer *Setting Shortcuts* to another PC: select **Export** on the PC that has the shortcuts you want to transfer and then select **Import** on the other PC.

- If you want to add a *Setting Shortcut* to an existing shortcut set: 1) select **Import** to load the shortcut set; 2) create the new *Setting Shortcut*; and 3) replace the shortcut set by selecting **Export** and save it using the same name.

Settings — displays the Image Settings window which allows you to make changes to the selected Setting Shortcut. From this window you can also access the Device settings and Diagnostics windows.

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: displays the scanners' version and copyright information.

Help: displays help information for the window currently being displayed.

The Image Settings window

From this window you can define image processing options by using the available tabs. The values used in Image Settings are saved in the selected Setting Shortcut. The Image Settings window includes the following tabs: General, Size, Adjust, Enhance and Detect.
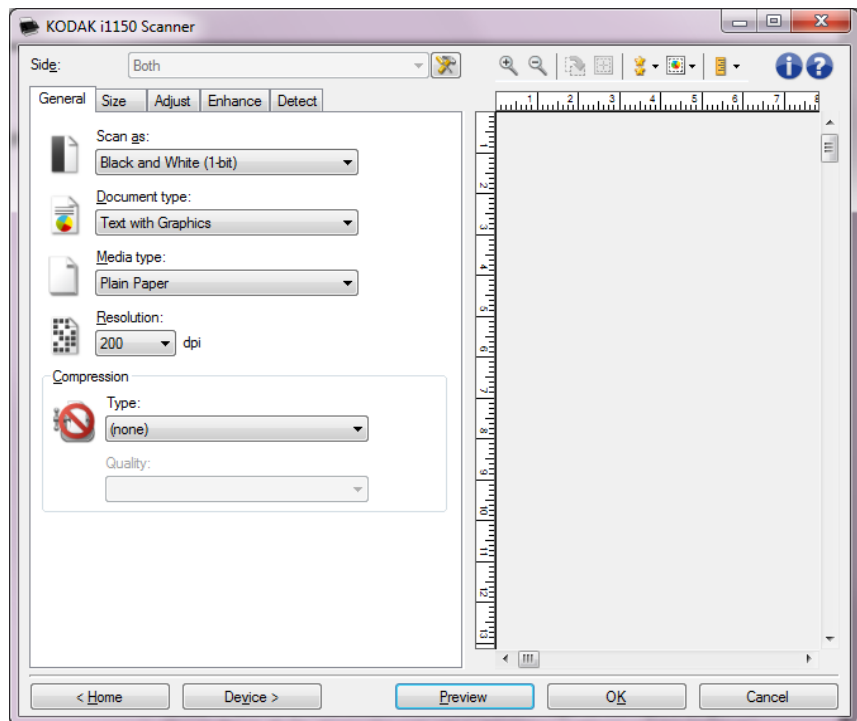
Side — allows you to select which side and image to configure (e.g., Front, Back, Both: Color (24-bit), etc.). All image settings will be applied to the selected image.

NOTES:

• The *Side* 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 Setup: 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 is only available if the rotated outline fits in the scanner's maximum width.
	Center Outline: adjusts the X origin of the outline such 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 that is 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 Updates: allows you to select how the displayed image is updated. • **On**: the displayed image will automatically show the effects of your settings changes, in most cases, without having to rescan the document. If rescan 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 choose **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 does not align with your preview image, you may use the mouse to adjust the size and location of the outline. As the mouse cursor moves around the outline, the cursor will change indicating that you can adjust the outline by pressing and holding the left mouse button.

  - **Move**: place the mouse cursor within the outline to adjust the location of the outline.

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

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

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

Home — returns you 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/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.

General tab   The General tab contains the commonly used image options. In most
                                cases, you will not have to change options on other tabs.
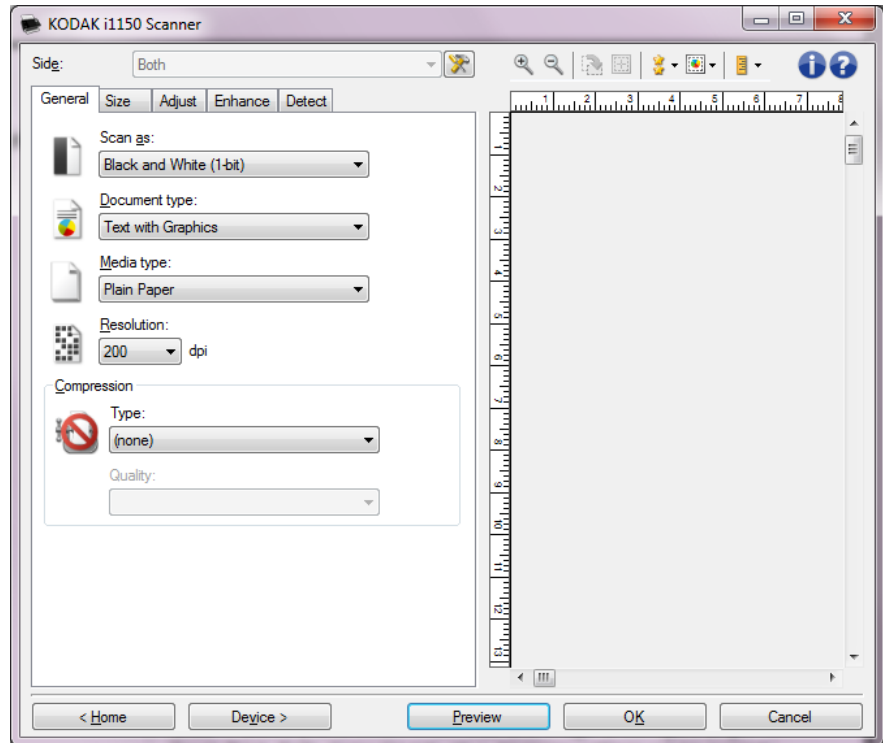
Scan as — allows you to select the electronic image format.

- **Color (24-bit)**: produces a color version of your document.

- **Grayscale (8-bit**): produces a grayscale version of your document.

- **Black and white (1-bit)**: produces a black and white version of your
  document.

    NOTE: The *Scan as* option is only available when **Images per Side:
          One** is selected on the Advanced tab.

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

- **Text with Graphics**: the documents contain a mix of text, business
  graphics (bar graphs, pie charts, etc.) and line art.

- **Text**: the documents contain mostly text.

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

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

Resolution or dots per inch (dpi) — allows you to select the dots per
inch (dpi), which is a determinant of a better quality image. It may also
increase scanning time and image size. The resolutions are: 100, 150,
200, 240, 250, 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 your electronic image size.

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

  - **(none)**: no compression, which may produce a large image size.
  - **Group-4**: uses a CCITT standard to compress a black and white image, often used in conjunction with TIFF files.
  - **JPEG**: uses JPEG techniques to compress a color/grayscale image.

    NOTE: The Group-4 and JPEG options are only available for Scan as: Black and White (1-bit).

- **Quality** — if you choose JPEG compression, select one of the quality options. This option is not applied to the preview image.

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

Size tab

The Size tab allows you to define values relating to the image output (e.g., cropping values, paper size, etc.).
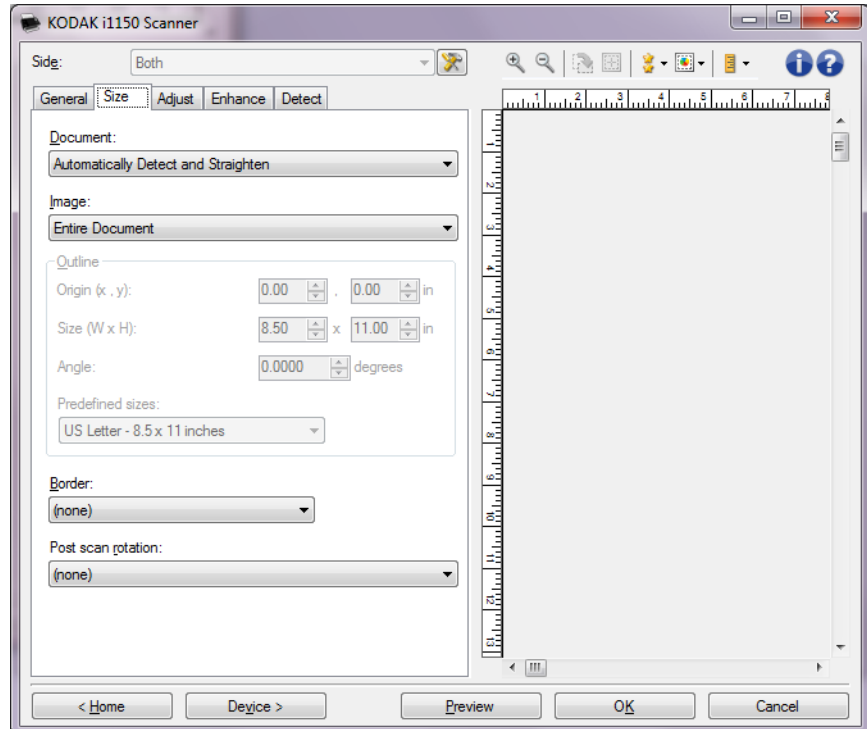
Document — allows you to select how the scanner will detect your document as it is being fed through the scanner.

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

- **Automatically Detect**: the scanner will automatically find each document (regardless of size). If a document is fed crooked, it will not be straightened.

- **Manually Select**: the scanner will return an image based on the area you specify with the *Outline* options. It is suggested that you only use this option for scan jobs that contain same-size documents.

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

- **Entire Document**: if you select **Document: Automatically Detect and Straighten**, **Document: Automatically Detect** or **Document: Manually Select**, returns the entire document.

- **Part of Document**: if you select **Document: Automatically Detect and Straighten**, returns the portion of the document which you specify with the *Outline* options.

