



Kodak

i1400 Series Scanners

User's Guide

Contents

1	Introduction	1
	Scanner features	1
	Safety information	2
	User precautions	2
	Environmental information	3
	European Union	3
	EMC statements	3
	United States	3
	Japan	4
	Korean	4
	Acoustic emission	4
	Power system connection	4
2	Getting Started	5
	What's in the box	5
	System requirements	5
	Installing the scanner	5
	Attaching the input and output trays	6
	Installing the <i>Kodak Driver Software</i>	7
	Connecting the power cord to the scanner	9
	Disconnecting the power cord	9
	Connecting the USB cable	10
	Turning on the scanner and finalizing <i>Kodak Driver Software</i> installation	10
	Installing application software	12
	Scanner components	12
	Front view	12
	Inside view	13
	Side views	14
3	Using the Scanner	15
	Turning the scanner on and off	15
	Adjusting the input and output trays	15
	Tray extenders and side guides	16
	Adjusting the output tray	17
	Start and stop scanning	18
	Document preparation	18
	Verifying your scanner installation	19
	Viewing test images	21
	Smart touch functionality	22
	Configuration dialog box	23
	Scan To settings	24
	Scan As settings	26
	Configuring function numbers	27
	Smart touch edit window	29
	Using function numbers	30
	Scanning your documents	31
	Automatic feeding	31
	Continuous feeding	32
	Manual feeding	32
	Damaged documents	32

4 Image Processing	33
Overview	33
Terminology and features	33
Starting the Scan Validation Tool	33
Scan Validation Tool dialog box	34
Using the TWAIN datasource	36
How do I begin?	36
Selecting Image settings	37
Selecting Device settings	39
The main <i>Kodak</i> Scanner window	40
The Image Settings window	43
Preview area	44
General tab	45
Size tab	47
Adjustments tab: black and white	51
Adjustments tab: color or grayscale	53
Enhancements tab	55
Defining custom dropout colors using the Color Dropout Configuration window	57
Color Dropout Configuration window - Single tab	59
Color Dropout Configuration window - Multiple tab	62
Color Dropout Configuration window - Advanced tab	65
Advanced Image Setup	67
The Advanced tab	67
Content Settings tab	70
Creating color/grayscale or black and white images based on the contents of your documents, Example 1	72
Creating multiple images for each side of a document, Example 2	74
Creating different settings for each side of a document, Example 3	76
Creating a new shortcut	78
Changing Image settings	80
Creating a custom dropout color to drop a single color	81
Creating a custom dropout color to drop multiple colors	82
The Device Settings window	83
Device - General tab	84
Device - Printer tab	86
Device - Multifeed tab	89
Changing Device settings	91
The Diagnostics window	92
Diagnostics - General tab	93
Diagnostics - Debug tab	95
Diagnostics - Logs tab	97

Using the ISIS Driver	98
The main ISIS Driver window.	98
Main tab	99
Layout tab	102
Image Processing tab	103
Scanner tab.	105
Auto Color Detect tab	107
Adjustments tab	109
Dropout tab	111
Logs tab	112
About tab.	112
Scan Area dialog box	113
5 Document Printing	
Printer specifications	116
Installing/Replacing the ink cartridge	117
Enhanced Printer	118
Document Printer.	120
Changing print positions	122
Changing the print position	122
Replacing the ink blotter strips.	123
Supplies	124
Problem solving	125
6 Maintenance	126
Supplies and consumables	127
Cleaning the separator module	128
Cleaning the feed module	130
Cleaning the drive rollers and transport area	132
Cleaning the imaging guides	133
Cleaning the paper path	134
Replacing parts	134
Replacing the feed module and feed module tires.	135
Replacing the separator module and separator module tires	137
Replacing the pre-separation pad	139
Replacing the imaging guides	140
7 Troubleshooting	143
Indicator lights and error codes	143
Service indicator lights	143
Lamps	143
Clearing document jams	144
Problem solving	145
Appendix A Specifications	147
Appendix B TWAIN Image Processing Terminology	148

Appendix c Warranty - US and Canada only	150
Limited warranty for <i>Kodak</i> Scanners	150
Warranty exclusions	151
Installation Warning and Disclaimer	152
How to obtain limited warranty service	152
Packaging and shipping guidelines	153
Return procedure	153
Customer responsibility	153
Warranty Service description	153
On-site service	154
AUR	154
Depot service	155
Important restrictions	156
Contacting Kodak	156

1 Introduction

The *Kodak i1400 Series Scanners* include the following models:



Kodak i1410 Scanner — desktop simplex color scanner that scans up to 60 ppm (300 dpi, black and white, landscape orientation) letter-size documents.

Kodak i1420 Scanner — desktop duplex color scanner that scans up to 60 ppm (300 dpi, black and white, landscape orientation) letter-size documents.

Kodak i1440 Scanner — desktop duplex color scanner that scans up to 75 ppm (300 dpi, black and white, landscape orientation) letter-size documents.

This User's Guide provides information and procedures for using and maintaining the *Kodak i1400 Series Scanners*. The information in this guide is for use with all scanner models unless otherwise noted.

Scanner features

- Easy to use
- Small, compact size
- Scans up to 30.5 x 86 cm / 12 x 34 inches using the automatic document feeder
- Simultaneous black and white and color/grayscale image output
- Document printing capabilities for the *Kodak i1420* and *i1440 Scanners*
- Smart touch functionality allows you to send documents to file, email, printers, fax printers or desktop applications that support TIFF, JPEG, RTF, PDF and searchable PDF
- Easily replaceable feed and separator modules
- Output resolutions from 75 to 1200 dpi
- Image processing features include Kodak's Perfect Page technology for black and white, grayscale and color images
- Bundled ISIS and TWAIN drivers
- High speed USB 2.0 interface
- Optional A3 flatbed easily connects and disconnects to the scanner

Safety information

- When placing the scanner, make sure that the electrical power outlet is located within 1.52 meters (5 feet) of the scanner and is easily accessible.
- Use only the power supply that was provided with the *Kodak i1400 Series Scanner*. Do not substitute another power supply model or another manufacturer's power supply.
- This product is designed for connection to IT power systems.
- The printer access door must be in place and closed during scanner operation, except when changing the print head location or replacing the ink cartridge. When the printer access door is removed, **do not** allow loose clothing, jewelry, hair or other objects to enter the printer opening.
- Material Safety Data Sheets (MSDS) for chemical products are available on the Kodak website at: www.kodak.com/go/msds. When accessing the MSDSs from the website, you will be required to provide the catalog number of the consumable you want the Material Safety Data Sheet for. See the section entitled, "Supplies and consumables" later in this guide for supplies and catalog numbers.

Warning labels



CAUTION: Moving parts, avoid contact.



CAUTION: Hot surface, avoid contact.

User precautions

Users and their employer need to observe the common sense precautions applicable to the operation of any machinery. These include, but are not limited to, the following:

- Do not wear loose clothing, unbuttoned sleeves, etc.
- Do not wear loose jewelry, bracelets, bulky rings, long necklaces, etc.
- Hair length should be kept short, using a hair net if needed, or tying long hair up in a bundle.
- Remove all other loose objects from the area that could be drawn into the machine.
- Take sufficient breaks to maintain mental alertness.
- Use only the recommended cleaning supplies.
- Do not use canned/compressed air.

Supervisors should review their practices and make compliance with these precautions a part of the job description for operation of the scanner or any mechanical device.

Environmental information

- The *Kodak i1400 Series Scanners* are designed to meet worldwide environmental requirements.
- Guidelines are available for the disposal of consumable items that are replaced during maintenance or service; follow local regulations or contact Kodak locally for more information.
- The product packaging is recyclable.
- The *Kodak i1400 Series Scanners* are Energy Star compliant and are shipped from the factory with the default time set to 15 minutes.

European Union



This symbol indicates that when the last user wishes to discard this product, it must be sent to appropriate facilities for recovery and recycling. Please contact your local Kodak representative or refer to www.kodak.com/go/recycle for additional information on the collection and recovery programs available for this product.

EMC statements

United States

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for additional suggestions.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Where shielded interface cables have been provided with the product or specified additional components or accessories elsewhere defined to be used with the installation of the product, they must be used in order to ensure compliance with FCC regulation.

Japan

This is a Class B product based on the standard of the Voluntary Control Council for interference by information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
取扱説明書に従って正しい取り扱いをして下さい。

Korean

As this equipment has obtained EMC registration for household use, it can be used in any area including residential areas.

이 기기는 가정용으로 전자파적합등록을 한 기기로서 주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.

Acoustic emission

Maschinenlärminformationsverordnung – 3, GSGV
Der arbeitsplatzbezogene Emissionswert beträgt <70 db(A).

[Machine Noise Information Ordinance — 3, GSGV
The operator-position noise emission value is <70 dB(A).]

Power system connection

This product is also designed for Norwegian IT power system with phase-to-phase voltage 230V.

Netzanschluß

Das Gerät ist auch für die Verwendung im norwegischen IT-Stromsystem mit einer Leiterspannung von 230 V geeignet.

Connexion aux systèmes d'alimentation électrique

Ce produit est également conçu pour les systèmes norvégiens d'alimentation électrique informatique, dont la tension par phase est de 230 V.

2 Getting Started

What's in the box

Before you begin open the box and check the contents:

- *Kodak* i1410, i1420 or i1440 Scanner
- Input tray
- Output tray
- USB 2.0 cable
- Power supply
- AC power cord bundles
- Welcome Folio which includes:
 - Bundled installation and application CDs
 - Registration sheets
 - Printed User's Guide, English
 - Service Contact sheets
 - Quick Installation Guide
 - Quick Tips Guide
 - Miscellaneous flyers

System requirements

Following is the recommended system configuration to run *Kodak* i1400 Series Scanners.

- Intel Pentium IV, 3.5 GHz processor
- USB port 2.0
- Windows 2000, Service Pack 4 and Windows XP (Professional/Home), Service Pack 2; Windows Vista
- 200 MB free hard disk space
- 3 GB of RAM

Installing the scanner

Install the scanner in the following order:

1. Attach the input and output trays.
2. Install the *Kodak* Driver Software.
3. Connect the power cord to the scanner.
4. Connect the USB cable between your scanner and PC.
5. Turn on scanner power and finalize the *Kodak* Driver Software installation.
6. Install other supplied applications (optional).

IMPORTANT: Install the Kodak Driver Software on the host PC before you connect the scanner.

Attaching the input and output trays

The input and output trays snap into place. The input and output trays can also be adjusted to fit different document sizes.

Attaching the input tray

1. Locate the input tray slots on the scanner.
2. Align the input tray pins with the slots.



3. Snap the input tray into place.

Attaching the output tray

1. Locate the output tray slots on the scanner.
2. Align the output tray pins with the slots.



3. Snap the output tray into place.

Installing the Kodak Driver Software

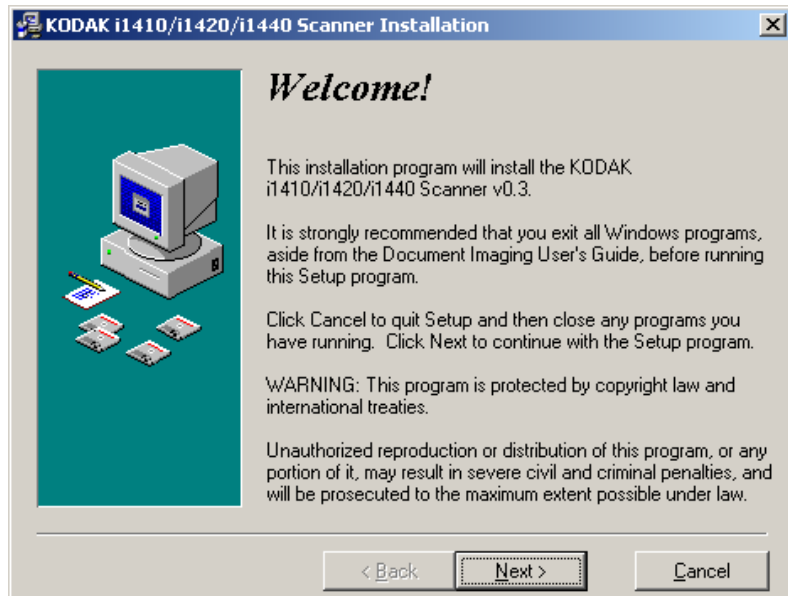
Install the driver software **before** connecting the scanner to your PC.

1. Insert the *Kodak i1400 Series Scanner Installation CD* in the CD-ROM drive. The installation program starts automatically.

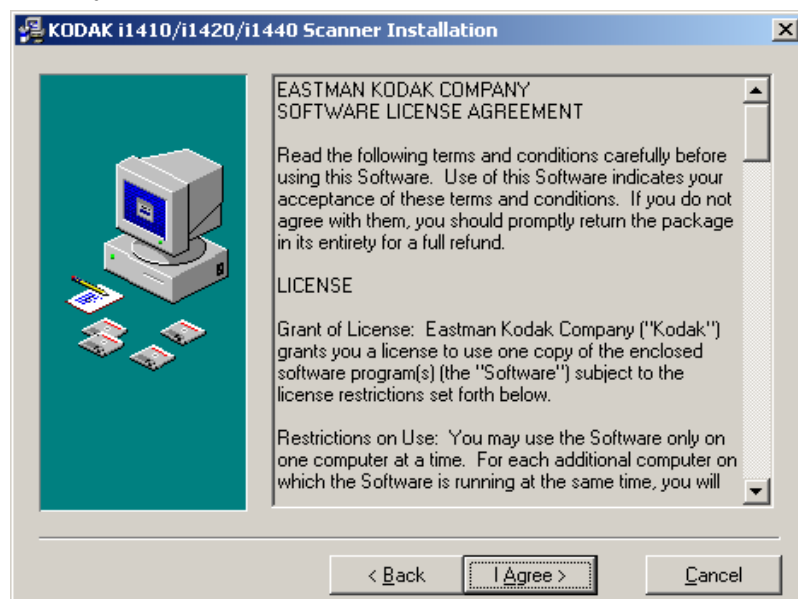
NOTE: If the CD does not start automatically, open the My Computer icon on your desktop. Double-click the icon for your CD-ROM drive, then double-click on **Install Scanner Software**.

2. Select **Install Scanner Software**. The following message may be displayed, **Portions of this application are already installed. Existing files will be upgraded as necessary. Continue with installation?** If the message is displayed, click **Yes**.

The Welcome window will be displayed.

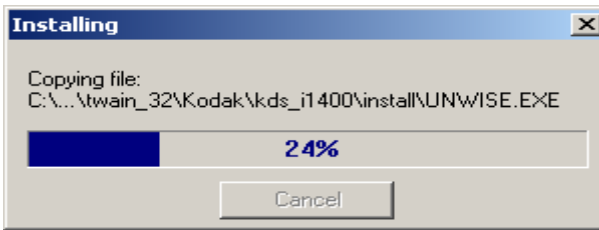


3. Click **Next**. The Software License Agreement window will be displayed.

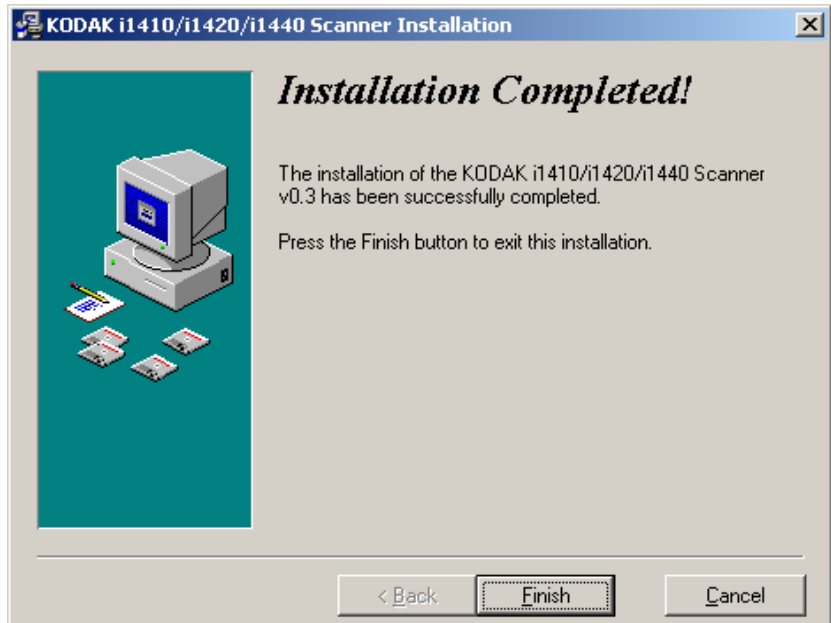


4. After reading the agreement, click **I Agree** to continue.

The installation will start.



5. When the installation is complete, the Installation Completed window will be displayed.



6. Click **Finish**.

Connecting the power cord to the scanner

Use only the power supply that was provided with the *Kodak i1400* Series Scanner. Do not substitute another power supply model or another manufacturer's power supply.

When the drivers have been installed, connect the power supply and power cord to the scanner. Make sure that the power outlet is located within 1.52 metres (5 feet) of the scanner and is easily accessible.

1. Select the appropriate AC power cord for your region from the supply of power cords packed with your scanner.
2. Attach the power cord for your power type to the power supply.



3. Plug the output power cord from the power supply into the power port on the scanner.



4. Plug the other end of the power cord into the wall outlet.

Disconnecting the power cord

To disconnect the power cord from the scanner:

- Place your thumb on the arrow on the collar of the power connector and pull it away from the scanner.



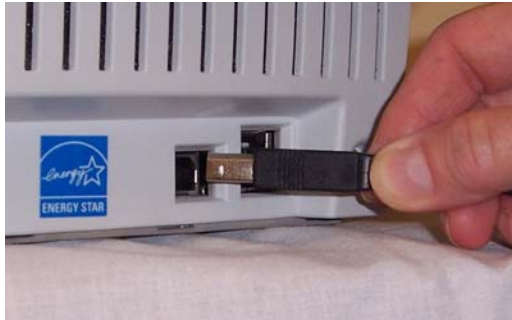
Connecting the USB cable

IMPORTANT: *If you have not installed the Kodak Driver Software, do that now before proceeding.*

The USB cable supplied with your scanner has two different ends.