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

- **Origin (x, y)**:

  - if you select **Document: Automatically Detect and Straighten,** (x) is the distance from the left edge of the document and (y) is the distance from the top edge of the document.

  - if you select **Document: Manually Select,** (x) is the distance from the left edge of the scanner's paper path and (y) is the distance from the first portion of the document detected by the scanner.

- **Size (W x H)**: if you select **Document: Automatically Detect and Straighten** or **Document: Manually Select**, this is the width and height of the electronic image.

NOTE: The electronic image may be shorter than you specified if the outline goes beyond the end of the scanned document.

- **Angle**: allows you to select the angle of the outline.

- **Predefined sizes**: provides a list of commonly used paper sizes. Selecting an item in this list will automatically set the size of the outline to that paper's size. **Custom** will be displayed when the outline size does not match any sizes in the list.

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

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

- **(none)**

- **Add**: includes up to approximately 0.254 cm (0.1 inches) of border around all of the image edges.

  NOTE: This option is not available for **Document: Automatically Detect** and **Document Manually Select**.

- **Remove**: produces an image that contains just the document by eliminating any residual border. Residual border can be used by variations in a document edge; for example, when a document is not a perfect rectangle and/or was fed crooked.

  NOTES:
  - While this option will not remove large amounts of residual border, there is a possibility that a small amount of the document will be lost.

  - This option is only available when both **Document: Automatically Detect and Straighten** and **Image: Entire Document** are selected.

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

- **(none)**

- **Automatic** — the scanner will analyze each document to determine how it was fed and will rotate the image to the proper orientation.

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

- **Automatic - default to 180:** the scanner will analyze the content of each document to determine how it was fed and will rotate the image to the proper orientation. If the scanner cannot determine how the document was fed, it will rotate the image 180 degrees.

- **Automatic - default to 270:** the scanner will analyze the content of each document to determine how it was fed and will rotate the image to the proper orientation. If the scanner cannot determine how the document was fed, it will rotate the image 270 degrees.

- **90, 180, 270 degrees** — the amount of rotation that will be performed.

The following example shows how these settings effect a document that was fed landscape:

Landscape Feed Orientation	90 degrees	180 degrees	270 degrees
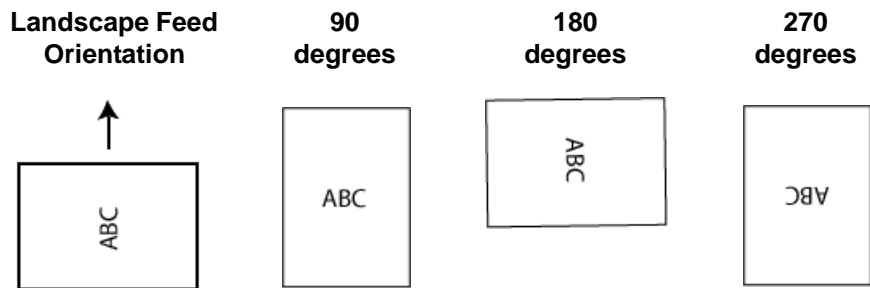
NOTE: This option is not applied to the preview image.

Adjust tab: black and white

The options available on the Adjust tab depend on the *Scan as* selection on the General tab. The following options are based on a *Scan as* selection of **Black and White**.
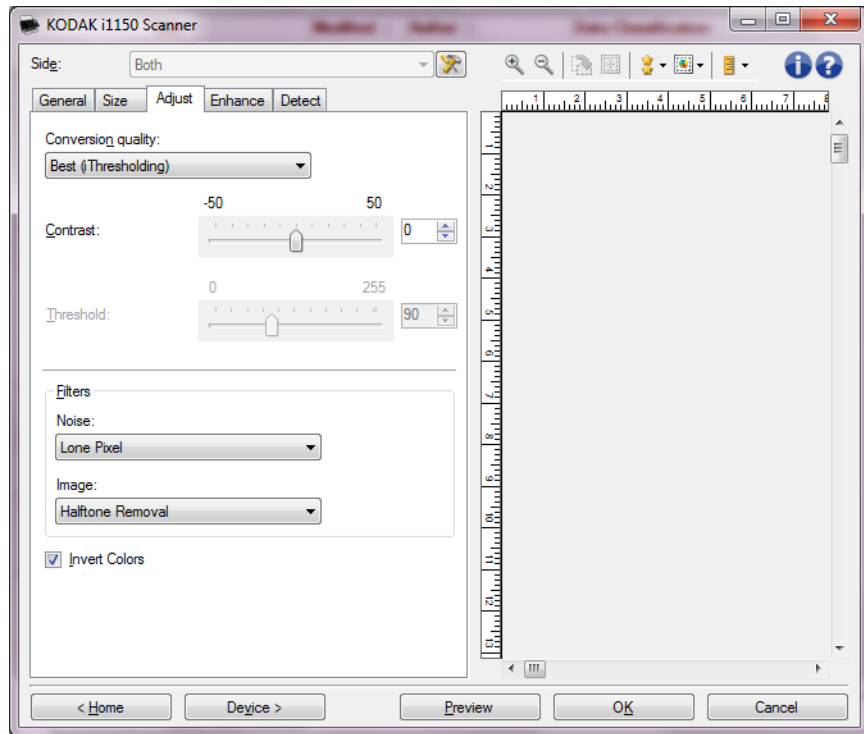
Conversion quality — these settings effect how the scanner analyzes a grayscale version of the document which is used to produce the black and white electronic image.

* **Best (iThresholding)**: the scanner analyzes each document to determine the optimal settings to produce the highest quality image. This option allows scanning of mixed documents with varying quality (e.g., faint text, shaded backgrounds, color backgrounds) and when scanning with consistent document sets.

* **Normal (ATP)**: allows you to determine the optimal settings to produce the desired image quality. This option works best when scanning with consistent document sets. You may also want to use this option if you have difficult documents such that you cannot find a Contrast setting for *Best* that produces the desired quality.

* **Draft (Fixed)**: allows you to select the grayscale threshold used to determine if a pixel is black or white. This option works best for high contrast documents.

Contrast — allows you to make an image 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 make light information more visible. The options range from **-50** to **50**. The default is 0.

NOTE: This is not 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 appear lighter, and can be used to subdue background noise. Increasing this setting will make the image appear darker, and can be used to help pick up light information. The options range from 0 to 255. The default is 90.

NOTE: This is not available for *Conversion quality: Best* and *Conversion quality: Normal*.

Filters

- **Noise**
    - (**none**)
    - **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.
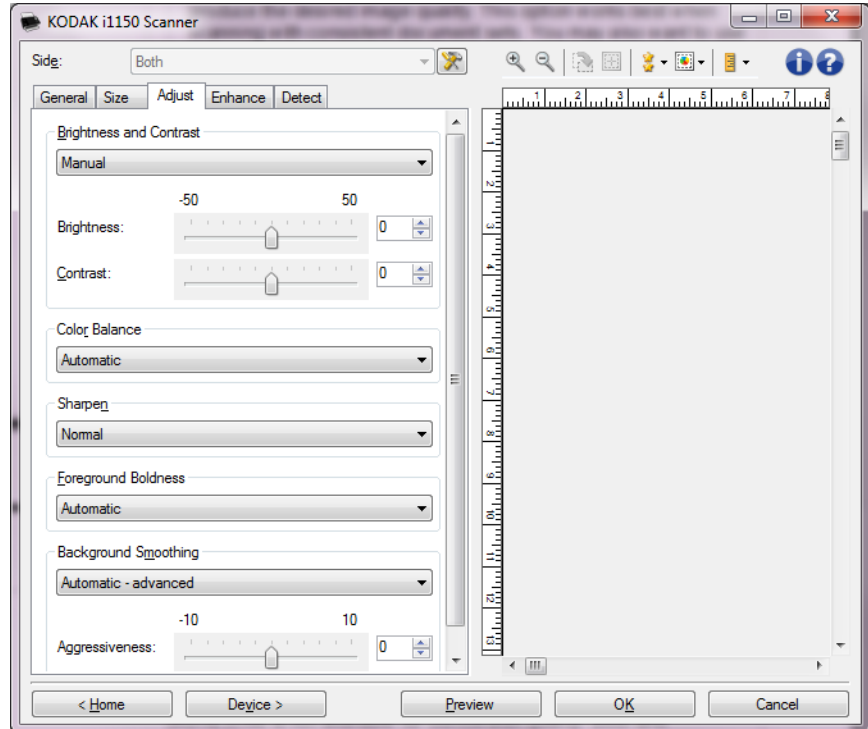
- **Image**
    - (**none**)
    - **Halftone Removal**: enhances dot matrix text and images with halftone screens (e.g., newspaper photographs).

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

Adjust tab: color or grayscale

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

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

Brightness and Contrast

• (**none**)

• **Automatic**: automatically adjusts each image.

• **Manual**: allows 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

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

NOTE: Color Balance is not available for Grayscale images.

Sharpen — increases the contrast of edges within the image.
- (**none**)
- **Normal**
- **High**
- **Exaggerated**

Foreground Boldness — using this option for documents or forms where you want the foreground (e.g. text, lines, etc.) to be more prominent.
- **(none)**
- **Automatic**: all foreground will be bolder.
- **Automatic - advanced**: for advanced users that want to further adjust the **Automatic** option.
  - **Aggressiveness** - allows you to adjust the extent at which the foreground is determined. The values range from **-10** to **10**.

Background Smoothing — using this option for documents or forms with a background color will help produce images with a more uniform background color. This option improves image quality and may reduce file size.
- **(none)**
- **Automatic**: smooths up to three background colors.
- **Automatic - advanced**: for advanced users that want to further adjust the **Automatic** option.
  - **Aggressiveness** - allows you to adjust the extent at which the background(s) are determined. The values range from **-10** to **10**.

Enhance tab

The options on the Enhance tab depend on the *Scan as* selection on the General tab.

NOTE: Most options have additional settings. Those settings will only be visible when the option is turned on. If all of the settings do not fit on the screen, a scroll bar will appear giving you access to all setting.
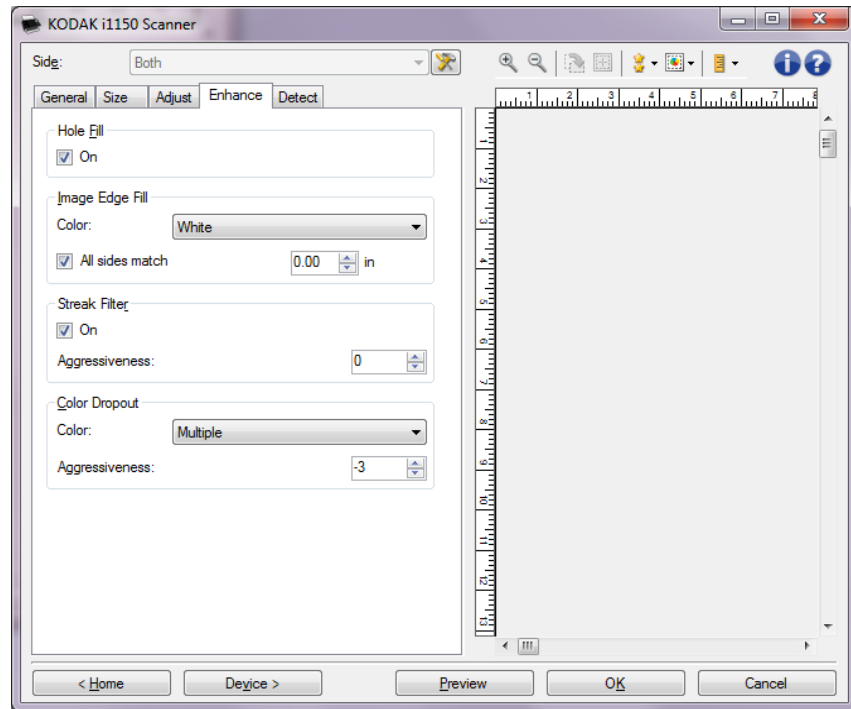
Hole Fill —allows you to fill in the holes that are around the edges of your document. The types of holes that are filled include: round, rectangular, and irregularly shaped (e.g., double-punched or those having a slight tear that could have occurred when the document was removed from a binder). Checking **On** turns hole fill on.

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

- **Color**:
  - (**none**)
  - **Automatic**: the scanner will automatically fill the edges of the image using the surrounding color.
  - **Automatic - include tears**: in addition to filling the edges, the scanner will also fill in tears along the edge of document.
  - **White**
  - **Black**

- **All sides match**: when turned on, an equal amount will be filled in on all sides. This option is only available for **Black and White**.
- **Top**: determines how much of the top edge will be filled in.
- **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.
- **Bottom**: determines how much of the bottom edge will be filled in.

NOTES:

- The **Top, Left/Right** and **Bottom** options are not available when *All sides match* is turned on.
- When using **Image Edge Fill,** be careful not to enter a value too large as it could fill in image data that you want to keep.
- This option is 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 not following the recommended cleaning procedures for your scanner.

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

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

Color
- (**none**)
- **Multiple**: drops colors other than dark shades (e.g., black or dark blue ink)
- **Predominant**: drops the predominant color
- **Blue**
- **Green**
- **Red**
  - **Aggressiveness**: allows you to adjust the extent at which the colors are dropped. The values range from **-10** to **10**. The default is 0. This option is only available when *Color* is set to **Multiple** or **Predominant**.

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

Detect tab   The Detect tab provides the following options.
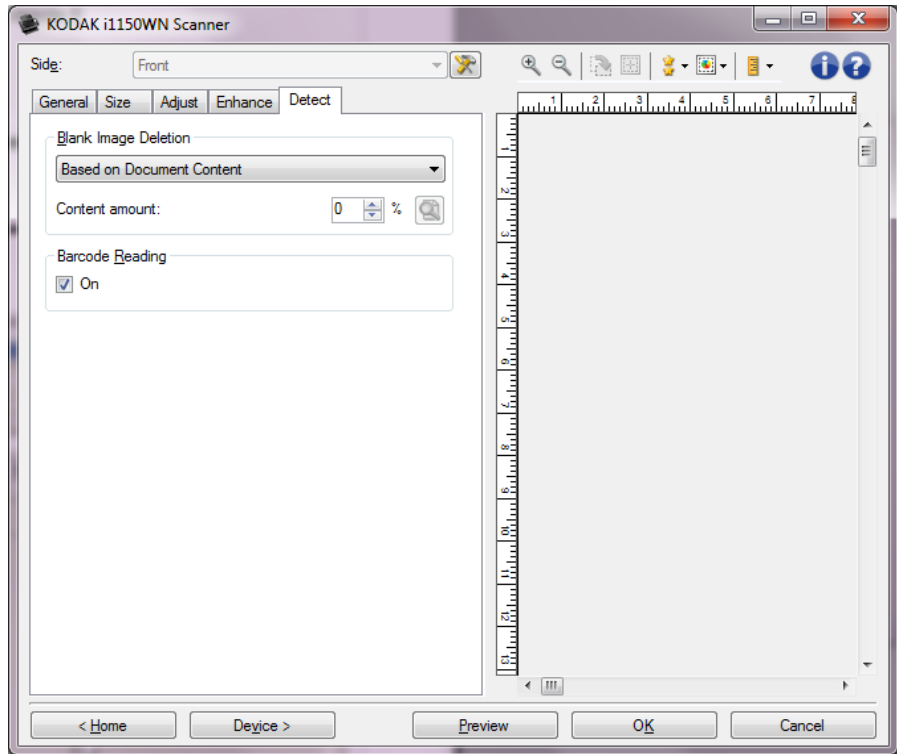
Blank Image Deletion — allows you to configure the scanner to not give blank images to the scanning application.

- **(none)**: all images are given to the scanning application.

- **Based on Document Content**: images will be considered blank based on the document content within the image.

  - **Content amount**: allows you to select the maximum amount of content that the scanner will consider to be blank. Any image that has more content than this value will be considered non-blank and will be given to the scanning application. The values range from 0 to 100 percent.

  - 🔲 : *Content amount* will be filled in with the amount of content in the preview image. If you have a representative blank document (e.g., blank sheet with letter head), this can be used to assist with determining the setting for Content amount (i.e., perform a preview scan, click this button, and adjust Content amount as appropriate).

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

- **Based on Size**: images will be considered blank based on the size of the image that would be given to the scanning application (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 that is less than this value will be considered blank and will not be given to the scanning application. The values range from 1 to 1000 KB (1 KB equals 1024 bytes).

Barcode — allows you to configure the scanner to search your images for a barcode. The scanner will search each image and decode the first barcode it finds and return the information to the scanning application.

The following barcodes can be detected:

Interleaved 2 of 5
Code 3 of 9
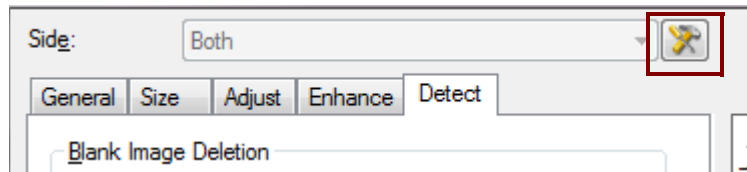Code 128
Codabar
UPC-A
UPC-E
EAN-13
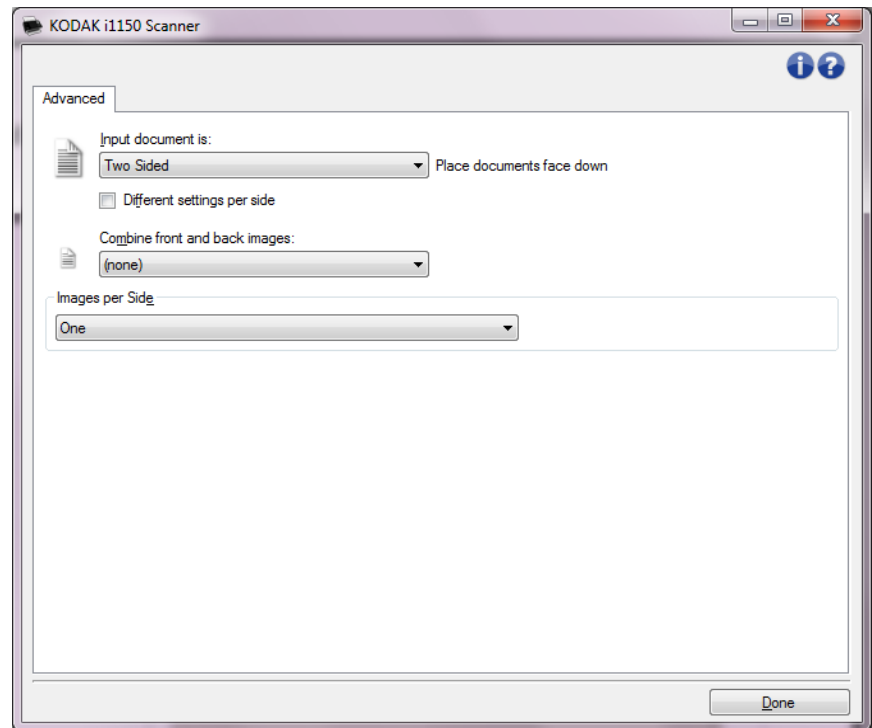EAN-8
PDF417

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

Advanced Image Setup

Advanced tab

The Advanced Image Setup icon is located at the top of the Image Settings window next to the **Side** drop-down box.

When you select the Advanced Image Setup icon, the Advanced tab will be displayed.