1. Attach the B end of the USB cable to the scanner USB port, located on the back of the scanner.



2. Attach the A end of the USB cable to the proper USB port on your PC.

Turning on the scanner and finalizing *Kodak* Driver Software installation

When the USB cable and power connections have been made, and the *Kodak* Software Drivers have been properly installed, the installation will be completed when the scanner is turned on.

1. Turn on the power to the scanner.



When you turn on the scanner, the scanner goes through a series of self tests, the indicators will flash. When it is finished and ready to scan, the LED indicator will stop flashing and stay green.

NOTES:

- The following screens are based on Windows XP. Depending on the computer operating system you are using, these screens may be slightly different.
- If a flatbed is attached, the New Hardware screen may be displayed once for the scanner and once for the flatbed.

Your operating software will now auto detect the scanner.



2. Click **Next**. The following screen will be displayed.



3. Click **Finish**.

The installation of the *Kodak Driver Software* for the scanner is complete. To test the scanner, refer to the section entitled, "Verifying your scanner installation" in Chapter 3.

Installing application software

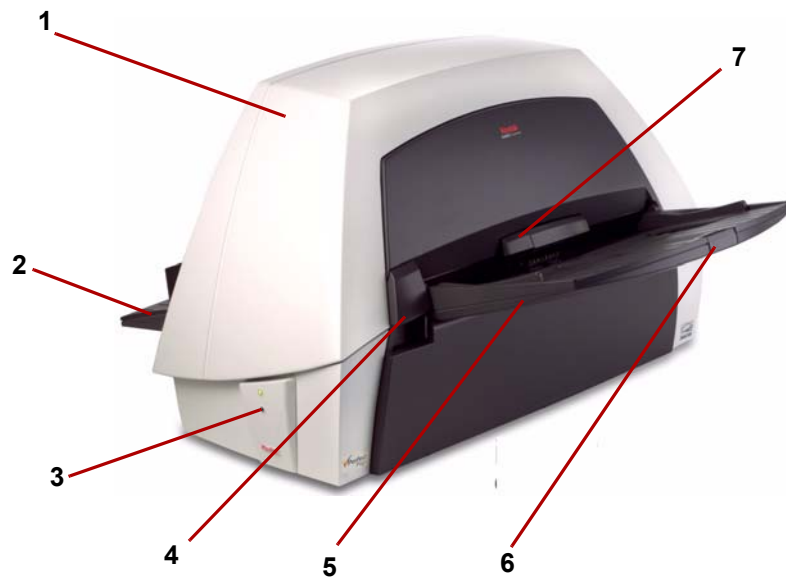
The following Kodak applications are available on the CDs packed with your scanner.

- *Kodak Capture Software Lite*
- *Kodak Scan Validation Tool*

Other scanning applications may also be provided on the CDs packed with your scanner. Review these CDs for any other applications that are included. You may also use third-party scanning applications not provided. See the User Guides provided with these applications for instructions on how to install and use the software.

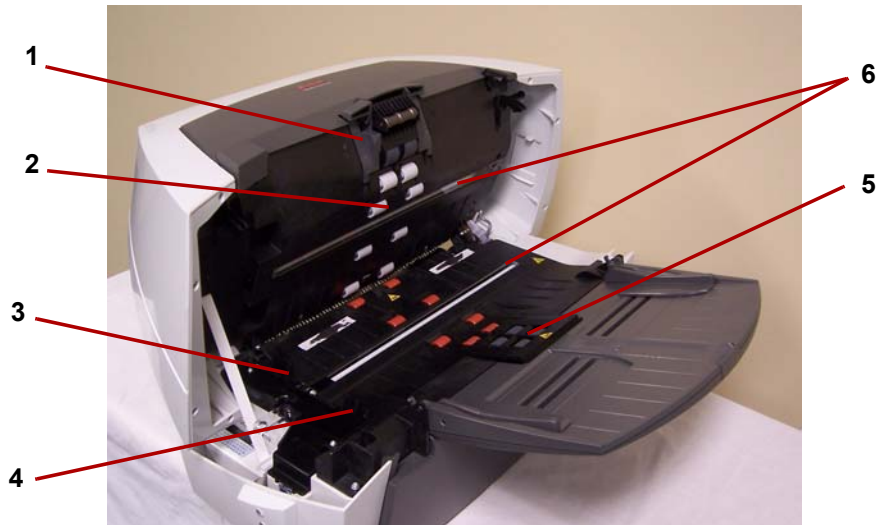
Scanner components

Front view



- 1 Scanner cover** — provides access to the internal components of the scanner.
- 2 Output tray** — collects the scanned documents.
- 3 LEDs** — illuminates or flashes indicating scanner status.
- 4 Scanner cover release lever** — push up on this lever to open the scanner cover.
- 5 Input tray** — holds up to 100 documents (20 lb./75 g/m²) in place.
- 6 Input tray extender** — pull this extender out when scanning documents longer than 21.6 x 27.9 cm (8.5 x 11 inches).
- 7 Gap release lever** — push up on this lever to adjust the space between the feed module and separator module for documents that require special handling.

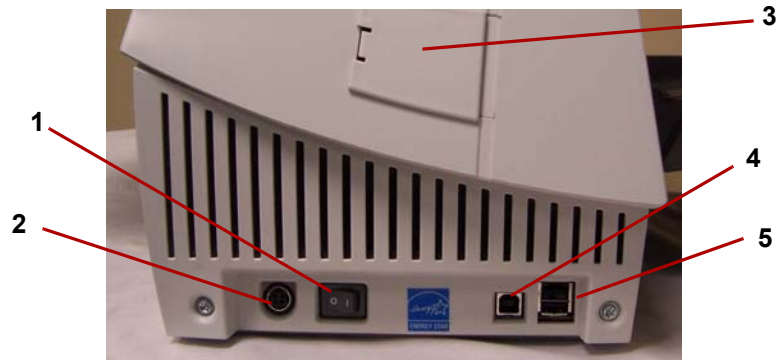
Inside view



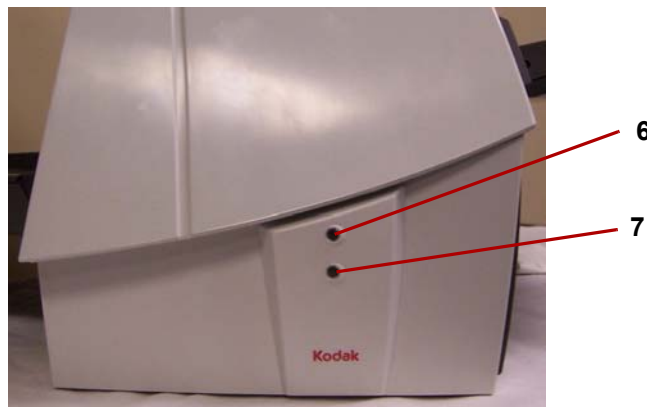
- 1 **Separator module** — provides smooth document feeding and separation of various sizes, thicknesses and textures of documents.
- 2 **Rollers** — provides smooth transport of documents through the scanner.
- 3 **Rear roller cover** — provides access to the rear rollers for cleaning.
- 4 **Front roller cover** — provides access to the feed module. This cover needs to be removed when cleaning or replacing the feed module or feed module tires.
- 5 **Feed module** — provides smooth document feeding and separation of various sizes, thicknesses and textures of documents.
- 6 **Imaging guides** — keep imaging guides clean to obtain optimum image quality.

NOTE: The *Kodak i1410* Scanner does not have an upper imaging guide.

Side views



- 1 **Power button** — turns the power to the scanner on (I) and off (O).
- 2 **Power port** — connects the power cord to the scanner.
- 3 **Side access door** — provides access to the upper imaging guide for replacement (*Kodak i1420 and i1440 Scanners only*).
- 4 **USB port** — connects the scanner to the PC.
- 5 **Flatbed/USB port** — connects the optional A3 Flatbed to the scanner.



- 6 **Top LED** — flashing red when an error has been encountered.
- 7 **Bottom LED** — steady green when the scanner is ready to scan; flashing green when the scanner is preparing to scan.

3 Using the Scanner

This chapter provides procedures for:

- Turning the scanner power on and off
- Adjusting the input and output trays
- Preparing your documents for scanning
- Verifying your scanning installation
- Scanning documents: automatic feeding, manual feeding and continuous feeding

Turning the scanner on and off

- Turn the power on to the scanner.



After you turn on the scanner, wait for it to complete the self-test. When completed, the green indicator light will remain on and constant.

Adjusting the input and output trays

The input and output trays may be adjusted to fit different document sizes. The input and output trays also may be folded flat up against the scanner to save space when the scanner is not in use.

To fold the scanner trays:

- Grasp the input tray/output tray and lift it up until it rests against the scanner front/back.



Tray extenders and side guides

- Both the input and output trays have extenders to accommodate long documents. Grasp the tray extender and pull it out to the desired position.



- The output tray also has two document stops that can be raised to accommodate the collection of small documents after they have been scanned.



- The input tray has side guides that allow you to adjust the feeder to fit different document sizes. Grasp the side guides and slide them in or out to the desired position.



Adjusting the output tray

The output tray has three possible positions.



**Lowest position for
long documents**



**Middle position for
letter or A4 documents**



**Highest position
for checks and small
documents**

- Set the output tray to the lowest position when you are scanning long documents.
- Set the output tray to the middle position when you are scanning letter- or A4-size documents.
- Set the output tray to the highest position with the first document stop raised when you are scanning checks and small documents (less than 10.2 cm/4 inches).
- Use the highest position with the second document stop raised when you are scanning documents that are 14 cm/5.5 inches long.

To adjust the output tray:

1. Grasp the tray on each side.
2. Lift the tray up and move it up or down to the desired position.

Start and stop scanning

Before you start scanning, make sure the scanner is on and ready for operation, which is indicated by the green indicator light being on and constant.

Scanning is controlled by application software designed to capture images. To start and stop scanning, refer to the documentation provided with your application software.

Document preparation

- A batch of documents to be fed into the scanner must be arranged so the leading edges of all documents are aligned and centered in the input tray; this allows the feeder to introduce documents into the scanner one at a time.
- Remove all staples and paper clips before scanning. Staples and paper clips on documents may damage the scanner and documents.
- Documents should be in good condition.
- Torn, damaged or crushed pages can be transported successfully through the scanner. However, no scanner can transport every possible type of damaged paper. If in doubt about whether a specific damaged document can be transported through the scanner, place the document in a clear protective sleeve. Sleeves should be manually fed, one at a time, folded edge first, while lifting the gap release lever.

NOTE: You also can use the optional *Kodak i1400 Series A3 Flatbed* to scan.

- When scanning documents in a clear protective sleeve, the input tray guides must be adjusted to accommodate the width of the sleeve.

Paper Types: Bond, Laser, Inkjet, Offset

NOTE: Chemically coated papers may cause more rapid wear/swelling of the rollers.

Paper inks: All inks on the paper must be dry before scanning is started. This includes: Standard offset printing, Inkjet printer, Thermal transfer, Handwriting inks.

Correction Fluids: Liquid Paper®, Tipp-Ex®, Wite-out®, and other similar correction fluids must be dry before scanning is started.

Paper Weights: 7.3 to 200 g/m² kg (9 to 110 lbs.)

Maximum Document Size: 30.5 x 86 cm (12 x 34 in.)

Minimum Document Size: 8.9 x 5 cm (3.5 x 2.5 in.)

Verifying your scanner installation

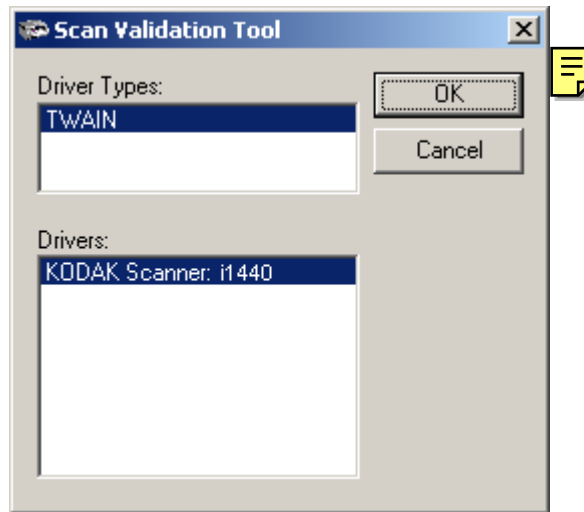
Kodak provides a test application called the *Kodak Scan Validation Tool*. This section describes how to use this tool to perform a basic scan function which includes feeding paper and viewing captured images on your PC.

The following steps help you to verify that your scanner installation was successful. If this procedure is successful, you will be ready to use your scanner. If it is not successful, go back and review the installation procedures outlined in the section entitled, "Installing the scanner" in Chapter 2.

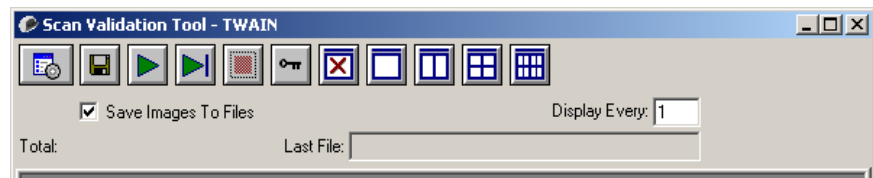
Before you begin, be sure the scanner is on and ready to scan.

1. Select **Start>Programs>Kodak>Document Imaging>Scan Validation Tool** or click the Scan Validation Tool icon.

The Scan Validation Tool dialog box will be displayed.

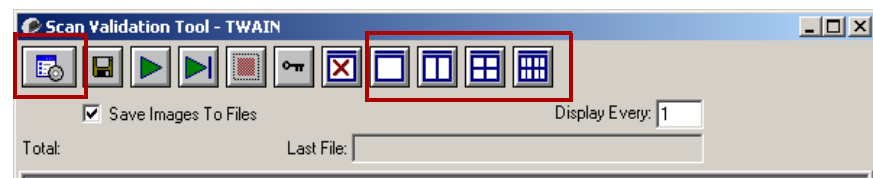


2. Select **TWAIN** (or **ISIS**) for the Driver Types and **Kodak Scanner i1410/i1420/i1440** as the driver. The Scan Validation Tool dialog box will be displayed.



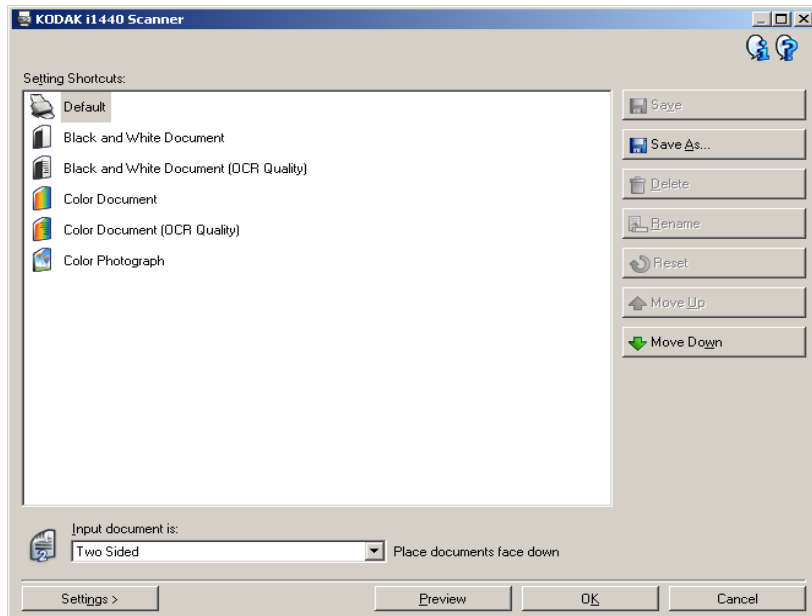
NOTE: For a description of this window and toolbar buttons, see the section entitled, "Scan Validation Tool dialog box" in Chapter 4.

3. Click one of the window icons to open and display the scanned images.

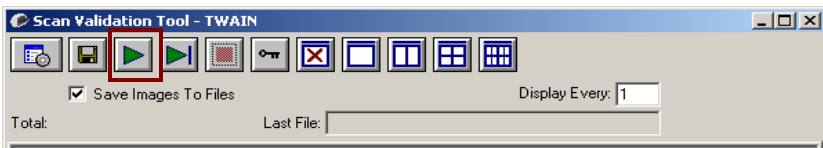


4. Click the **Setup** icon.

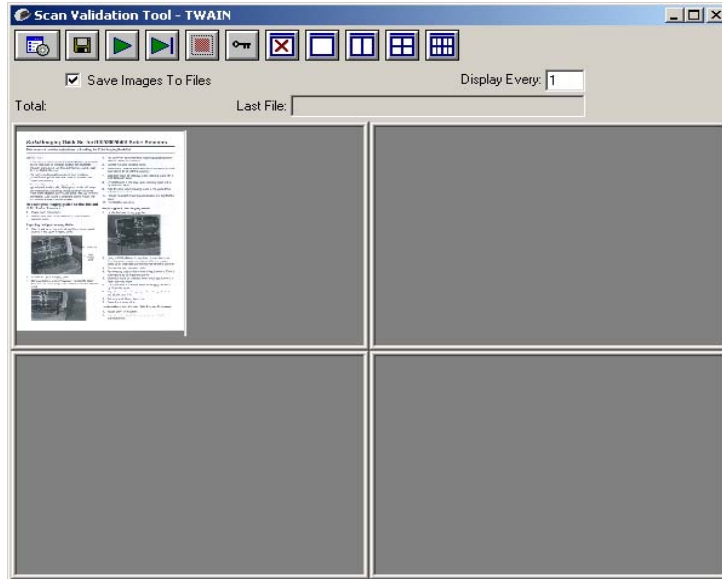
The main *Kodak* Scanner window will be displayed.