Input document is — select **Two Sided**, **One sided - Front,** or **One sided - Back** depending on what side(s) you want to configure.

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

Different settings per side — by default, the settings you select apply to both sides of the image. Turn this option on if you want to select different image processing settings for each side of the document you are scanning. For example, if you want the front side to be color and the rear side to be black and white, first make sure that you have selected the **Two Sided** option from the *Input Document is* drop-down list, then select the *Different Settings per side* checkbox.

Once you have done this, the *Side* drop-down list on the Image Settings window will no longer be grayed out and you can select different settings for each side. Now that you have enabled **Different settings per side**, your initial selections will apply only to the front side of the document you are scanning. After you have made your selections for the front side, use the *Side* drop-down list to select the back side and then make the settings you want to apply to the back.

NOTE: The *Different settings per side* option is only available for *duplex* scanner models.
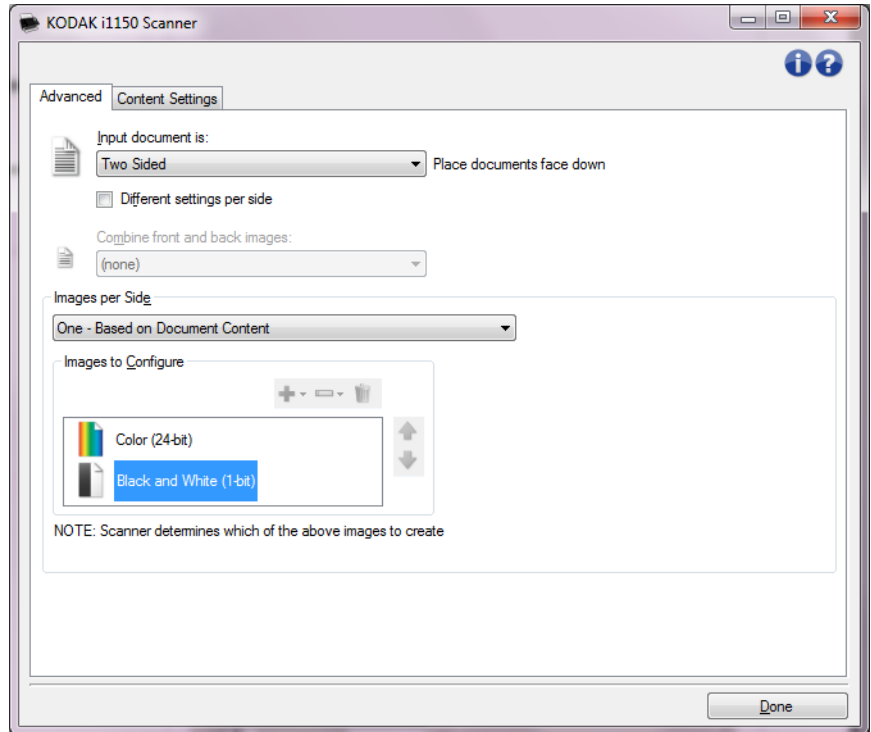
Combine front and back images — typically, for a document, one image is created for the front side and another image is created for the back side. Turn this option on if you want one image that contains both the front side and back side of the document. The selections are:

Front on Top: front side will be above the back side within the image.

Front on Bottom: back side will be above the front side within the image.

Front on Left: front side will be to the left of the back side within the image.

Front on Right: back side will be to the left of the front side within the image.

NOTES:
- This option is only available for duplex scanner models.
- This option is only available when *Input document is* is set to **Two Sided**, *Different settings per side* is turned **off** and *Images per side* is set to **One**; and the document is scanned from the Document Feeder.
- This option is not applied to the preview image.

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

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

- **One - Based on Document Content**: indicates you want the scanner to automatically detect if the document is color/grayscale or black and white. This option is not applied to the preview image.

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

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

Images to Configure — indicates which electronic images you need to configure.

NOTE: This is only available if you select anything other than **One** from the *Images per side* option. For procedures on how to configure advanced options, see the sections that follow:

- *Creating color/grayscale or black and white images based on the content of your documents, Example 1.*

- *Creating multiple images for each side of a document, Example 2.*

- *Creating different settings for each side of a document, Example 3.*

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

Toolbar buttons

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

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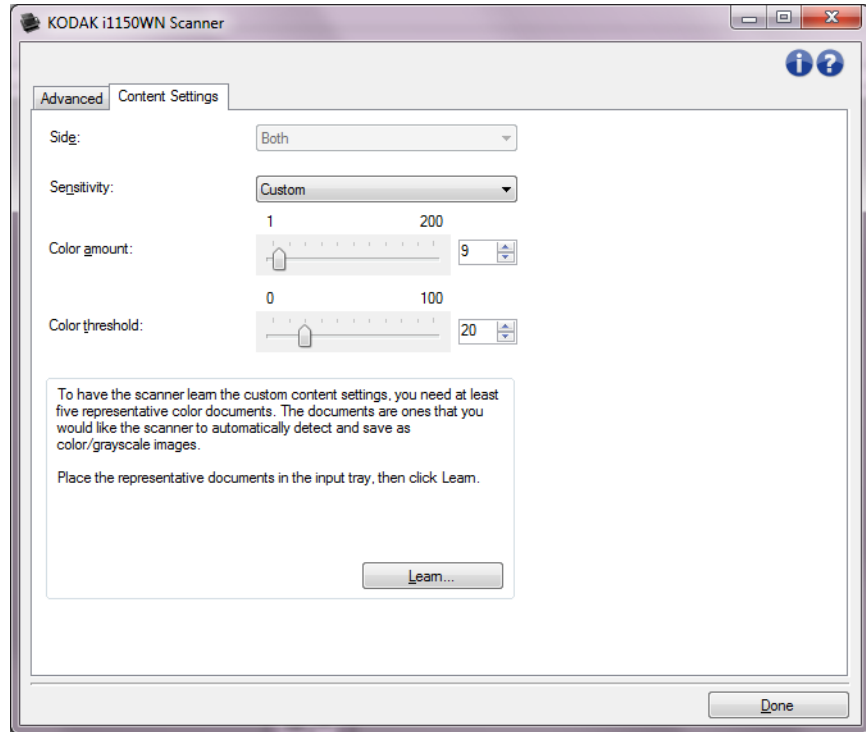
Delete: removes the selected image type.

Done — returns you to the Image Settings window.

Content Settings tab

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

Side — determines which side the *Sensitivity* settings are applied to. This option is only available if **Different settings per side** is checked on the Advanced tab.

Sensitivity

- **(none)**

- **Low**: documents requiring only a small amount of color to be saved as color/grayscale images. Used for capturing documents that are primarily black text with small logos, or contain small amounts of highlighted text or small colorful photos.

- **Medium**: documents requiring more color, as compared with the Low option, before they are saved as color/grayscale images.

- **High**: documents requiring more color, as compared with the Medium option, before they will be saved as color/grayscale images. Used for distinguishing documents containing medium- to large-size colorful photos from plain black text. Photos with neutral colors may require adjustments to the *Color threshold* or *Color amount* values in order to be captured correctly.

- **Custom**: allows you to manually adjust the *Color amount* and/or *Color threshold.*

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

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

Color threshold — the color threshold or saturation (e.g., pale blue vs. dark blue) at which a given color will be included in the color amount calculation. A higher value indicates that a more intense color is required. Valid values are **0** to **100**.

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

These Color amount and Color threshold sliders will be updated automatically. If these values do not provide the desired results with your job set, you may need to manually adjust the *Color threshold*.

Creating color/grayscale or black and white images based on the content of your documents, Example 1

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

1. Select a **Setting Shortcut** from the main Scanner window that closely describes your desired output.

2. Select **Settings** to display the Image Settings window.

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

4. Select **Input document is: Two Sided.**

5. Select **Images per side: One – Based on Document Content.**

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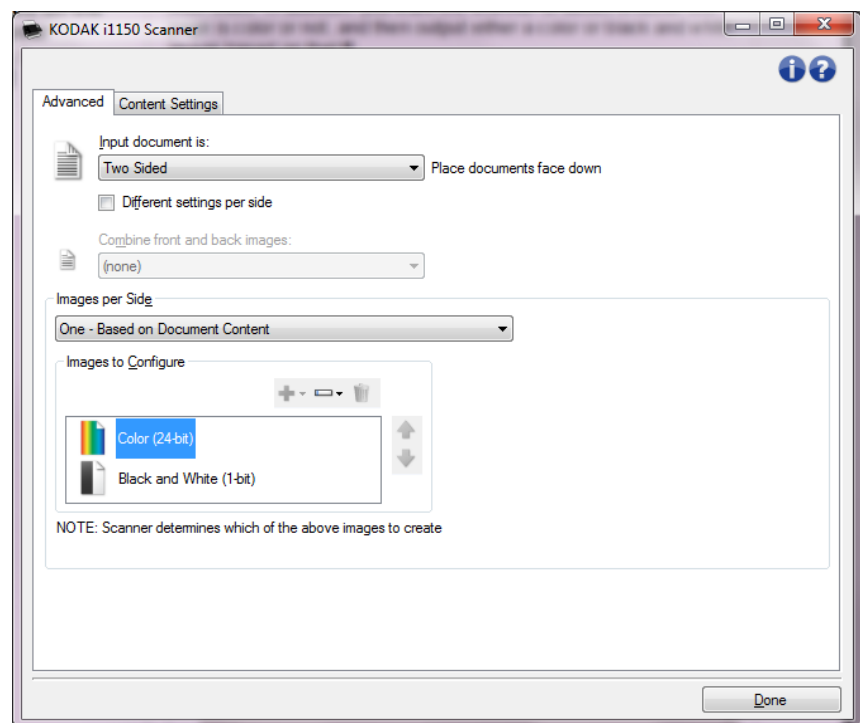