5. Select the **Default** Setting Shortcut.
6. Click **OK**. This resets the software to the factory-installed default settings. The factory default settings are set to capture black and white images. For an i1410 Scanner one side of the document will be scanned. For an i1420 or i1440 Scanner both sides of the document will be scanned. The Scan Validation Tool screen will be displayed.
7. Place some test documents into the input tray of the scanner. If you are scanning one-sided documents or if you have a *Kodak* i1410 Scanner, be sure the side you want to scan is facing the input tray.
8. Click the **Start Scanning** icon on the Scan Validation Tool.




The documents will be scanned and displayed in the Scan Validation Tool window.



NOTE: If the scanner is in power saver mode, a message will be displayed that the lamps need sufficient time to warm up. Scanning will proceed when the lamps are ready.

After the images have been displayed, your scanner installation verification is completed.

9. Click the Close box  to exit the Scan Validation Tool.

Viewing test images

The images you scanned can be found in the TWAIN folder on the C drive. Files will be named using the following naming convention: **image0000001A.jpg** is a front image; **image0000001B.jpg** is a back image. Double-click on this file to open and view the captured image.

Because factory default settings were used, the image may not be optimized to meet your needs.

When testing has been completed, delete the test images.

Smart touch functionality

Smart touch functionality allows you to quickly and easily perform common scanning tasks. Predefined tasks are installed with the scanner, however, you can configure smart touch to handle the tasks that are most important to you. You can perform any of the tasks by selecting the function from the smart touch function listing. Nine different functions can be assigned and performed.

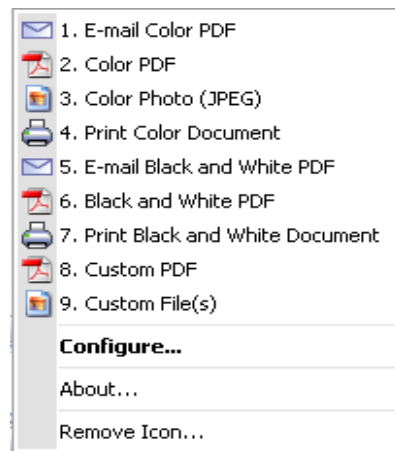
After the scanner, software drivers, and application software are properly installed and the PC has been restarted, a Scanner icon will be displayed on the system tray.



NOTE: If the Scanner icon indicates that the scanner is not ready, turn the scanner off, and then on again.



- Click on the Scanner icon on the system tray to display the smart touch function listing. This list displays the currently configured functions.

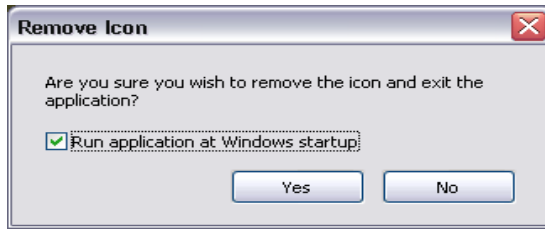


Function listing — click on one of the functions to run the assigned task.

Configure — select **Configure** to change the task assigned to a function.

About — displays the version number and information about smart touch.

Remove Icon — displays the Remove Icon dialog box.



When you click **Yes**, you will close smart touch and remove the smart touch icon from the system tray.

The software can be started manually by selecting **Start>Programs>Kodak>Document Imaging>i1410,i1420,i1440 >Smart touch**.

Configuration dialog box

The Configuration dialog box allows you to change the tasks associated with each of the 9 function numbers.

When you select **Configure** from the function listing, the Configuration dialog box will be displayed.



Task shortcut — select the function (1 through 9) that you want to modify.

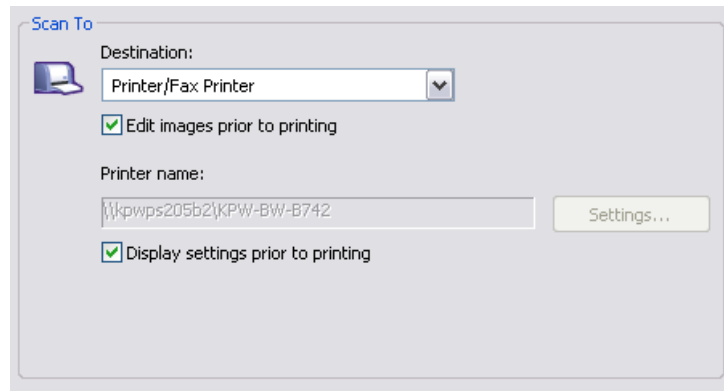
Rename — displays the Rename dialog box which allows you to enter a new name for the Task shortcut.

Scan To settings

Destination — allows you to select one of the following options:

- **File:** creates an electronic file from the scanned documents and saves it in the location specified in the Folder path.
- **Application:** creates an electronic file from the scanned documents and launches the application program for the saved file. For example, if your system is set up to use Adobe Reader to read PDF files, the saved file will be opened using Adobe Reader.
- **E-mail:** creates an electronic file from the scanned documents and launches your default E-mail program with the saved file included as an attachment.
- **Printer/Fax Printer:** sends the scanned documents to the printer or fax printer.

NOTE: If you select **Printer/Fax Printer**, the *Scan To* options change.



- **Display settings prior to printing:** if selected, the Print dialog box will be displayed after the document(s) are scanned, allowing you to select the printer and set the print options. The Print dialog box will be displayed each time the function is run.
- **Settings:** displays the Print dialog box allowing you to select a different printer or different set of print options for this function. These settings will be saved and used by default each time the function is run. This option is not available if **Display settings prior to printing** is checked.

Edit images prior to saving/emailing/printing: if selected, the scanned images will be displayed in an Edit window to allow for editing.

File Type — select one of these options based on how you want to save or send the scanned image(s). Available formats are:

- **PDF:** Adobe PDF files (Portable Document Files) look exactly like original documents and preserve the fonts, images, graphics and layout of the source files regardless of the application and platform used to create it.
- **PDF - Searchable:** same as a PDF file with the addition of full text search features for locating words.
- **RTF (Rich Text Format):** is a document file format developed by Microsoft to allow easy portability from one PC to another regardless of the operating system that is running on the PC.

- **JPEG/TIFF - Single page:** if you are scanning documents with multiple pages or sides, each page or side is saved as a separate JPEG or TIFF file.
- **TIFF - Multi-page:** combines all the scanned images into a single TIFF file.

Settings button — if you select **PDF - Searchable** or **RTF** as the File Type, the OCR Setup dialog box will be displayed.



- Select the language for the searchable PDF or RTF file and click **OK**.

Folder: enter the folder name where you want to save the scanned images or click **Browse** to locate the folder.

File Name Prefix: when images are scanned, they are automatically assigned a unique file name. For example, if you choose to scan your documents as PDF files, the software automatically assigns the date and sequence number for each image: 2006-09-27(1).pdf (for the first PDF file created), 2006-09-27(2) for the second PDF file created, etc. If you want to add a prefix to the file name, it will be attached to the beginning of each file name. For example, if you want the word *Invoice* before the file name, enter “**Invoice**” in the *File name prefix* field. The files will be named: **Invoice**2006-09-27(1); **Invoice**2006-09-27(20), etc.

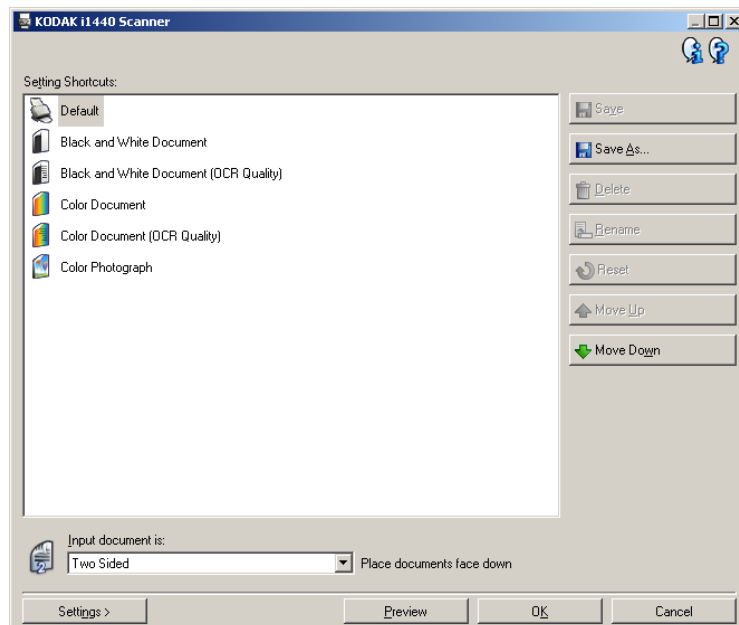
Name file prior to saving: if selected, the Save As dialog box will be displayed after the document(s) are scanned, allowing you to select the specify the name of the file and the location where it will be stored. The Save As dialog box will be displayed each time the function is run.

Scan As settings

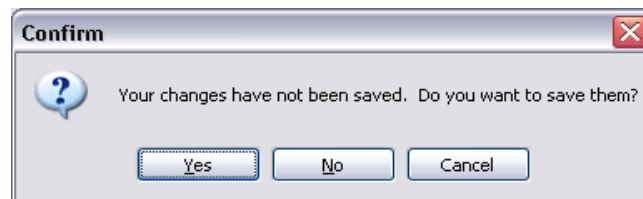
Setting Shortcut — displays the name of the Setting Shortcut used on the main *Kodak* Scanner window. This is the shortcut to the collection of scanner settings being used by the scanner.

Display settings prior to scanning: if selected, the main *Kodak* Scanner window will be displayed before the document(s) are scanned, allowing you to select the scanner Setting Shortcut. The main *Kodak* Scanner window will be displayed each time the function is run.

Settings: displays the main *Kodak* Scanner window allowing you to select a different Setting Shortcut for this function. The new Setting Shortcut will be saved and used by default each time the function is run.



OK — closes the Configuration dialog box. If you made changes in the Configuration dialog box and you did not save your changes, a message will be displayed.



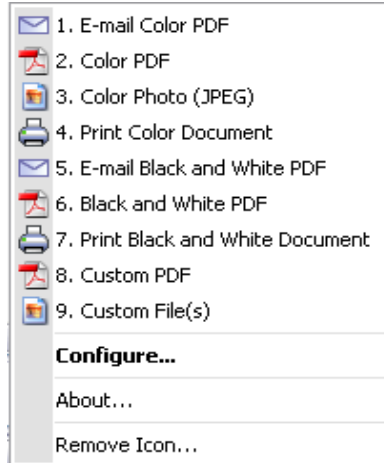
Cancel — closes the Configuration dialog box without saving any unapplied changes.

Yes — saves any changes made on the Configuration dialog box.

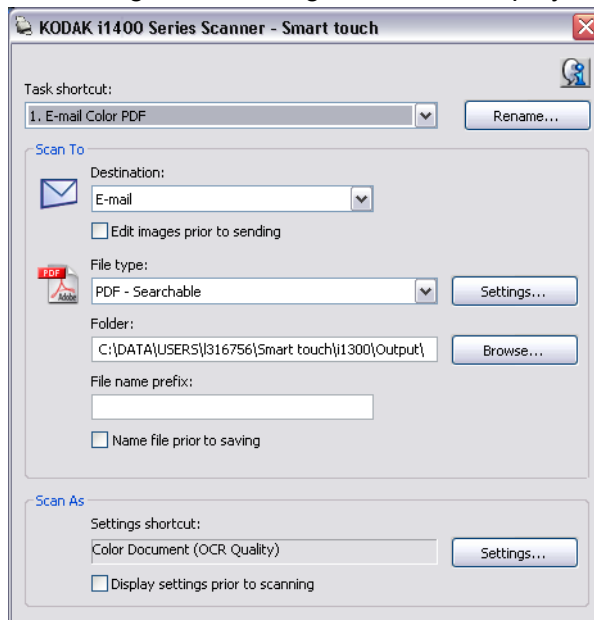
No — closes the Configuration dialog box without saving any changes.

Configuring function numbers

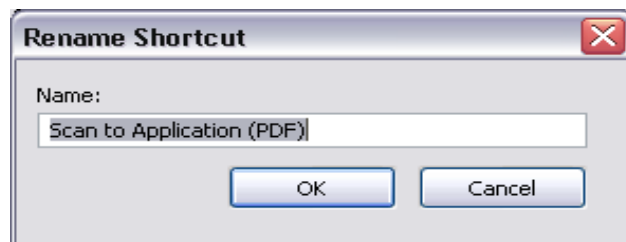
1. Click the smart touch icon on the system tray to display the smart touch function listing and select **Configure**.



The Configuration dialog box will be displayed.

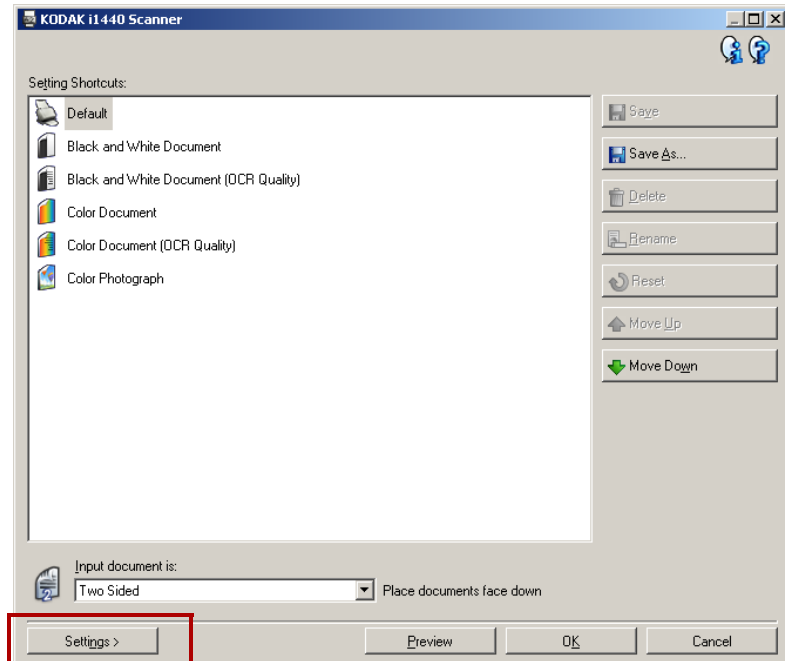


2. Select the Task shortcut you want to configure from the *Task Shortcut* drop-down list.
3. If you want to rename the Task Shortcut, click **Rename**. The Rename dialog box will be displayed.



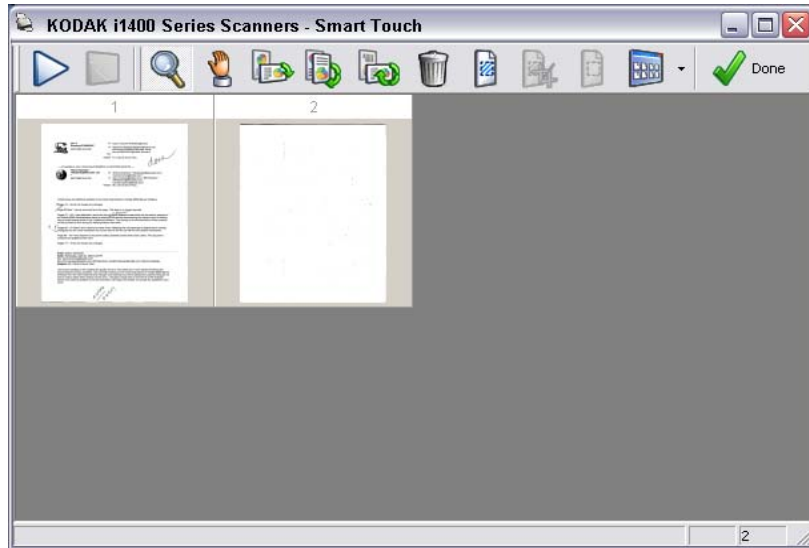
- Enter the desired name and click **OK**.
4. Select the desired destination from the *Destination* drop-down list.
 5. Select the desired file type from the *File Type* drop-down list. This determines the file type of the electronic file to be created.

6. By default your documents will be stored within your “My Documents” folder. If you want to change it, enter the folder name or click **Browse** to select a different folder.
7. If desired, add a file name prefix by entering the text in the *File name prefix* field.
8. If you want to provide your own file name for the file, select the **Name file prior to saving** check box on the Configuration dialog box.
9. If desired, select a different Setting Shortcut based on the type of document you are scanning by selecting the **Settings** button on the main *Kodak Scanner* window.



10. If you want to change your scanner Setting Shortcut before scanning, check **Display settings prior to scanning** from the smart touch Configuration dialog box.
11. Click **Apply**.
12. Modify other function numbers by repeating Steps 2 and 11.
13. When finished, click **OK**.













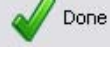
Smart touch Edit window The smart touch Edit window allows you to view the scanned images before sending them to the final destination. As documents are scanned, the images will be displayed in the Edit window.



From this window you can perform common editing tasks such as, rotating and deleting blank pages, etc. When finished, click **Done** to send the images to the final destination.

To enable this Edit window, select the **Edit images prior to sending** check box on the Configuration dialog box for the function you are configuring.

These icons are available on the Edit window. To use a tool, click on the icon and apply it to the desired image.