6. If you want a grayscale image instead of a color image, when enough color is detected in the document:
   - make sure *Color (24-bit)* is selected
   - select **Change** to display a list of options
   - select **Grayscale**

7. Go to the **Content Settings** tab.
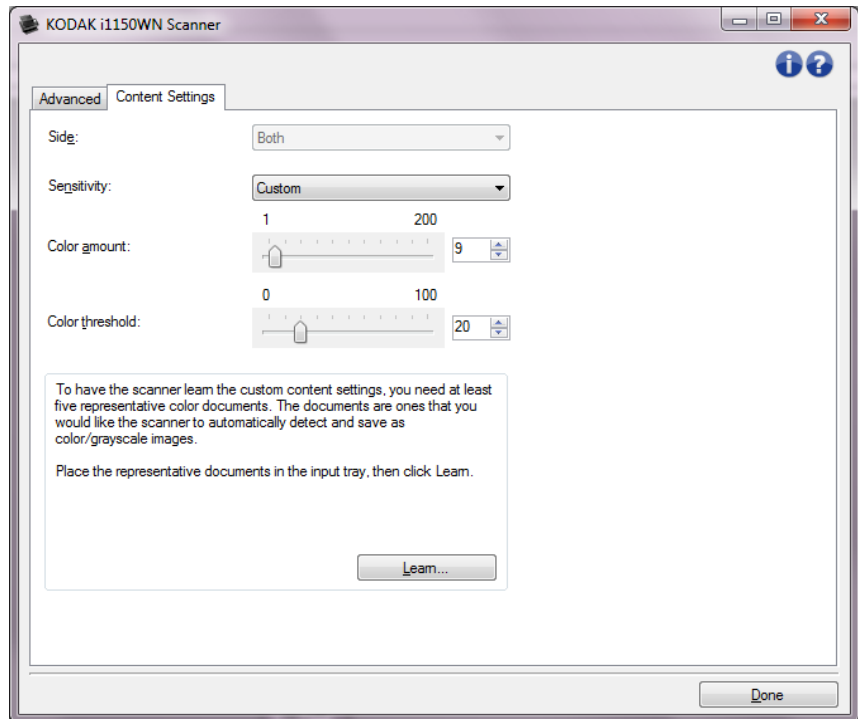
8. Select a **Sensitivity** option.

9. Select **Done** to return to the Image Settings window.

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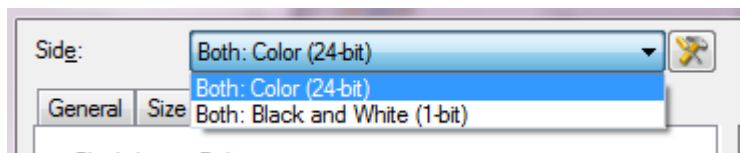
10. Select **Side: Both: Color (24-bit).**

    NOTE: Make any other adjustments to the color image settings on
    the rest of the tabs on the Image Settings window.

11. Select **Side: Both: Black and White (1-bit).**

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

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

Creating multiple images for each side of a document, Example 2

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

1. Select a **Setting Shortcut** from the main Scanner window that closely describes your desired output.

2. Select **Settings** to display the Image Settings window.

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

4. Select **Input document is: Two Sided.**

5. Select **Images per side: Multiple.**

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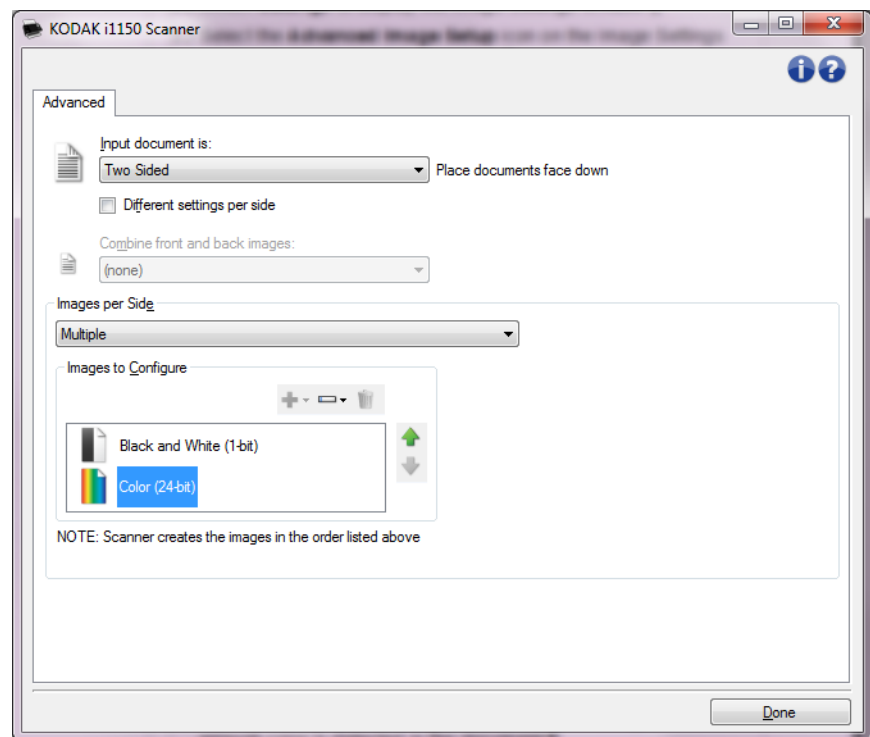

6. If you want a grayscale image instead of a color image, when enough color is detected in the document:

   • make sure *Color (24-bit)* is selected
   • select **Change** to display a list of options
   • select **Grayscale**

7. By default the scanner will produce the first image listed (black and white in this example) and deliver it to the scanning application, then it will produce and deliver the second image listed (color/grayscale in this example). If you want the color/grayscale image to be produced and delivered first:

• make sure *Color (24-bit)* is selected
• select **Move up** to place the color/grayscale image first in the list
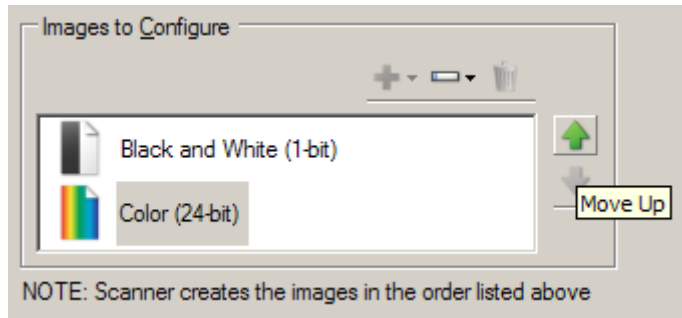
8. Select **Done** to return to the Image Settings window.

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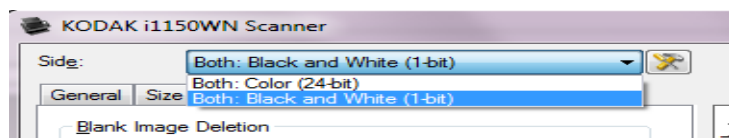
9. Select **Side: Both: Color (24-bit)**.

NOTE: Make any other adjustments to the color image settings on the rest of the tabs on the Image Settings window.

10. Select **Side: Both: Black and White (1-bit)**.

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

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

Creating different settings for each side of a document, Example 3

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

NOTE: This example is only available for duplex scanners.

1. If you are not already on the Advanced tab:
   - Select a **Setting Shortcut** from the main Scanner window that closely describes your desired output.
   - Select **Settings** to display the Image Settings window.
   - Select the **Advanced Image Setup** icon on the Image Settings window to display the Advanced tab.

2. Select **Input document is: Two Sided**.

3. Turn on the **Different settings per side** option.

4. Select **Images per side: One.**
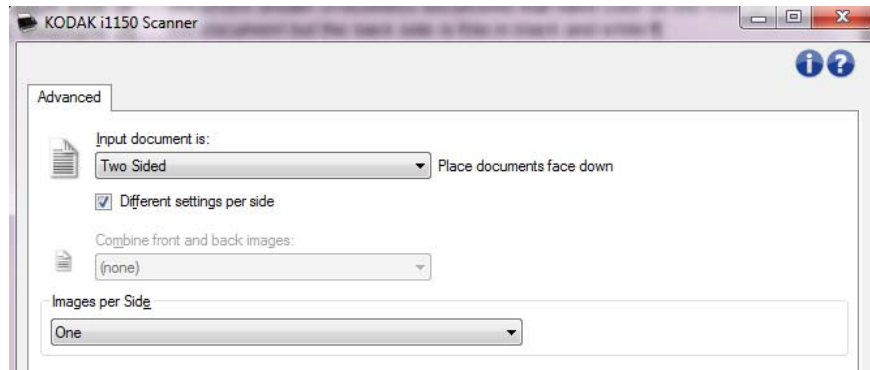
5. Select **Done** to return to the Image Settings window.

   NOTE: You will notice that the *Side* option now has two entries: **Front** and **Back**.
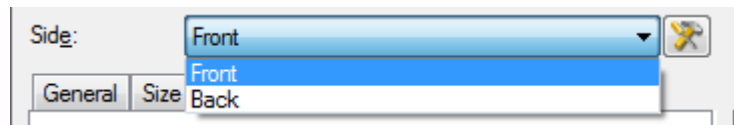
6. Select **Side: Front**.

7. Select **Color (24-bit)** for the *Scan as* option on the General tab.

   NOTE: Make any other adjustments to the front side settings on the rest of the tabs on the Image Settings window.

8. Select **Side: Back**.

9. Select **Black and White (1-bit)** for the *Scan as* option on the General tab.

   NOTE: Make any other adjustments to the back side settings on the rest of the tabs on the Image Settings window.