	Start — allows you to scan additional documents and append them to the current images.
	Stop — cancels the scanning of documents.
	Magnifier — magnifies a portion of the image. Press and hold the left mouse button inside an image to magnify it. Drag the tool across the image to magnify different areas of the image.
	Pan — allows you to move the image freely around the window. Use this tool when the entire image is not visible in the display window, for example after zooming in.
	Rotate 90 — rotates the image 90 degrees to the right.
	Rotate 180 — rotates the image 180 degrees to the right.
	Rotate 270 — rotates the image 270 degrees to the right.
	Delete — deletes the selected image. A confirmation dialog box will be displayed before the image is deleted.
	Select Region — allows a rectangular region to be drawn in each image. Use this tool with the Crop and Blank tools. Click on the icon in the lower left corner of an image to remove (deselect) the region.
	Crop — crops the image, keeping only the portion of the image inside the region. A confirmation dialog box will be displayed before the image is cropped.
	Blank — replaces the portion of the image inside the region with a white background. A confirmation dialog box will be displayed before the image is modified.
	More Editing Tools — these are tools and shortcuts to get different views of the images, including tools to zoom in and zoom out. Normally the shortcuts (or hotkeys) would be used for these tools.
	Done — click this icon when you have finished viewing or editing the images and you want to send them to the selected destination.

Using function numbers

When you have assigned the function numbers, they can be easily launched from the smart touch function listing.

1. Display the function listing from the smart touch icon on the system tray.
2. Select the function number you want to run.

Scanning your documents

Standard paper size documents should feed easily through the scanner.

- Place the documents you want to scan into the input tray of the scanner. If you are scanning one-sided documents or if you have a *Kodak i1410 Scanner*, be sure the side you want to scan is facing the input tray.



Automatic feeding

To scan a batch of documents, follow the guidelines for size, type, quantity, etc., as previously described in the “*Document preparation*” section. For faster throughput, feed documents into the automatic document feeder in landscape orientation (longer side as the leading edge).

***IMPORTANT:** Remove all staples and paper clips before scanning. Staples and paper clips in documents may damage the scanner.*

1. Align the leading edges of the stacked documents.
2. Position the documents **face down** with the leading edge centered in the automatic document feeder.
3. Adjust the input tray side guides.
4. Adjust the output tray position, if necessary.
5. Pull out the output tray extender, if necessary.
6. Start scanning.

Continuous feeding

Continuous feeding allows you to place additional batches of documents in the feeder for “infinite” feeding (with operator assistance).

- When only a few documents from one batch remain in the feeder, place the next batch **face down** on top of those documents.



Manual feeding

Follow the guidelines for document size, type, weight, quantity, etc. Position the documents **face down** with the leading edge centered in the automatic document feeder, then start scanning.

Damaged documents

You can scan torn or fragile documents through the automatic document feeder if they are placed in a protective plastic sleeve.

1. Position the sleeve **face down**, folded edge first, and centered in the automatic document feeder.



2. Lift the gap release lever, if necessary (this provides more clearance to ease document feeding).
3. Start scanning.

4 Image Processing

Overview

This chapter introduces concepts that may be new to some users. The *Kodak i1400 Series Scanners* provide the ability to process scanned images to improve their quality. Using these features the scanner can sometimes make the scanned image look better than the original document. Basic image processing concepts are reviewed in this chapter to help you take advantage of these features.

Image processing refers to several separate features of the scanner that allow you to automatically adjust each image in a certain way that may improve the resulting images. Common examples of image processing features are correcting any skew in the fed document, cutting the edges of the image off to remove any unneeded border or cleaning up extraneous “noise” on the image. This can be done automatically so you can get better images with minor rework.

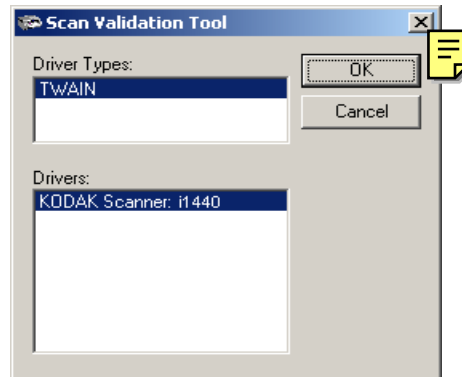
The information that follows describes the image processing features. The same options should be available on the user interface of the scanning application you are using (i.e., *Kodak Capture Software*).

Terminology and features

If you have used previous scanners from Kodak, you may be familiar with the image processing features already. With the new graphical user interface in the TWAIN datasource, some of the names of those features have changed. Refer to *Appendix B, TWAIN Image Processing Terminology* for a cross reference of previous names with new names.

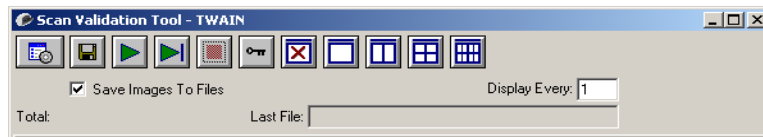
Starting the Scan Validation Tool

1. Select **Start>Programs>Kodak>Document Imaging>Scan Validation Tool**.



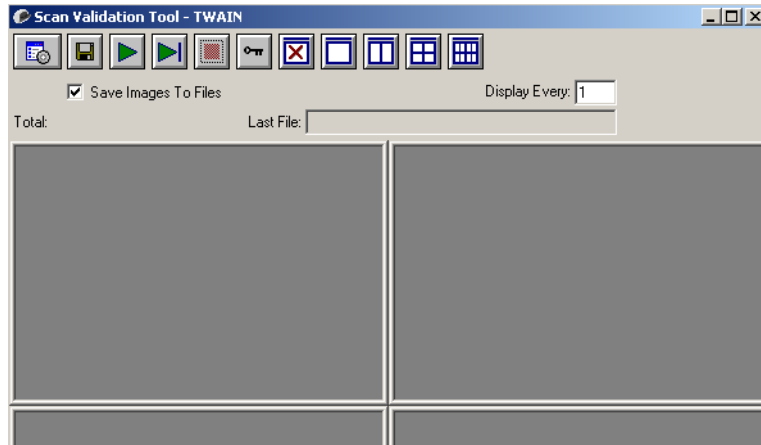
2. Select **TWAIN** (or **ISIS**) for the Driver Type and the **Kodak Scanner i1410/i1420/i1440 Scanner** as the driver.

The Scan Validation Tool dialog box will be displayed.



The Scan Validation Tool dialog box

The Scan Validation Tool (SVT) is a diagnostic application provided by Kodak. 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 datasource and the ISIS driver.



Toolbar buttons



Setup — displays the user interface for the selected driver.



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.



Start Scanning — scans the documents in the input tray.



Scan One Page — scans only one page.



Stop Scanning — ends the scan session.



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.

Save Images to Files — when selected, will save the images to the specified directory.

Display Every — enter the sampling rate of the images you want to display while scanning. For example, to see every image, enter a value of 1. To see every 10th image, enter a value of 10.

Total — displays the total number of images scanned during the current Scan Validation Tool session.

- To access the TWAIN datasource (or ISIS driver), double-click the **Setup** icon on the Scan Validation Tool dialog box to access the main *Kodak* Scanner window.

Last File — displays the full path and file name for the last stored image.

Using the TWAIN datasource

The *Kodak* i1400 Series Scanners can provide a wide variety of electronic images. This can be done by using the TWAIN datasource Kodak provides in concert with your scanning application. The TWAIN datasource is the part of the capture system which links the scanner to your scanning application.

When using the TWAIN datasource, the main *Kodak* 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. For more information, refer to the sections entitled, "Creating a new Setting Shortcut" and "Changing image settings" later in this chapter.

For the purpose of this manual, all displayed dialog boxes assume the features available on the *Kodak* i1420 and i1440 Scanners (duplex scanner). If you have a *Kodak* i1410 Scanner (simplex scanner) all options are limited to one-sided scanning only.

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 *Kodak* 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 to set are available on these two windows:

- **Image** Settings: clicking the **Settings** button on the main *Kodak* Scanner window, displays the Image Settings window. From this window you can set your image processing parameters by using the General, Size, Adjustments and Enhancements tab. 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 (and Printer tab if you have the document printer installed). From the Device Settings window, you can also access Diagnostics.

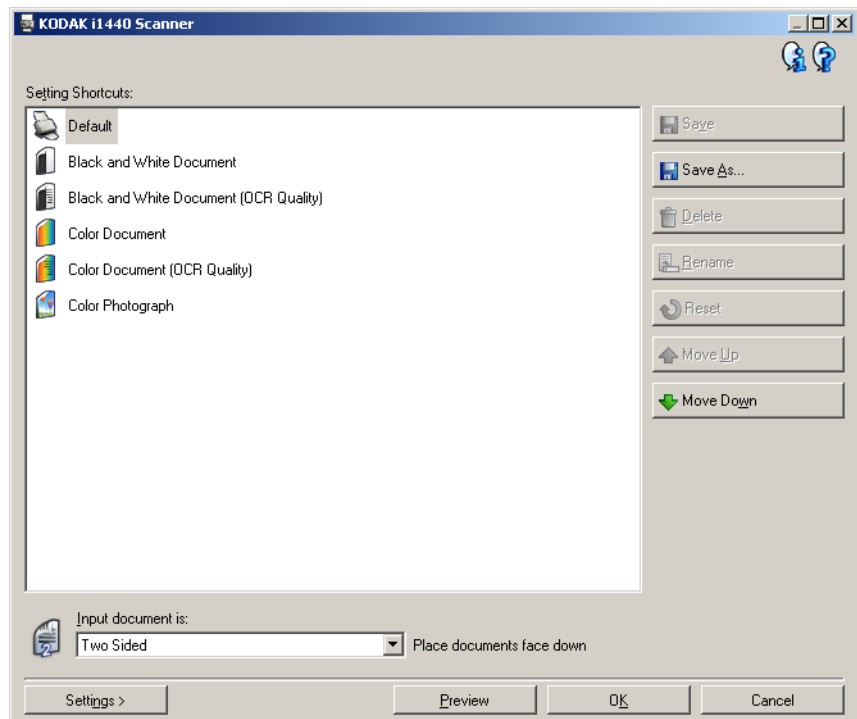
The procedures that follow describe how to configure a customized Setting Shortcut. Complete descriptions of the features and options on the *Kodak Scanner* window and tabs are found in the section entitled, “The main *Kodak Scanner* window”.

NOTE: Setting Shortcuts can sometimes be overridden by your scanning application. If this happens, the shortcut you call will appear in the main *Kodak 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 datasource.

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 *Kodak Scanner* window:



1. Select a predefined Setting Shortcut from the Setting Shortcuts list. Choose a Setting Shortcut that describes as closely as possible the image output you desire.
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* drop-down list. Options are:
 - **Two Sided** — captures both sides of the document
 - **One Sided-Front** — captures the front side only
 - **One Sided-Back** — captures the back side only

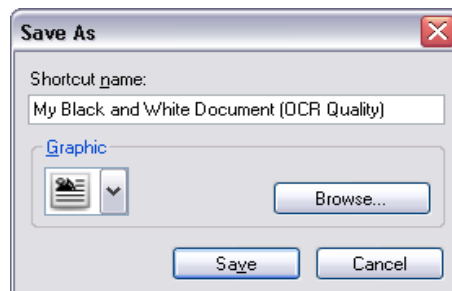
3. Place one or two representative documents in the input tray of the scanner.

NOTE: When scanning one side of a document or if you are using an i1410 Scanner, be sure to place the side of the document to be scanned facing the input tray.

4. If you want to see what your selected image processing options will look like and make on-screen changes, click **Preview** to review and adjust the image.

NOTE: This only needs to be done if you want to make interactive adjustments to your selected image processing options.

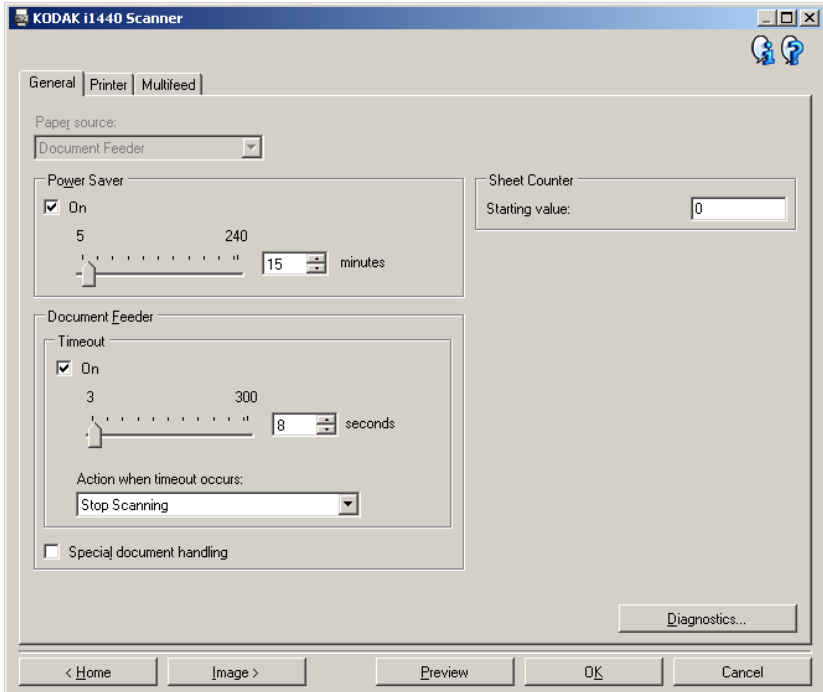
5. If you are satisfied with your selected image processing options, reload your document if necessary and click **OK/Scan**.
 - If the images are acceptable, the image processing settings are fine and you do not need to click the Settings button to alter any values in the General, Size, Adjustments or Enhancements tabs.
 - If the images are not acceptable, you can either select a different predefined Setting Shortcut that more closely describes your desired output or you can continue to work with the Setting Shortcut you have selected by reviewing each setting on the General, Size, Adjustments and Enhancements tabs and make the appropriate changes. When you make any changes, repeat Steps 3 - 5 to until you get the desired results.
6. If you made any changes to a predefined default Setting Shortcut, click **Save As** on the main *Kodak* Scanner window. The Save As dialog box will be displayed.



7. Enter a new Setting Shortcut name that is meaningful to you and click **Save**. You have now created and saved a custom Setting Shortcut which can be used for your scanning operations.

Selecting Device settings

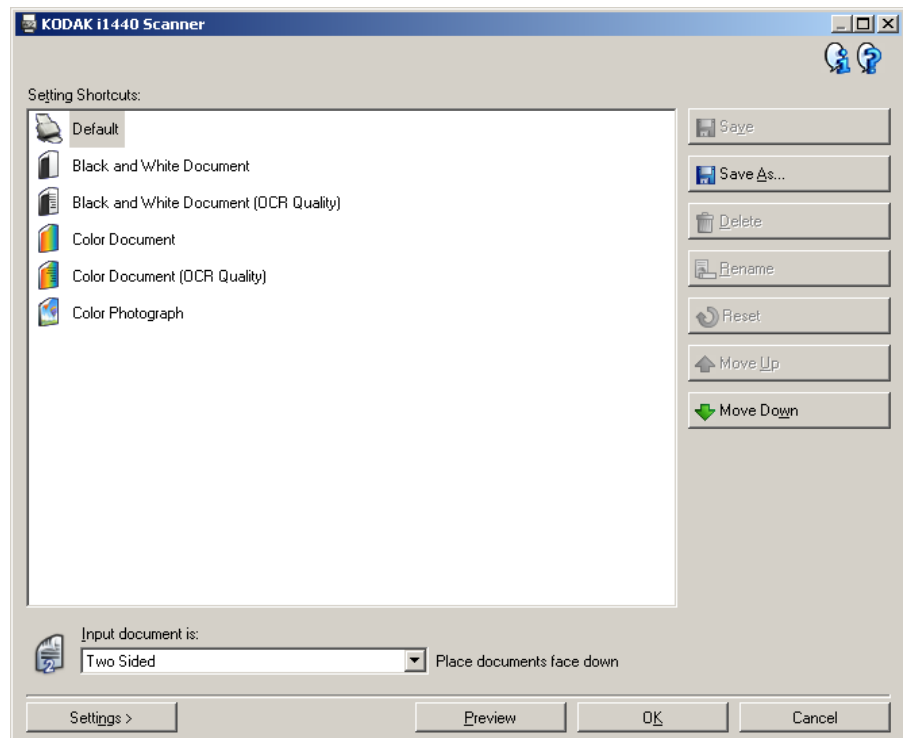
1. Select the Setting Shortcut that you just created.
2. Select **Settings** to access the Image Settings window.
3. Select **Device**. The Device Settings window will be displayed.



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 appropriate options or action you want the scanner to perform.
7. When finished:
 - Click **Home** to return to the main *Kodak* Scanner window and click **Save** to save your selections to your custom Setting Shortcut, or
 - Click **Image** to return to the Image Settings window if you need to make additional changes.

The main *Kodak* Scanner window

The main *Kodak* 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**.



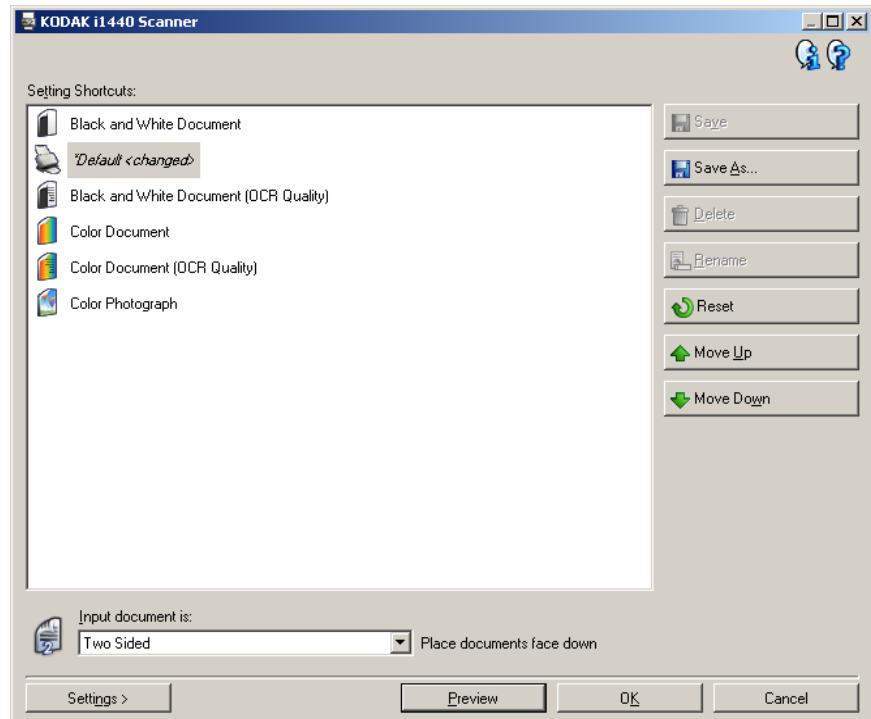
Setting Shortcuts — provides a listing of the Setting Shortcuts currently set up. The supplied shortcuts are:

- **Default** — the scanner's default settings
- **Black and White Document**
- **Black and White Document (OCR Quality)**
- **Color Document**
- **Color Document (OCR Quality)**
- **Color Photograph**

NOTES:

- Select an **OCR Quality** shortcut if you want to have the electronic images processed by an OCR application.
- These Setting Shortcuts are provided at installation and are read-only shortcuts. They can be used as models to create your custom shortcuts, but cannot be modified.

- 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., **Default<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 selected Setting Shortcut.

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

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

Rename — allows you to rename the selected 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>*).

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

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 Diagnostic 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 *Kodak* Scanner window without saving any changes.

Information Icons



About: displays the scanners' version and copyright information.

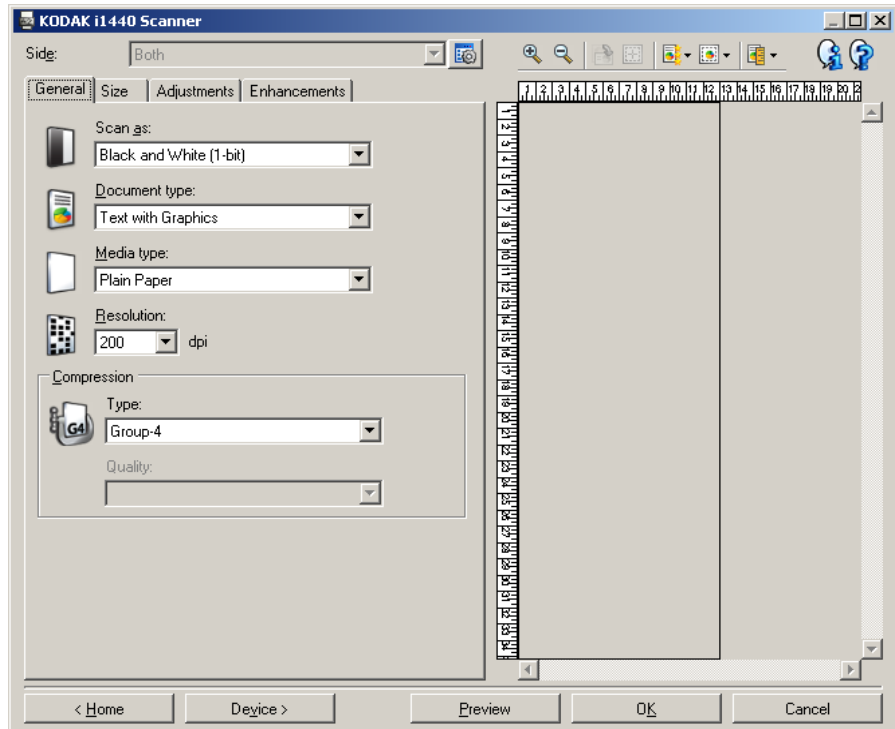


Help: displays help information for the window currently being displayed.

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 Adjustments and Enhancements.

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 scanning image. <ul style="list-style-type: none"> • 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.
	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 main purpose of the preview area is to display 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. The displayed image will automatically show the effects of your changes, in most cases, without having to rescan the document. If a rescan is necessary, you will be prompted to reinsert the document.

NOTE: 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.

Home — returns you to the main *Kodak* 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.

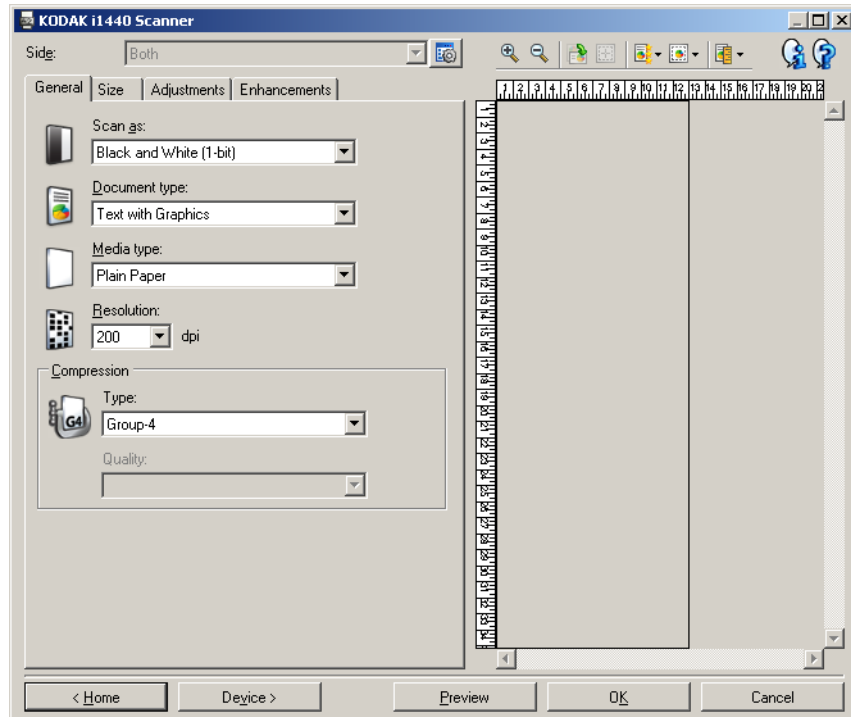
OK/Scan — when selected, you will be prompted to save any unsaved changes.

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

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

General tab

The General tab contains 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.
- **Text with Photographs**: the documents contain a mix of text and photographs.

NOTE: This option is not available for all models.

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

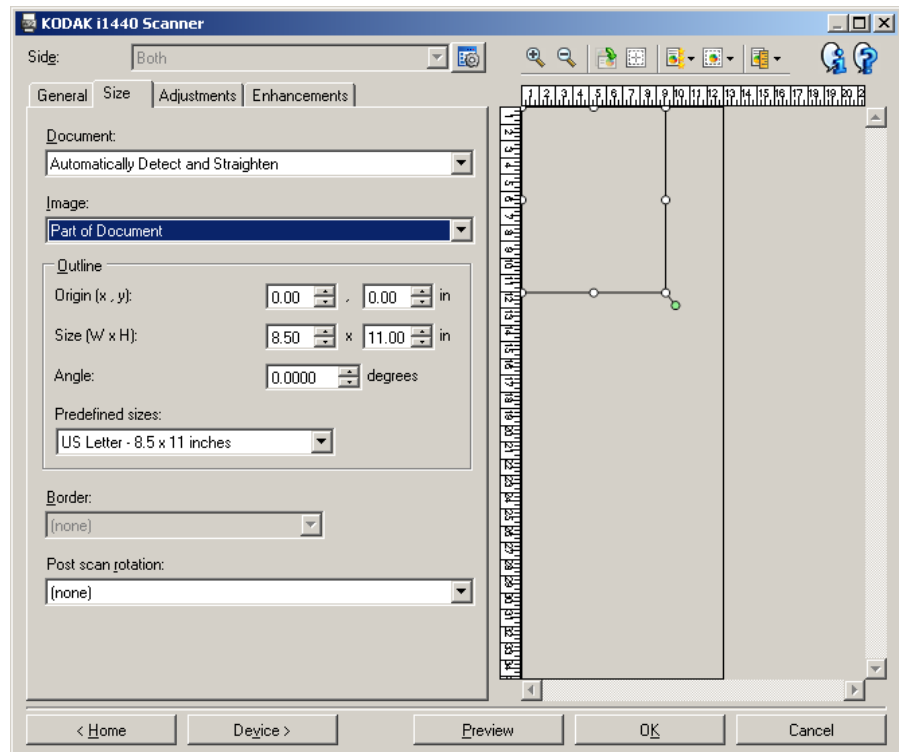
Media type — allows you to select the type of paper you are scanning, based upon the texture/weight. The options are: **Plain Paper**, **Thin Paper**, **Glossy Paper**, **Card Stock**, and **Magazine**.

Resolution — allows you to select the dots per inch (dpi), which is a determinant of a better quality image. It may also increase scanning time and image size. The options are: 75, 100, 150, 200, 240, 300, 400, 600 and 1200 dpi.

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.
- **Quality** — if you choose JPEG compression, select one of the quality options:
 - **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



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.
- **Photograph:** the scanner will locate the photograph on the document and return an image that contains just the photograph. If the scanner finds more than one photograph on a document, one image is still returned.
NOTE: This option is not available for all models.
- **Manually Detect:** 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.
- **Continuous:** the scanner will split the document into separate images based on the area you specify with the Outline options. It is suggested that you select an Outline that covers the entire width of the document and a height around 11 inches (297 mm).
NOTE: This option is not available for all models.

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 Detect**, returns the entire document.
- if you select **Document: Photograph**, the entire document is used to locate the photograph.

- **Part of the document:**

- if you select **Document: Automatically Detect and Straighten** or **Document: Continuous**, returns the portion of the document which you specify with the Outline options.
- if you select **Document: Photograph**, only the portion of the document which you specify with the Outline options will be used to locate the photograph.

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

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

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

- **Size (w, h):**

- if you select **Document: Automatically Detect and Straighten** or **Document: Manually Select**, this is the width and height of the electronic image.
- if you select **Document: Photograph**, this is the width and height of the area of the document to use to locate the photograph.
- if you select **Document: Continuous**, this is the width and height of each separate electronic image.

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

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

- **Predefined sizes:** provides a list of commonly used paper sizes. Selecting an item in this list will automatically set the size of the outline to that paper's size. **Custom** will be displayed when the outline size does not match any sizes in 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 0.1 inches of border around all of the image edges.

NOTE: This option is only available for the following selections: when both **Document: Automatically Detect and Straighten** and **Image: Part of Document** are selected; **Document: Automatically Detect**; or **Document: Manually Select**.

- **Remove:** produces an image that contains just the document by eliminating any residual border. 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 crooked.

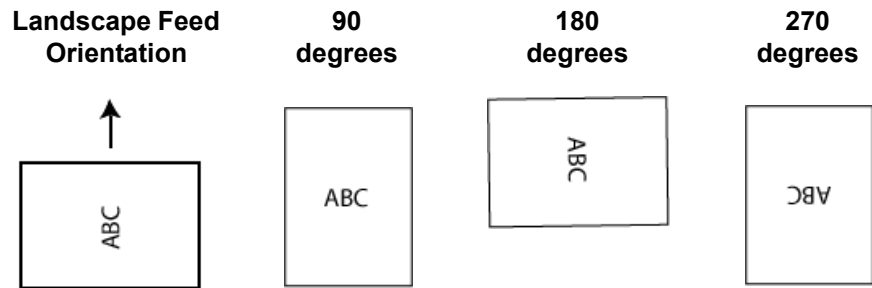
NOTES:

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

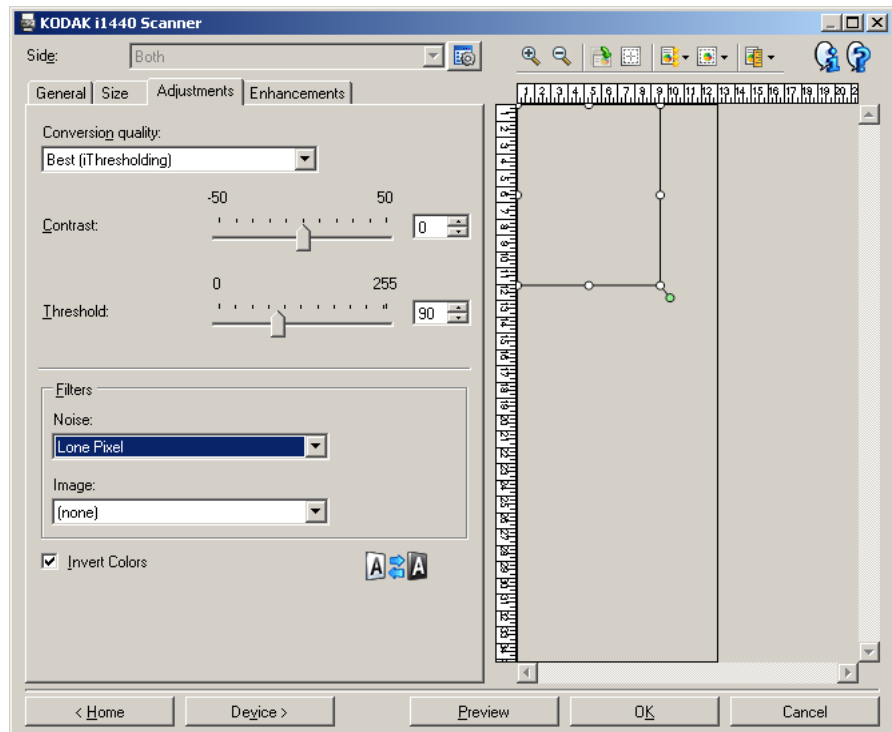
- **(none)**
- **Automatic** — the scanner will analyze each document to determine how it was fed and will rotate the image to the proper orientation.
- **90, 180, 270 degrees** — the amount of rotation that will be performed.

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



Adjustments tab: black and white

The options available on the Adjustments 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 produce the highest quality image. This option allows scanning of mixed documents with varying quality (i.e., 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: Draft*.

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. This options range from 0 to 255. The default is 90.

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

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 visa versa.

- **Image**

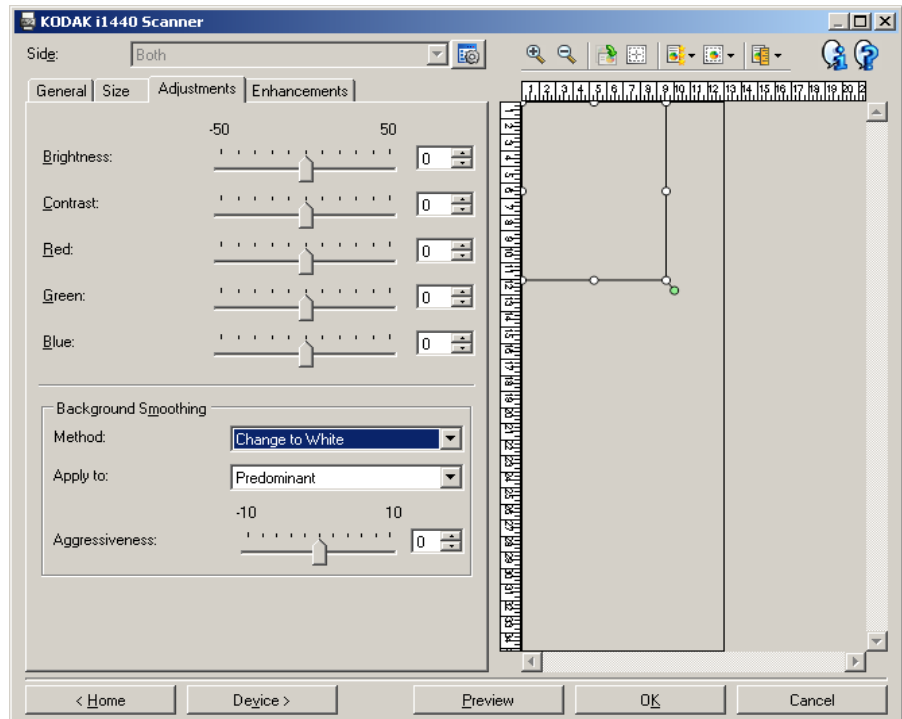
- **(none)**
- **Halftone Removal:** enhances dot matrix text and images with halftone screens (e.g., newspaper photographs).

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.

NOTE: You may want to change this option if your application misinterprets the image data and stores your image in reverse of what you expect.

Adjustments tab: color or grayscale

The options available on the Adjustments 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**.



Brightness — changes the amount of white in the color or grayscale image. The values range from **-50** to **50**. The default is 0.

Contrast — makes the image sharper or softer. The values range from **-50** to **50**. The default is 0.

Red — changes the amount of red in the color image. The values range from **-50** to **50**. The default is 0. *Does not apply to grayscale images.*

Green — changes the amount of green in the color image. The values range from **-50** to **50**. The default is 0. *Does not apply to grayscale images.*

Blue — changes the amount of blue in the color image. The values range from **-50** to **50**. The default is 0. *Does not apply to grayscale images.*

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.

- **Method:**

- **(none)** - no background smoothing will be performed.
- **Automatic** - smooths up to three background colors.
- **Change to White** - identifies up to three background colors and substitutes each color with white.

- **Apply to:**
 - **Predominant** - smooths the predominant background color to white.
 - **Neutral** - smooths only the neutral color to white, and also smooths up to two additional background colors.
 - **All** - smooths the neutral color and up to two additional background colors to white.
- NOTE: The *Apply to* options are only available for **Method: Change to White**.
- **Aggressiveness:** allows you to adjust the extent at which the background(s) are determined. The values range from **-10** to **10**. The default is 0.