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

Creating a new Setting Shortcut

1. From the main Scanner window, select a Setting Shortcut from the list. It is recommended that you select a shortcut that most closely describes the desired image output.
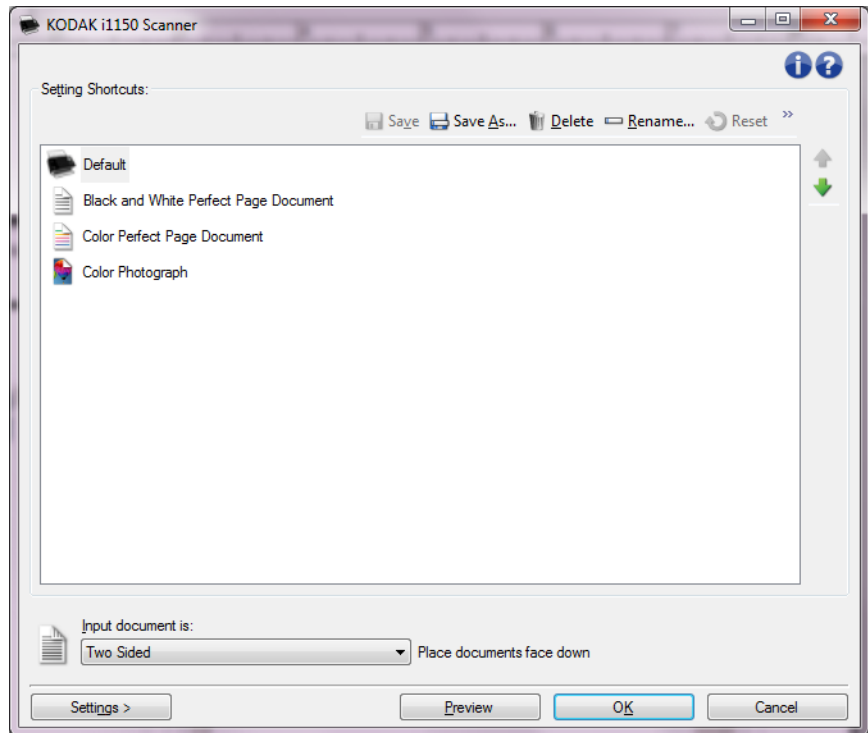

2. Determine if you want to capture an electronic image of the front of your document, back of your document or both sides of your document and make the selection from the *Input document is* field.

3. Select **Settings** on the main Scanner window. The General tab of the Image Settings window will be displayed.
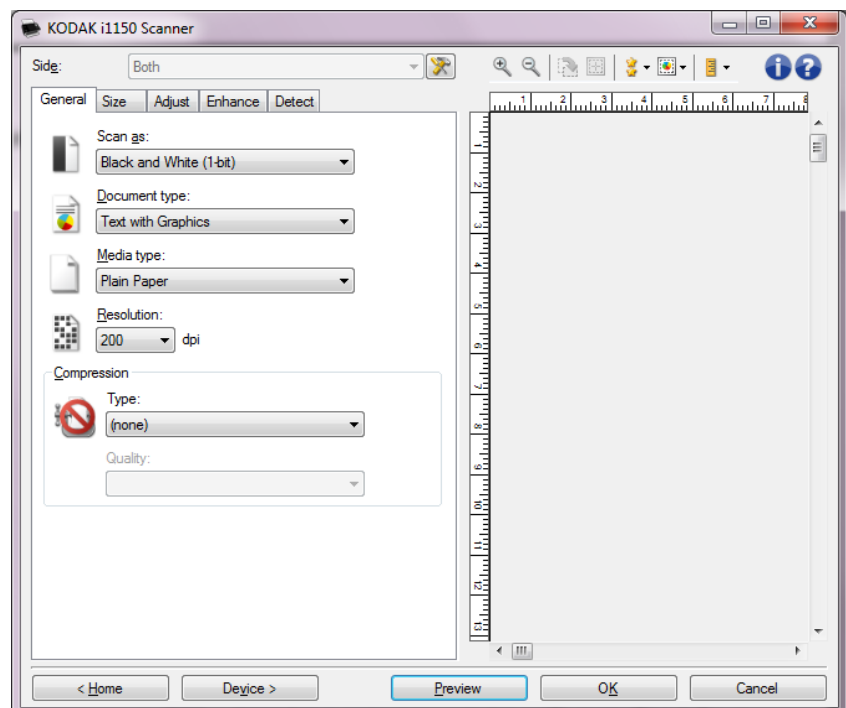
4. Select the appropriate options on the General tab.

   NOTE: If necessary, review each setting on the other tabs and make any changes.

5. Place one representative document in the input tray of the scanner.

6. Select **Preview** to review the resulting image.

   NOTE: If the images are not acceptable, you can either select a different predefined Setting Shortcut or make additional changes on the rest of the tabs on the Image Settings window.

7. Define the desired Device settings by selecting **Device** on the Image Settings window to display the Device Settings window.

8. Review each tab and select the appropriate options or actions you want the scanner to perform.

9. Select **Home** to return to the main Scanner window.

10. Select **Save As** to display the Save As window.

11. Enter a new shortcut name that is meaningful to you and select **Save**.

Changing Image Settings

1. Select a Setting Shortcut from the main Scanner window that closely describes your desired output.

2. Select an *Input document is* option from the main Scanner window.

3. Select **Settings** to display the Image Settings window.
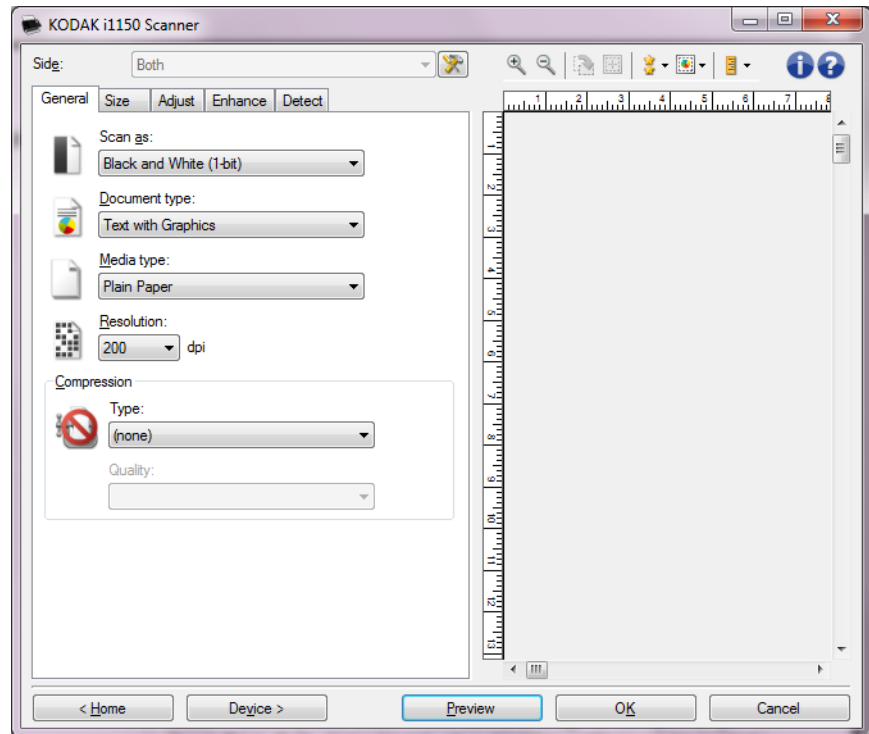
4. Before making any adjustments, browse through the tabs on the Image Settings window to get familiar with options that are available.

5. For each option you want to use, make the appropriate selections you want the scanner to perform when scanning.

6. If you want to see the result of your options:

   • Place a representative document in the input tray of the scanner.

   • Select **Preview** to perform a preview scan.

   NOTES:

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

   • If you are making interactive adjustments, it is recommended that you preview the image using the highest preview quality.

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

The Device Settings window

From this window you can set all scanner-specific options, as well as diagnostics, by using the available tabs. The values used in Device Settings are saved in the selected *Setting Shortcut*. the Device Setting window includes the General, Transport and Multifeed tabs.
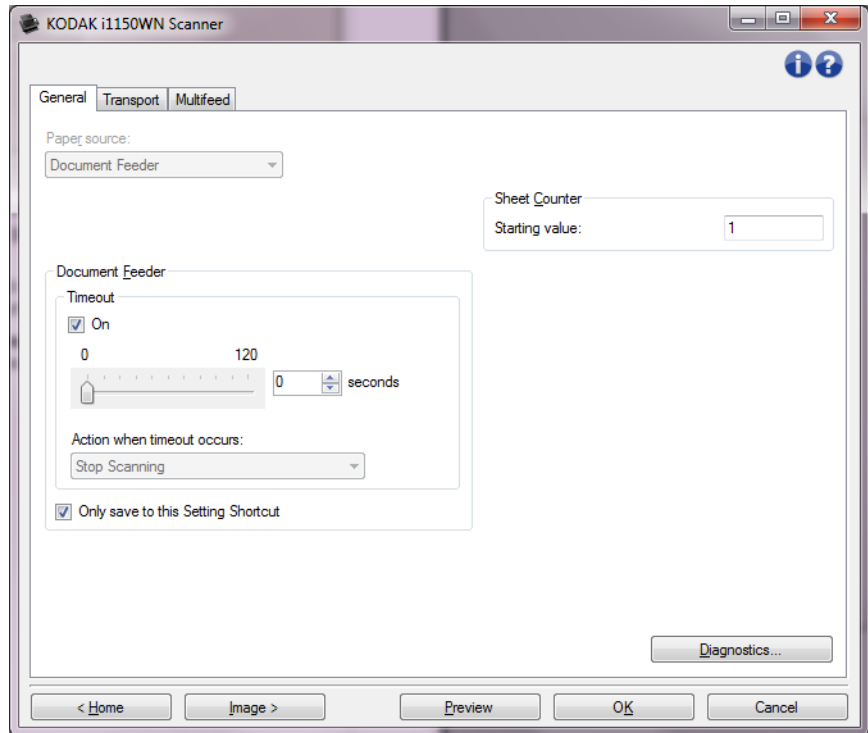
Home — returns you to the main Scanner window.