Enhancements tab

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

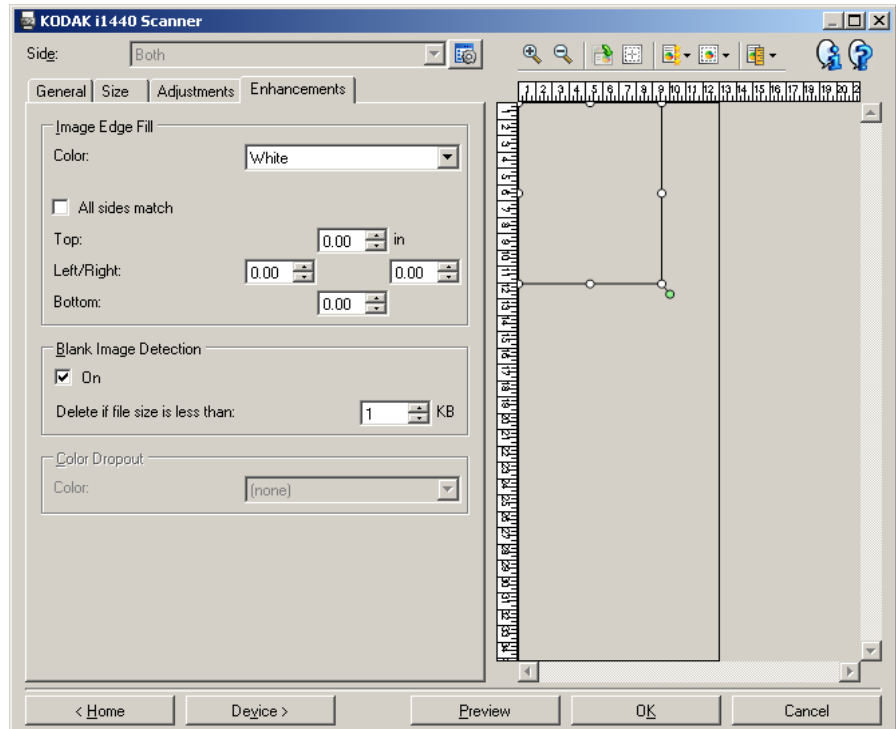


Image Edge Fill — fills the edges of the final electronic image by covering the area with the specified color.

- **Color:** allows you to select the color to fill the edges with.
 - (none)
 - White
 - Black
- **All sides match:** when turned on, an equal amount will be filled in on all sides.
- **Top:** determines how much of the top edge will be filled in.
NOTE: This option is applied to all edges when **All sides match** is turned on.
- **Left/Right:** the option on the left will determine how much of the left edge will be filled in and the option on the right will determine how much of the right edge will be filled in.
- **Bottom:** determines how much of the bottom edge will be filled in.
NOTE: 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.

Blank Image Detection — allows you to configure the scanner to not include blank images.

- **On:** turns Blank Image Detection on and makes the rest of the Blank Image Detection options available.
- **Delete if file size is less than:** 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).

Color Dropout — used to eliminate a form's background so that only the entered data is included in the electronic image (i.e., 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:** select the desired dropout color.
 - **(none)**
 - **Red**
 - **Green**
 - **Blue**

NOTE: **For i1440 Scanners only:** If you created custom dropout colors, these colors will also be available in the *Color* drop-down list.

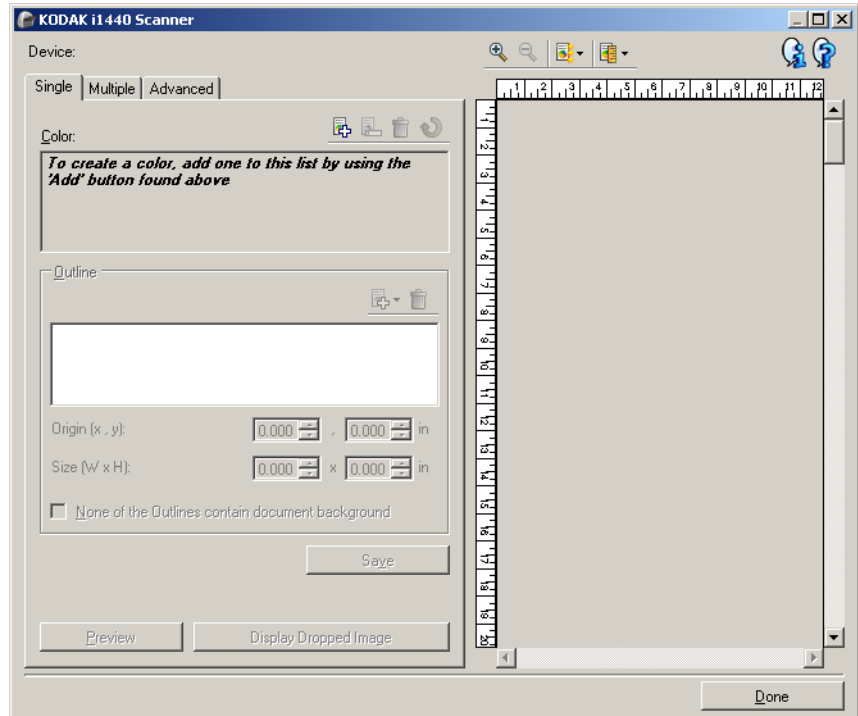
The following options are for the Kodak i1440 Scanner only.

- **Form data is color:** allows you to indicate that a color other than black or dark blue ink, was used for the data entered on the form.
- **Configure:** displays the Color Dropout Configuration window, which allows you to create and change custom dropout colors. If you have any unsaved changes for the current Setting Shortcut, you will be prompted to save those changes.

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

Defining custom dropout colors using the Color Dropout Configuration window

The Color Dropout Configuration window allows you to define custom dropout colors. If the supplied dropout colors (i.e., red, green, blue) do not dropout the color on your form, you can create a custom dropout color that is specific to your form. The custom color is created by using the Color Dropout Configuration window. If you have a complicated form that requires more than one dropout color, you can create a multiple custom color that can dropout up to three colors.



The Color Dropout Configuration window is accessed via the Configure button on the Enhancements tab of the Image Settings window. This window includes the following tabs: **Single**, **Multiple** and **Advanced**.

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

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

Toolbar buttons



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



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



Preview Quality: selects the quality of the preview 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.



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 of the color dropped image based on some of the current shortcut settings (e.g. *Black and White: Conversion quality, Contrast, Threshold*). An image will be displayed in this area after a preview scan has been performed.

- **Outline:** When the Single tab is displayed, the preview area also shows the current *Outline* selections. If the outline does not align with the desired area on 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.



Done — returns you to the Enhancements tab. When selected, you will be prompted to save any unsaved changes.

Information icons



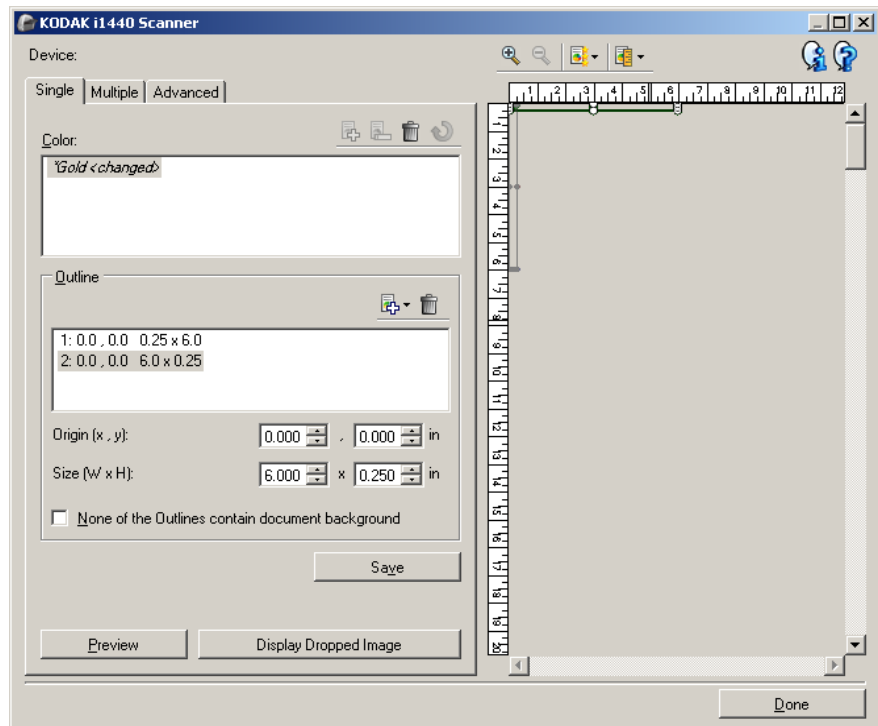
About: displays the scanners' version and copyright information.



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

Color Dropout Configuration window — Single tab

The Single tab allows you to configure a custom dropout color that contains information for one color. The information includes the learned data as well as the options used to create the color.



NOTE: You cannot select another tab while a color is being modified (e.g., when the color name is in italics and appended with <changed>).

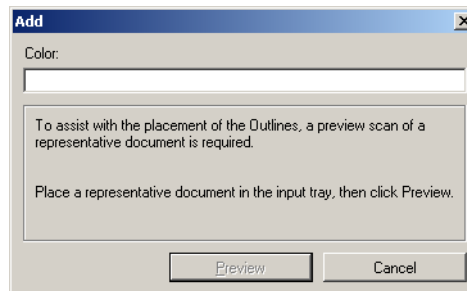
Color — indicates which custom dropout color you are configuring. The maximum number of custom dropout colors is 60.

See the section entitled, "Creating a custom dropout color to drop multiple colors" for procedures on how to configure a custom single color.

Toolbar buttons



Add: adds a color that can be configured. This option is not available if the maximum number of colors has been reached or a color is being modified. When selected, the Add window will be displayed:

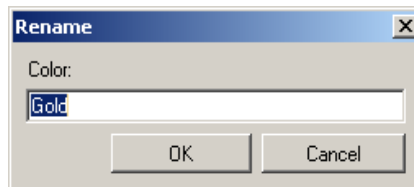


- **Color:** allows you to enter the name you want for the new color. The name cannot be the same as any existing Single, Multiple or supplied dropout color.
- **Preview:** performs a preview scan and adds the color alphabetically to the Color list.

NOTE: The preview image will automatically toggle to the color image, since no single colors have been added yet.



Rename: allows you to rename the currently selected color. This option is not available if there are no multiple colors or a color is being modified. When selected, the Rename window will be displayed:



- **Color:** allows you to enter the new name you want for the color. The name cannot be the same as any existing Single, Multiple or supplied dropout color. When you click **OK**, the color will be saved with the new name.



Delete: removes the currently selected color. This option is only available if you have a single color defined or if the single color is included in any defined Multiple color. When selected, you will be prompted for confirmation.

NOTE: If all single colors are removed, the preview image will automatically toggle to the color image.



Clear learned information: removes all previously learned information about the currently selected color. This option is not available if a color is being modified. When selected, you will be prompted for confirmation.

Outlines — allows you to define up to eight areas of the document to use for the learning process. You can select the location and size of each outline. The preview area will show each outline.

NOTE: The *Outlines* option is not available for a color that has already been learned.

- **Origin (x, y)** — (x) is the distance from the left edge of the document and (y) is the distance from the top edge of the document.
- **Size (w, h)** — the width and height of the outline area.

NOTE: The minimum size is 0.25 inches (6.35 mm).

- **None of the Outlines contain document background** — allows you to indicate that every outline is within a solid area of color. Typically at least one outline will contain the background of the document (e.g. outline is around text), in that case do not select this option.

NOTES:

- These options are not available when no *Outlines* are defined.
- The color information is re-learned when any of these options are changed. If the preview is showing a dropped image, the image will show the result of the re-learned information.
- You can also adjust the outline displayed in the preview area using your mouse.

Toolbar buttons



Add: displays a list of predefined outline sizes. This option is not available if eight *Outlines* have been added. When selected, the outline will appear at the end of the Outline list and be visible in the preview area.

- 0.25 x 6 in (6.35 x 152.4 mm)
- 0.5 x 6 in (127 x 152.4 mm)
- 1 x 2 in (25.4 x 50.8 mm)
- 2 x 1 in (50.8 x 25.4 mm)
- 2 x 4 in (50.8 x 101.6 mm)
- 4 x 2 in (101.6 x 50.8 mm)
- 4 x 6 in (101.6 x 152.4 mm)
- 6 x 0.5 in (152.4 x 127 mm)
- 6 x 0.25 in (152.4 x 6.35 mm)



Delete: removes the currently selected Outline. This option is not available when no *Outlines* are defined.

NOTE: If all *Outlines* are removed, the preview image will automatically toggle to the color image.

Save — saves the learned color information.

NOTE: This option is only available when the current color is being modified (e.g. name is in italics and appended with *<changed>*) and has at least one *Outline* defined.

Preview — initiates a scan and displays the scanned image in the preview area. The image displayed will be either the dropped image or a color image. This option is only available when there is at least one single color.

Display Dropped Image/Display Color Image — allows you to toggle the displayed preview image. This will only affect the preview image for the Single tab, and will be retained even if you change tabs. This option is only available when there is at least one single color, the selected single color has at least one *Outline* defined, and there is a preview image.

Color Dropout Configuration window — Multiple tab

The Multiple tab allows you to configure a custom dropout color that contains information for up to three single colors.

NOTE: If you cannot select another tab while a color is being modified (e.g. name is in italics and appended with *<changed>*).

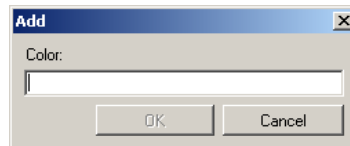
Color — indicates which custom dropout color you are configuring. The maximum number of custom dropout colors is 60.

See the section entitled, “Creating a custom dropout color to drop multiple colors” for procedures on how to configure a custom single color.

Toolbar buttons



Add: adds a color that can be configured. This option is not available if the maximum number of colors has been reached or a color is being modified. When selected, the Add window will be displayed:



- **Color:** allows you to enter the name you want for the new color.

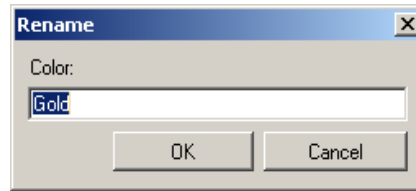
NOTE: The name cannot be the same as any existing Single, Multiple or supplied dropout color.

- **OK:** adds the color alphabetically to the *Color* list.

NOTE: The preview image will automatically toggle to the color image, since no single colors have been added yet.



Rename: allows you to rename the currently selected color. This option is not available if there are no multiple colors or a color is being modified. When selected, the Rename window will be displayed:



- **Color:** allows you to enter the new name you want for the color.
NOTE: The name cannot be the same as any existing Single, Multiple or supplied dropout color.
- **OK:** saves the Color with the new name.



Delete: removes the currently selected color. This option is only available if you have multiple colors defined. When selected, you will be prompted for confirmation.

NOTE: If all multiple colors are removed, then the preview image will automatically toggle to the color image.



Reset: allows you to undo any changes that have been made to the selected color. This option is only available when a color is being modified.

NOTE: The preview image will automatically toggle to the dropped image.

Single — allows you to define up to three single colors to be dropped as part of the multiple color.

NOTES:

- The *Single* option is only available when a multiple color has already been added.
- The preview area will not show each color's outlines.

Toolbar buttons



Add: displays a list of all existing single colors (supplied dropout colors followed by custom single colors). This option is not available if three single colors have been added. When selected, the color will appear at the end of the *Color* list.

NOTE: The preview image will automatically toggle to the dropped image.



Delete: removes the currently selected color. This option is only available if you have single colors defined.

NOTE: If all single colors are removed, then the preview image will automatically toggle to the color image.

Save — saves the single colors.

NOTE: This option is only available when the current color has been modified (e.g. name is in italics and appended with *<changed>*).

Preview — initiates a scan and displays the scanned image in the preview area. The image displayed will be either the dropped image or a color image.

NOTE: This option is only available when there is at least one multiple color.

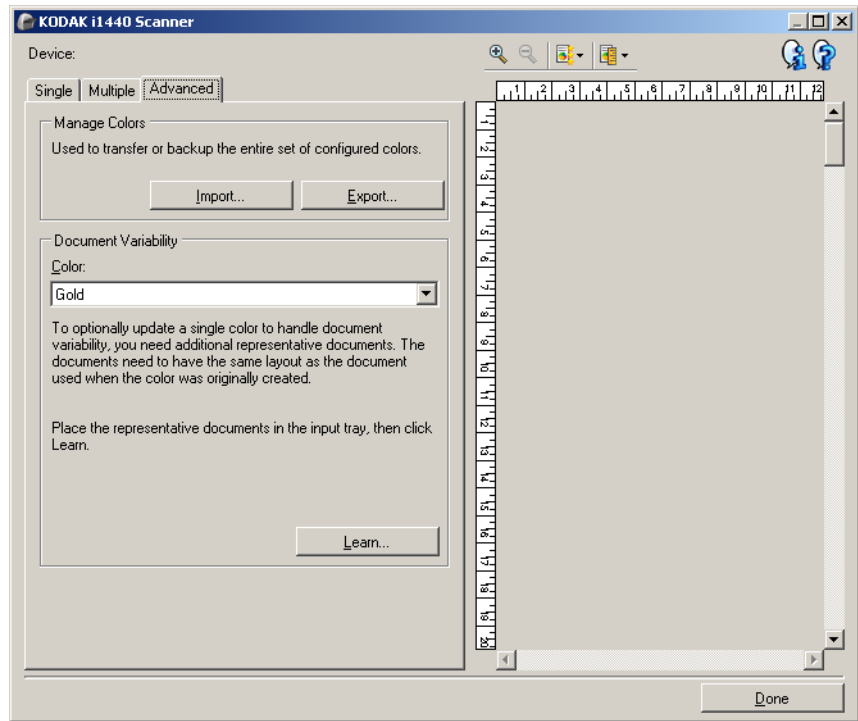
Display Dropped Image/Display Color Image — allows you to toggle the displayed preview image. This will only effect the preview image for the Multiple tab. Since most changes on this tab force the preview to display a certain image, this change is not retained.

NOTE: This option is only available when there is at least one multiple color, the selected multiple color has at least one single color defined, and there is a preview image.

Color Dropout Configuration window - Advanced tab

The Advanced tab allows you Import/Export your custom dropout color, as well as update an existing custom dropout color to handle color variability from document to document.

NOTE: No preview image will be displayed.



Manage Colors — allows you to transfer or backup your custom dropout colors. The dropout colors are transferred as an entire set.

- **Import** — imports a color set by replacing all current custom dropout colors with the colors in the set. When selected, the operating system's File Open window is displayed allowing you to select the color set you want to import.

NOTE: If at least one custom dropout color exists, you will be prompted for confirmation before the File Open window is displayed.

- **Export** — exports all the current custom dropout colors to a color set. When selected, the operating system's File Save window is displayed allowing you to select the folder and file name for the color set.

NOTES:

- This option is only available if there is at least one custom color.
- If you want to transfer colors to another PC: select **Export** on the PC that has the custom dropout colors you want to transfer and then select **Import** on the other PC.
- If you want to add a color to a current color set: select **Import**, create the new custom color and then replace the color set by selecting **Export**.

Document variability — allows you to optionally enhance a custom single dropout color to handle variability in color from document to document. For example, if you get additional prints of a form and it has a slightly different color, this feature can be used to update your existing custom color to handle the variability in the new form's color.

- **Color** — allows you to select which custom single dropout color to enhance.
- **Learn** — scans your documents in order to update the custom dropout color. When selected, you are prompted for confirmation before scanning occurs.

NOTES:

- The *Document variability* option is only available when at least one custom single color has been created.
- Only use documents of the same type and layout as the document you used when the custom dropout color was created.

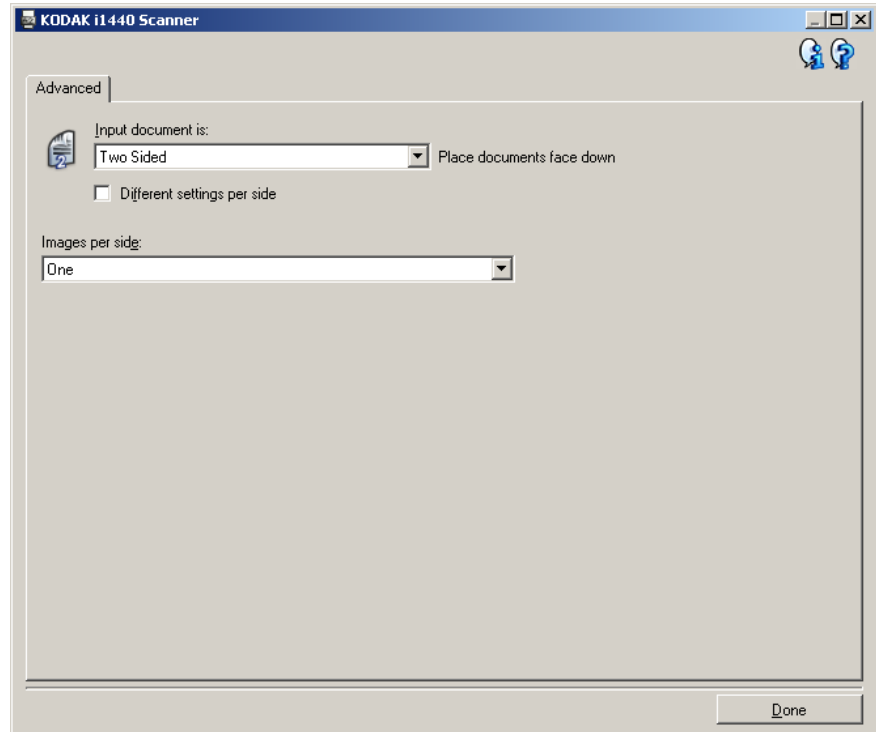
Advanced Image Setup

The Advanced tab

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



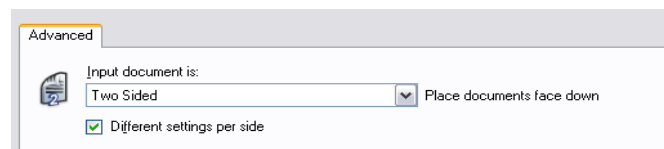
When you select the Advanced Image Setup icon, the Advanced tab will be displayed.



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

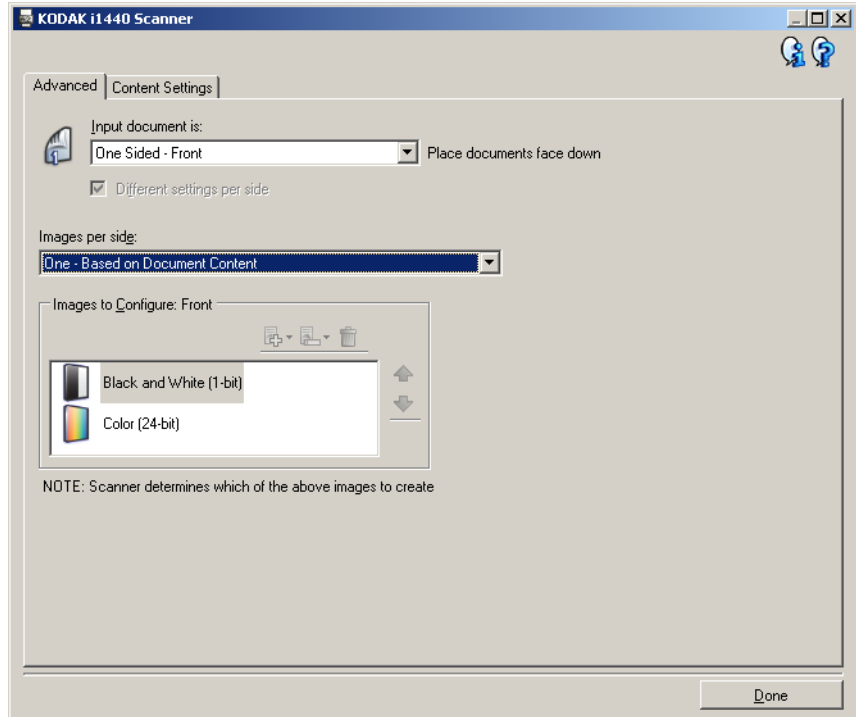
NOTE: The *Two Sided* and *One Sided - Back* options are only available for duplex scanner models.

Different settings per side — by default, the settings you select apply to both sides of the image. Turn this option on if you want you 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* option on the Image Settings window will no longer be grayed out and you can select different settings for each side. Now that you have 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* option 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.



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

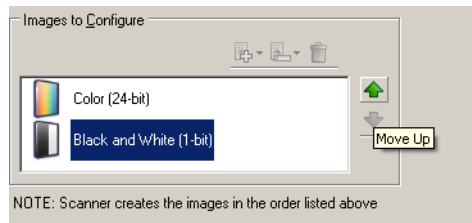
NOTE: If you select **One - Based on Document Content** from the *Images per side* option, the Content Settings tab will be displayed.

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, entitled:

- *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.



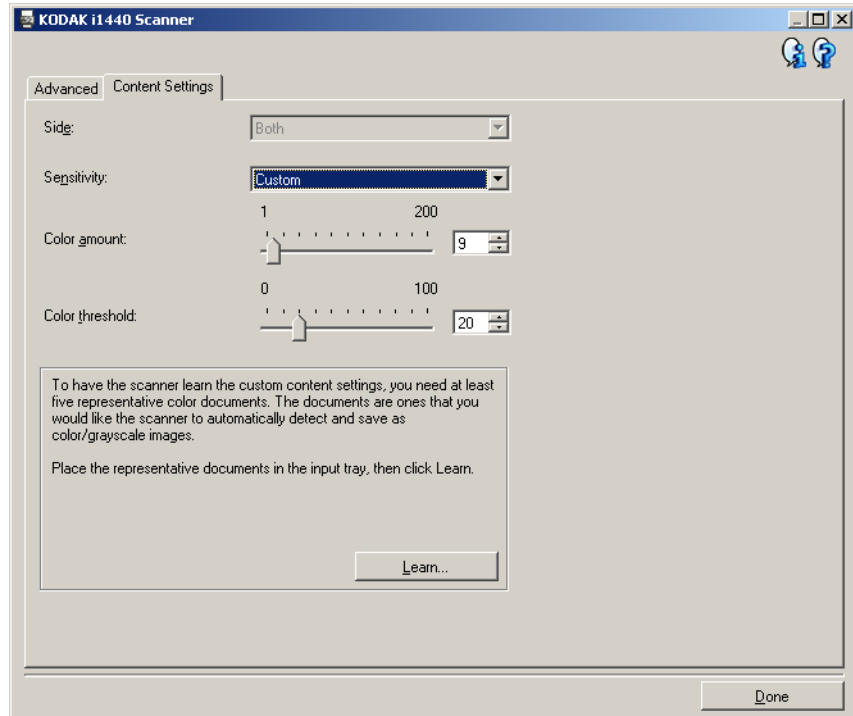
Toolbar buttons:

	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

- **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 (i.e., 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*.

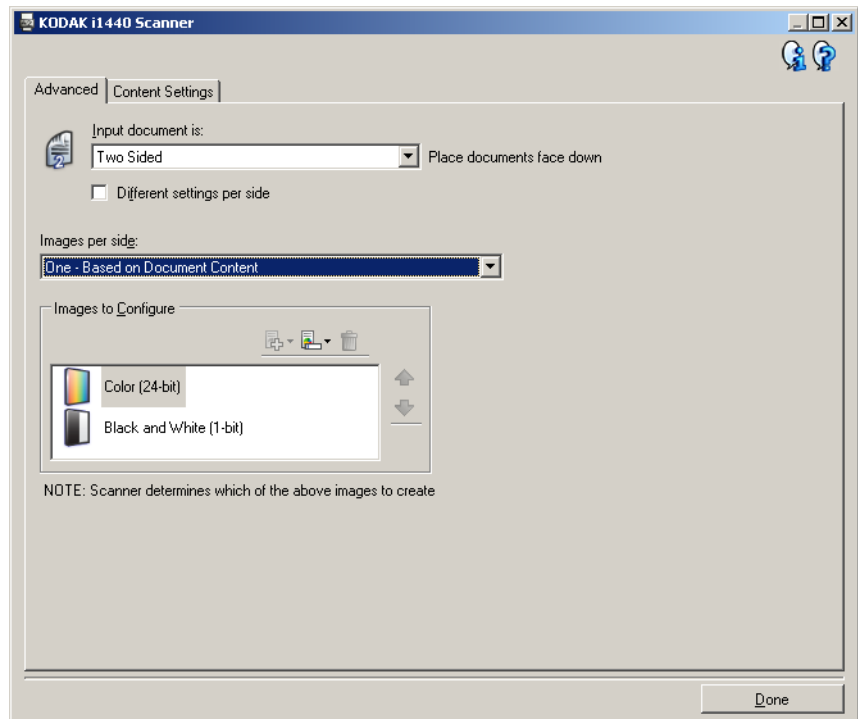
NOTE: These Color amount and Color threshold sliders will be updated automatically. If these values do not provide the desired results with your job set, you may need to manually adjust the *Color Threshold*.

**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.

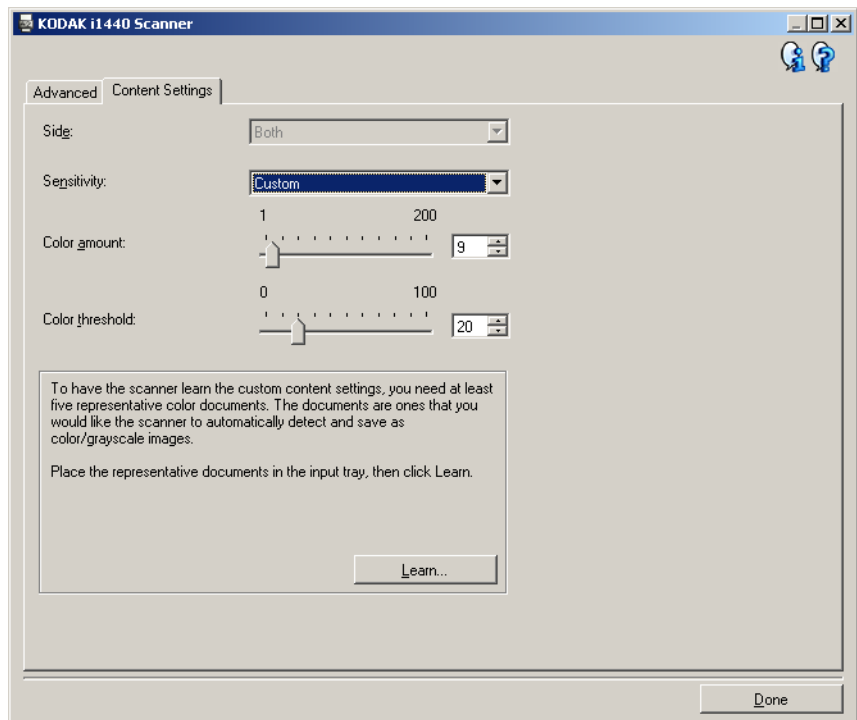
1. Select a **Setting Shortcut** from the main *Kodak Scanner* window that closely describes your desired output.
2. Select **Settings** to display the Image Settings window.
3. Select the **Advanced Image Setup** icon on the Image Settings window to display the Advanced tab.
4. Select **Input document 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**

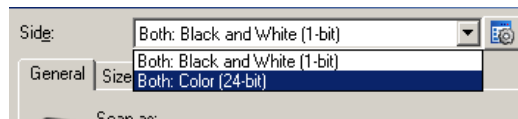
7. Go to the **Content Settings** tab.



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: Color (24 bit) and **Both: Black and White (1bit)**.



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

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

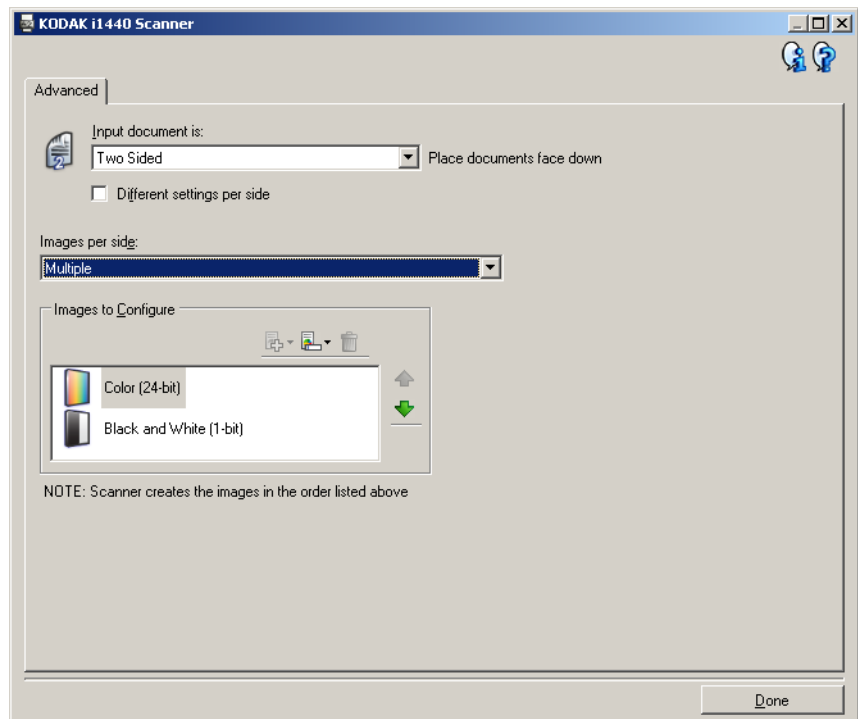
11. When finished, select **Home** to return to the main *Kodak Scanner* window and then select **Save** to save your selections to the shortcut.

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.

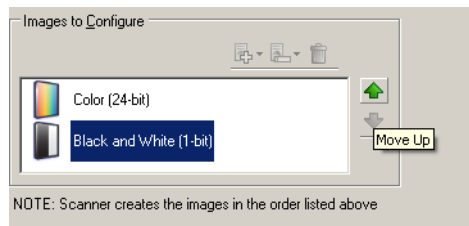
1. Select a **Setting Shortcut** from the main *Kodak* Scanner window that closely describes your desired output.
2. Select **Settings** to display the Image Settings window.
3. Select the **Advanced Image Setup** icon on the Image Settings window to display the Advanced tab.
4. Select **Input document 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.



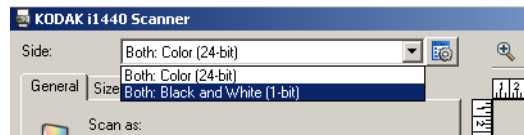
6. If you want a grayscale image instead of a color image, when enough color is detected in the document:
 - make sure *Color (24-bit)* is selected
 - select **Change** to display a list of options
 - select **Grayscale**

7. By default the scanner will produce the color/grayscale image first and deliver it to the scanning application, then it will produce and deliver the black and white image. If you want the black and white image to be produced and delivered first:
 - make sure *Black and White(1-bit)* is selected
 - select **Move up** to place the black and white 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 (1bit)**.