Image — displays the Image Settings window.

Preview — initiates a scan and then displays the Image Settings window with the scanned image placed in the preview area. The image displayed is a sample based on your current shortcut settings.

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.
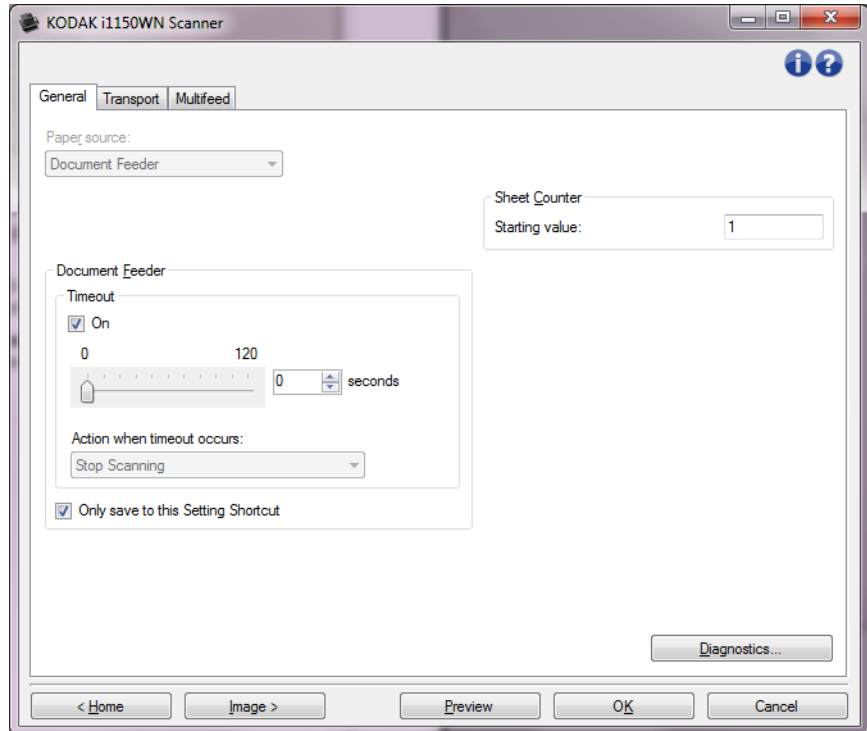
Information Icons

	About: displays the scanners' version and copyright information.
	Help: displays help information for the window currently being displayed.

Device - General tab

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

Paper source
- **Automatic:** looks for paper in the document feeder first. If there are no documents in the input tray, the scanner will scan from the flatbed.
- **Document Feeder**: the scanner will only scan documents from the input tray.
- **Flatbed**: scanner will scan from the flatbed.

NOTES:

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

- The Flatbed Accessory is not available for the *Kodak* i1150WN and i1190WN Scanners.

Document Feeder
- **Timeout**: allows you to select the amount of time 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 stop and control will return to the scanning application (e.g., ends the job).

Sheet Counter — enter the number to be assigned to the next physical sheet of paper entering the scanner. This is incremented sequentially by the scanner and is returned in the image header.

Diagnostics — displays the Diagnostics tab.

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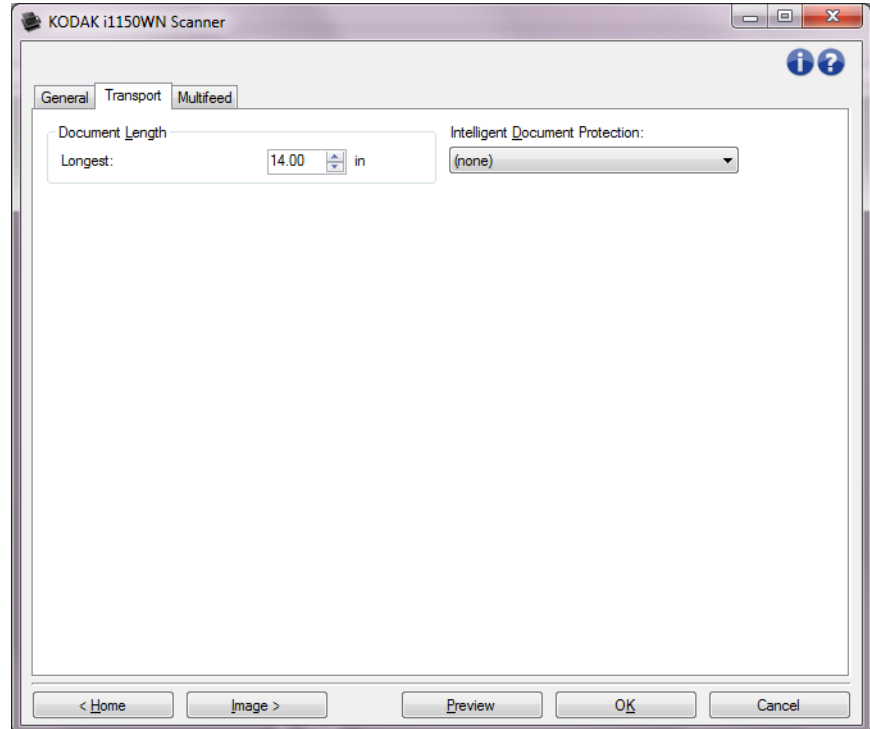

Document Length

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

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

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

    - **(none)**
    - **Minimum:** select this option if the scanner is stopping too frequently on documents that you do not want it to detect.
        NOTE: Documents may become more damaged before detection occurs.

    - **Normal:** this is the recommended option as it provides a balance between minimizing document damage and stopping the scanner unnecessarily.
    - **Maximum**: select this option to get the least amount of document damage.
        NOTE: This may cause the scanner to stop unnecessarily.

Device - Multifeed tab

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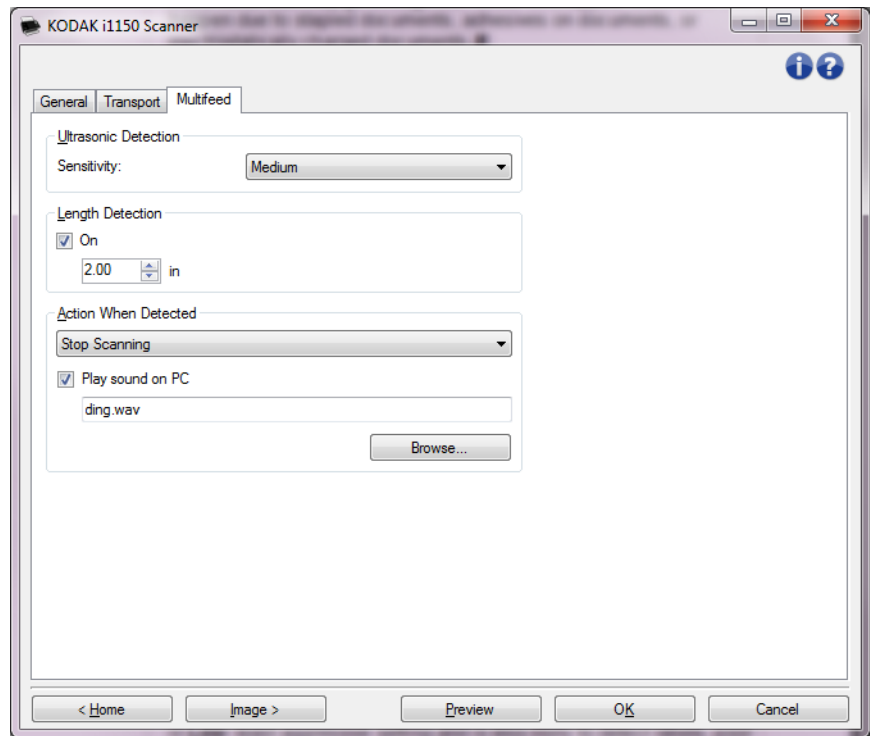
Ultrasonic Detection

Sensitivity — controls how aggressively the scanner will work to determine if more than one document is fed into the scanner. Multi-feeds are triggered by detecting air gaps between documents. This allows multifeed detection to be used with job sets containing documents with mixed thicknesses.

- **(none)**

- **Low**: least aggressive setting and is less likely to detect labels, poor quality, thick or wrinkled documents as multi-fed documents.

- **Medium**: use if your job set has varying document thicknesses or labels attached to the document. Depending on the label material, most documents with labels should not be detected as a multi-fed document.

- **High**: the most aggressive setting. This is a good setting to use if all documents have a thickness no greater than 20-lb. bond paper.

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

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

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

- **Stop Scanning**: scanning will stop and control will return to the scanning application (i.e., ends the job). Verify that the paper path has been cleared and restart the scan session from the scanning application.

- **Stop Scanning - generate image(s):** scanning will stop and control will return to the scanning application (i.e., ends the job). Image(s) of the multifed document will be generated. Verify that the paper path has been cleared and restart the scan session from the scanning application.

- **Stop Scanning - leave paper in path**: scanning will stop immediately (i.e., making no attempt to clear the paper path) and control will return to the scanning application (i.e., ends the job). Clear any documents from the paper path prior to restarting the scan session from the scanning application.

- **Continue Scanning**: the scanner will continue to scan.

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

NOTE: The sound on the PC may not occur at the exact time the multifeed is detected by the scanner.

Changing Device settings

1. Select a Setting Shortcut from the main Scanner window that closely describes your desired output.

2. Select **Settings** to display the Image Settings window.

3. Select **Device** to display the Device Settings window.
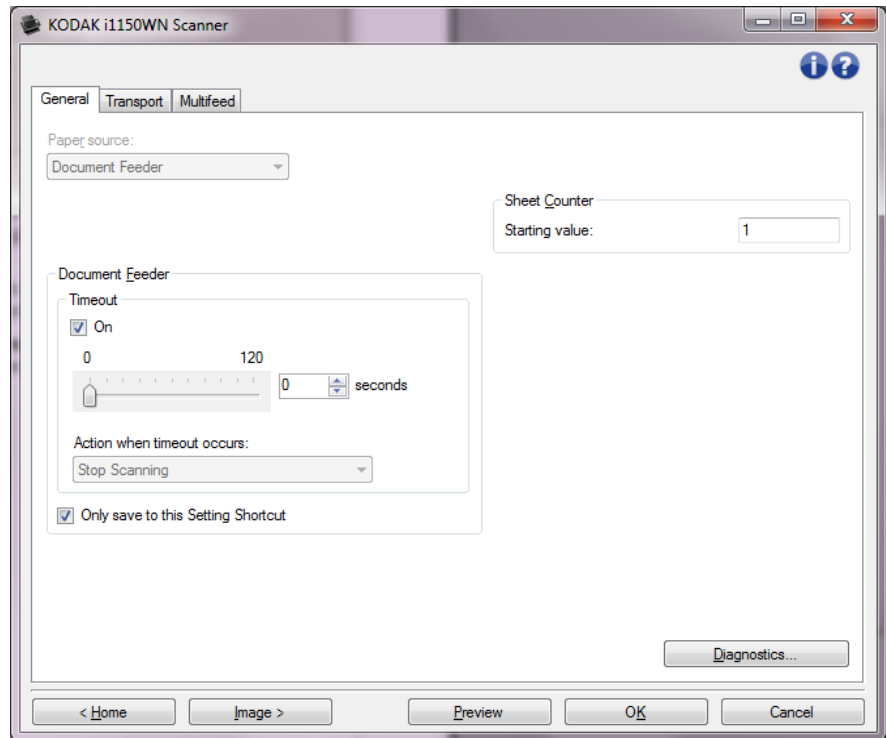
4. Before making any adjustments, browse through the tabs on the Device Settings window to get familiar with options that are available.

5. For each option you want to use, make the appropriate selections you want the scanner to perform when scanning.

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

The Diagnostics window

From this window you can access the diagnostic functions of the scanner. The Diagnostics window includes the following tabs: General, Debug and Logs. The Diagnostics window can be accessed via the Diagnostics button which is located on the General tab of the Device Settings window.

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

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

Done — returns you to the Device Settings window.

Diagnostics - General tab

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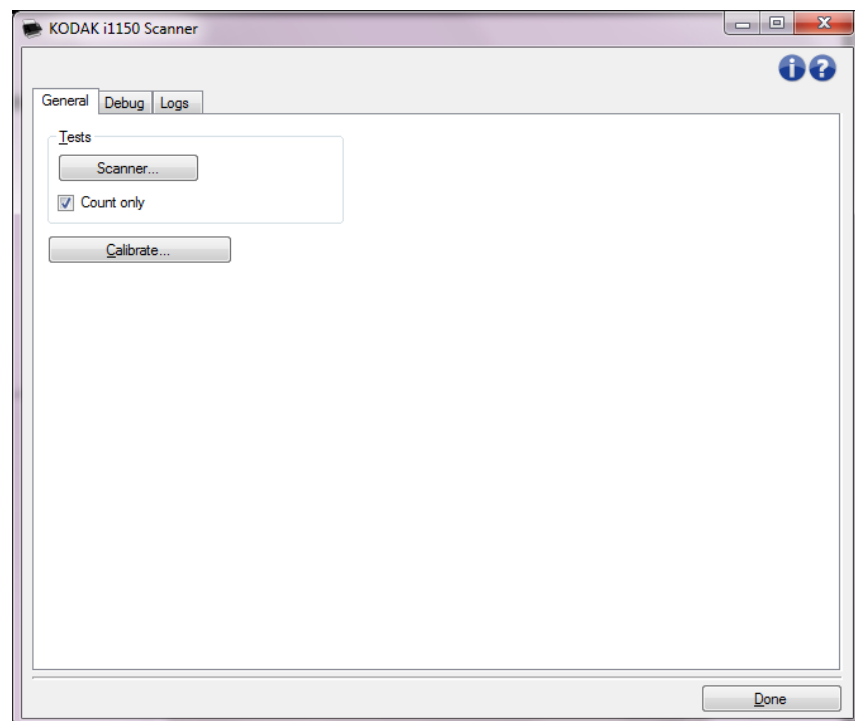
Tests

- **Scanner** — similar to, but more extensive than, a power-on self test. Clicking this button will put the device through a series of checks to determine that all the scanner hardware is working.

- **Count only** — counts the number of documents entering the scanner without sending the images to a scanning application. This test is performed during any scan session in which this option is turned on.

  NOTE: This test is automatically turned off when the scanning application disconnects from the scanner.

**Calibrate** — displays the Calibration window.

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

Diagnostics - Debug tab

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

NOTES:

- All of the options on this tab apply to all Setting Shortcuts, not just the currently selected Setting Shortcut, and are saved immediately.

- In order for any changes on this tab to take effect, you must restart your application.
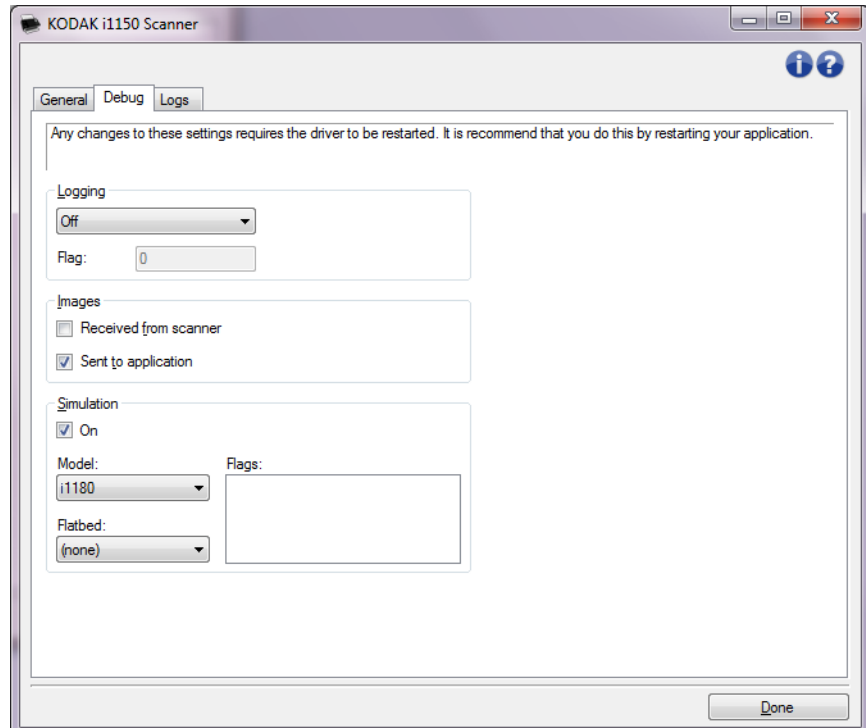
Logging — saves the communications between the scanner and a scanning application. The options are: **Off**, **On** or **Custom**.

Images - Received from scanner — saves the images received at the PC from the scanner.

Images - Sent to application — saves the images received at the scanning application from the scanner.

**Simulation** — allows you to use the TWAIN Data source without using the actual scanner.

- **Model**: allows you to select the specific model to simulate.

- **Flatbed**: allows you to select which flatbed accessory to simulate.

- **Flags**: if supported by your TWAIN Driver/Data source, this will contain a list of accessories your simulate scanner has installed.

Diagnostics - Logs tab   The Logs tab allows you to view scanner information.

Logs

- **General**: displays the scanner's version information, serial number, attached/installed accessories, meters, etc.

- **Operator**: displays the scanner's log. This log can only be cleared by your support personnel.
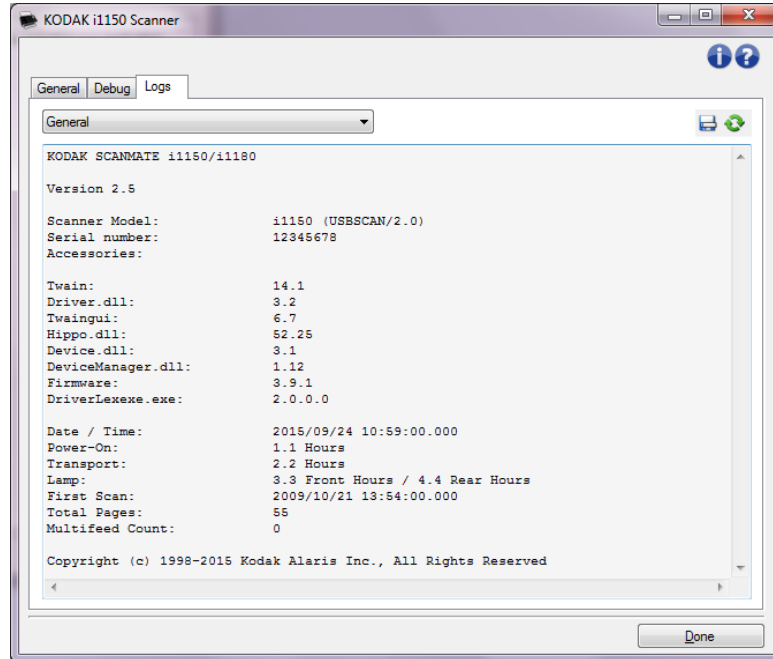
Toolbar buttons

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

- **Description**: enter a brief description of problem/reason for saving the logs.

- **Folder**: the location to save the logs.

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

- **Include debug images**: includes any generated debug images with the logs. This is turned on by default and should only be turned off when recommended by your support personnel.

- **Save**: saves the logs into a file with the extension .eklog.

Refresh: refreshes the currently displayed log.