9. Select **Sides: Both: Color (24-bit)**.

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

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

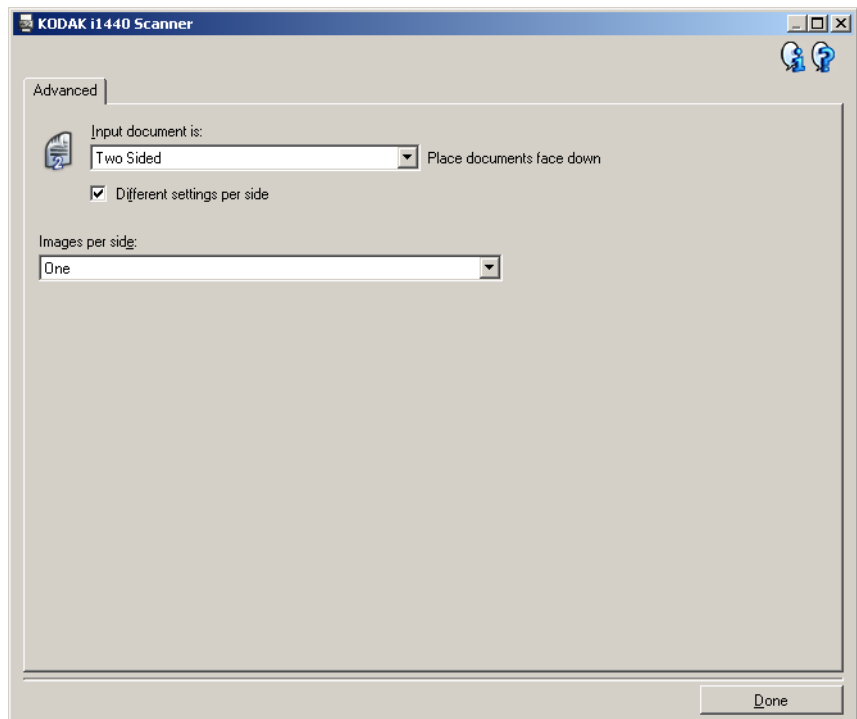
NOTE: Make any other adjustments to the black and white image settings on the rest of the tabs on the Image Settings window.

11. When finished, select **Home** to return to the main *Kodak 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 rear side is fine in black and white.

1. If you are not already on the Advanced tab:
 - Select a **Setting Shortcut** from the main *Kodak* 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 **Sides: 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 **Sides: Back**.

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

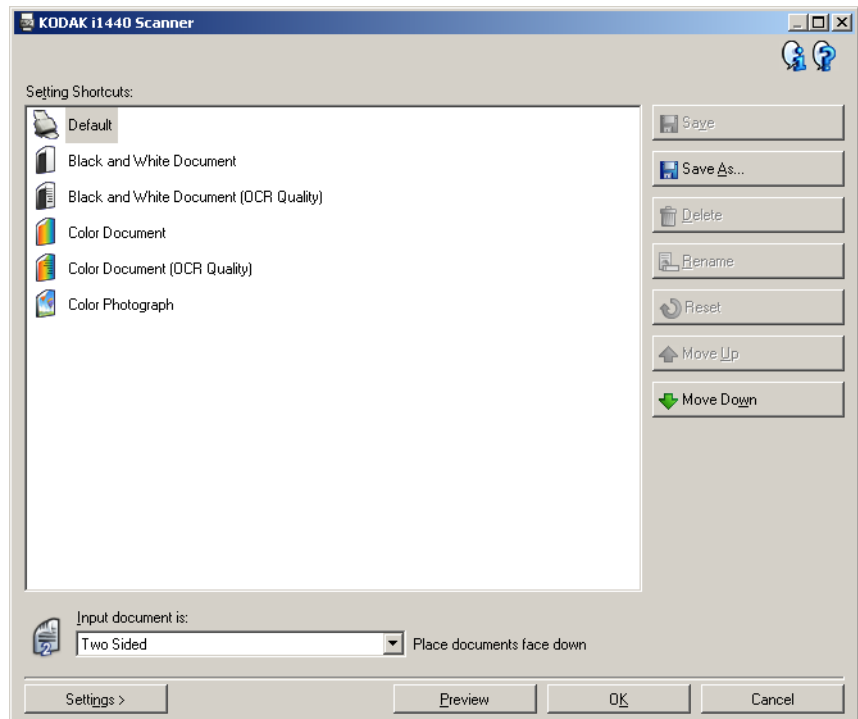
NOTE: Make any other adjustments to the back side settings on the rest of the tabs on the Image Settings window.

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

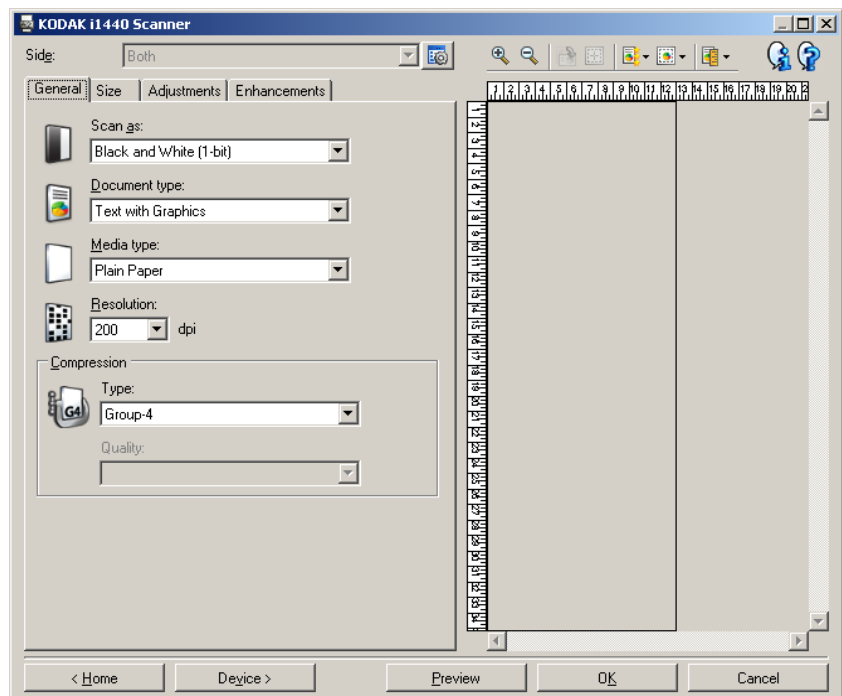
NOTE: Steps 2 and 3 are only valid for duplex scanner models.

Creating a new Setting Shortcut

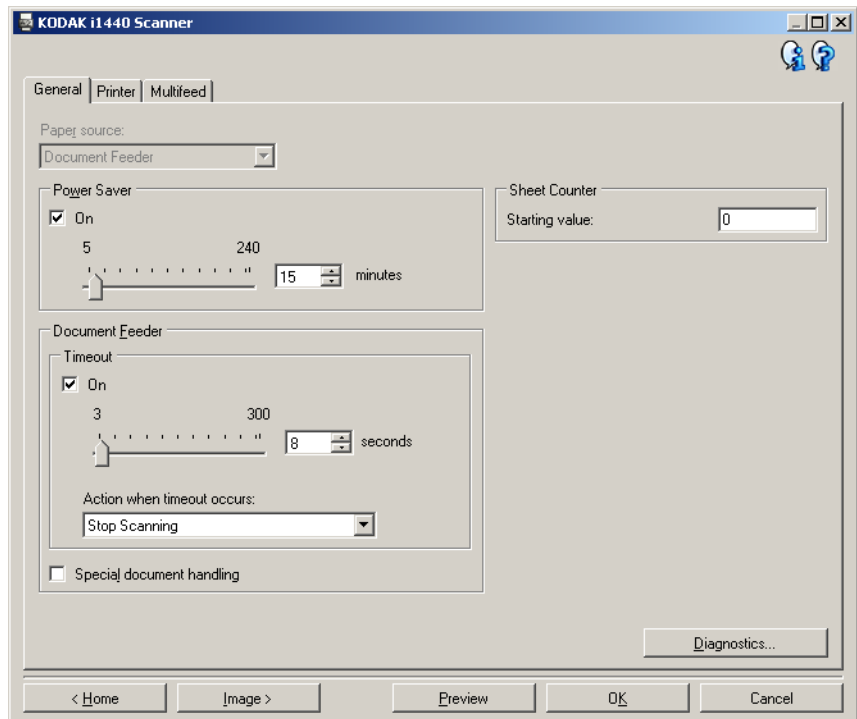
1. From the main *Kodak Scanner* window, select a Setting Shortcut from the list. It is recommended that you select a shortcut that most closely describes the desired image output.



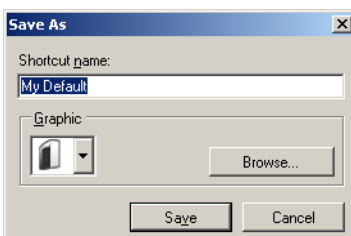
2. Determine if you want to capture an electronic image of the front of your document, back of your document or both sides of your document and make the selection from the *Input document is* field.
3. Select **Settings** on the main *Kodak Scanner* window. The General tab of the Image Settings window 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.



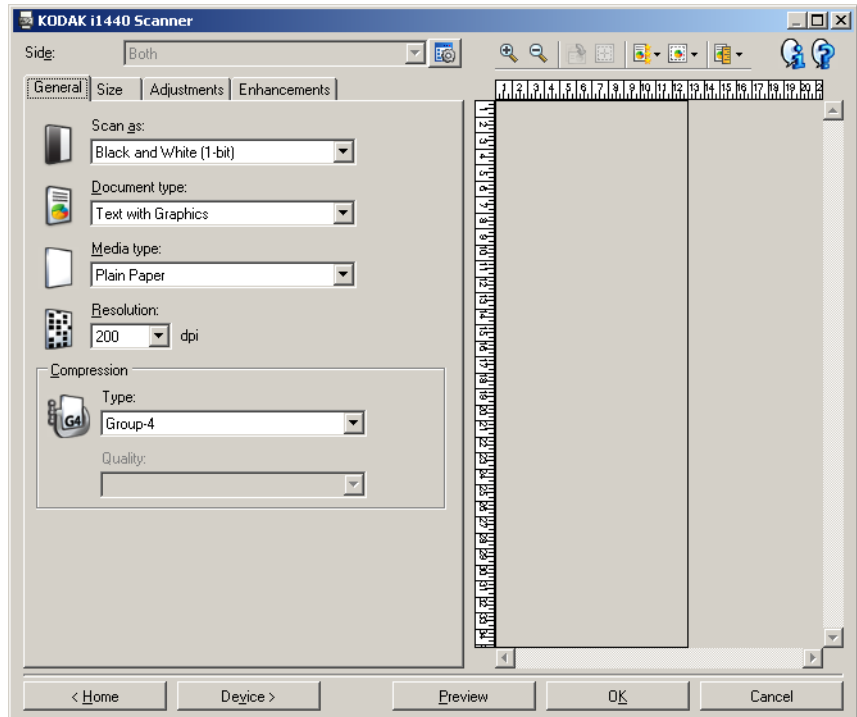
8. Review each tab and select the appropriate options or actions you want the scanner to perform.
9. Select **Home** to return to the main Kodak Scanner window.
10. Select **Save As** to display the Save As window.



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 *Kodak Scanner* window that closely describes your desired output.
2. Select an *Input document is* option from the main *Kodak 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.

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 *Kodak Scanner* window and then select **Save** to save your selections to the shortcut.

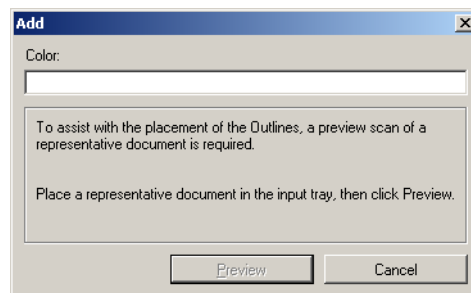
Creating a custom dropout color to drop a single color

In this example, let's assume you want to configure a custom dropout color that will drop a single color from a document.

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

NOTE: The shortcut will need to include a Black and White (1-bit) or Grayscale (8-bit) image.

2. Select **Settings** to display the Image Settings window.
3. Select the **Black and White (1-bit)** or **Grayscale (8-bit)** image on the General tab.
4. Select **Configure** within the *Color* dropout option on the Enhancements tab.
5. Select the **Single** tab.
6. Select the *Color's Add* icon to display the Add window.



7. Enter the name of the custom color.
8. Place a representative document in the input tray of the scanner.
9. Select **Preview** to perform a preview scan and add the color.
10. Select a predefined outline from the *Outline's Add* icon.
11. Adjust the outline by placing it over an area of the document that contains the color to be dropped (i.e. area of the document to learn).

NOTE: Some documents contain different shades of the same color. For those documents, it is recommended that you start by placing the outline over an area that contains the darkest shade.

12. Select **Display Dropped Image** to see the effect of the learning.

If all of the color is not dropped, repeat the following steps until all the color is dropped:

- select **Display Color Image**
- add another outline and place it over an area that was not dropped
- select **Display Dropped Image** to see the effect of the updated learning

13. Select **Save** to save the learned information.

Creating a custom dropout color to drop multiple colors

In this example, let's assume you want to configure a custom dropout color that will drop more than one color from a document.

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

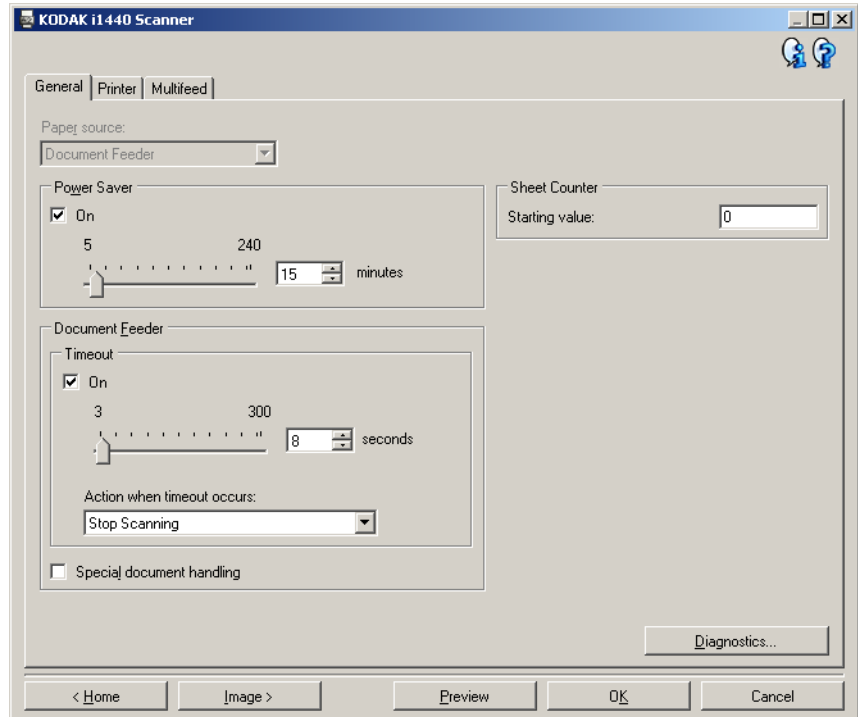
NOTE: The shortcut will need to include a Black and White (1-bit) or Grayscale (8-bit) image.

2. Select **Settings** to display the Image Settings window.
3. Select the **Black and White (1-bit)** or **Grayscale (8-bit)** image on the General tab.
4. Select **Configure** within the Color dropout option on the Enhancements tab.
5. Select the **Multiple tab**.
6. Select the *Color's Add* icon to display the Add window.
7. Enter the name for the custom dropout color and click **OK**.
8. Select up to three colors from the *Single's Add* icon.
9. If you want to see the effect of the dropped colors:
 - place a representative document in the input tray of the scanner
 - select **Preview** to perform a preview scan
 - select **Display Color Image** to see the color image
10. Select **Save**.

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 following tabs: General, Printer and Multifeed.

NOTE: The Printer tab is only available if your scanner is equipped with the document printer.



Home — returns you to the main *Kodak* 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 *Kodak* Scanner window without saving any changes.

Information Icons



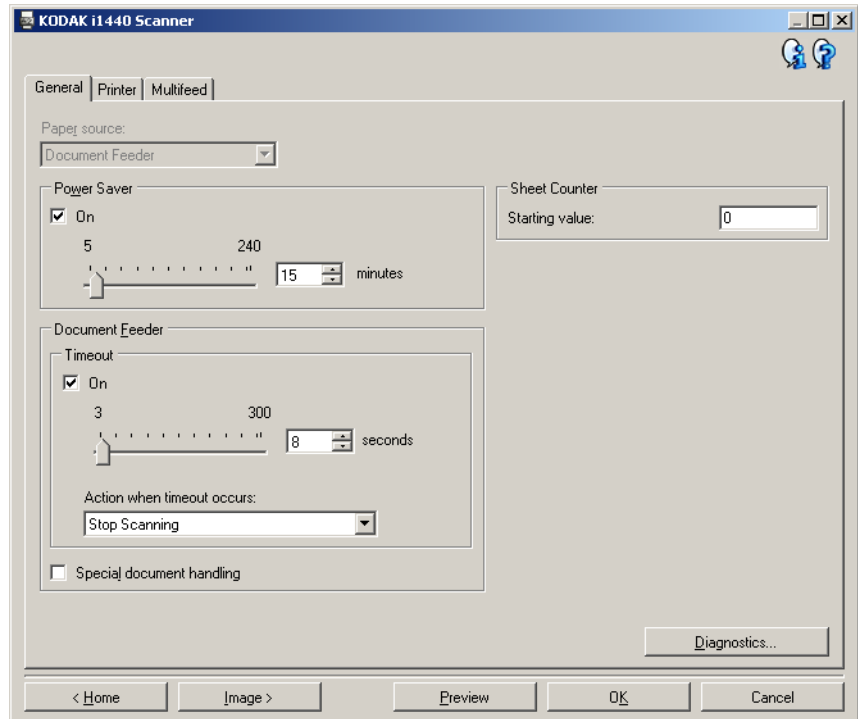
About: displays the scanners' version and copyright information.



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

NOTE: Flatbed options are only available if your scanner is equipped with the *Kodak i1400 Series A3 Flatbed Accessory*.

- **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.

Power Saver — allows you to set the amount of time the scanner has to be inactive before going into power saver mode. You can turn this option **off** or set a time from **5** to **240** minutes.

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. You can set a time from **1** to **300** seconds.
- **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 (i.e. ends the job).

Special document handling — allows you to scan irregularly shaped documents (e.g., pages with coupons removed or documents with large holes or cutouts in them) that may produce jams or truncated images.

NOTES:

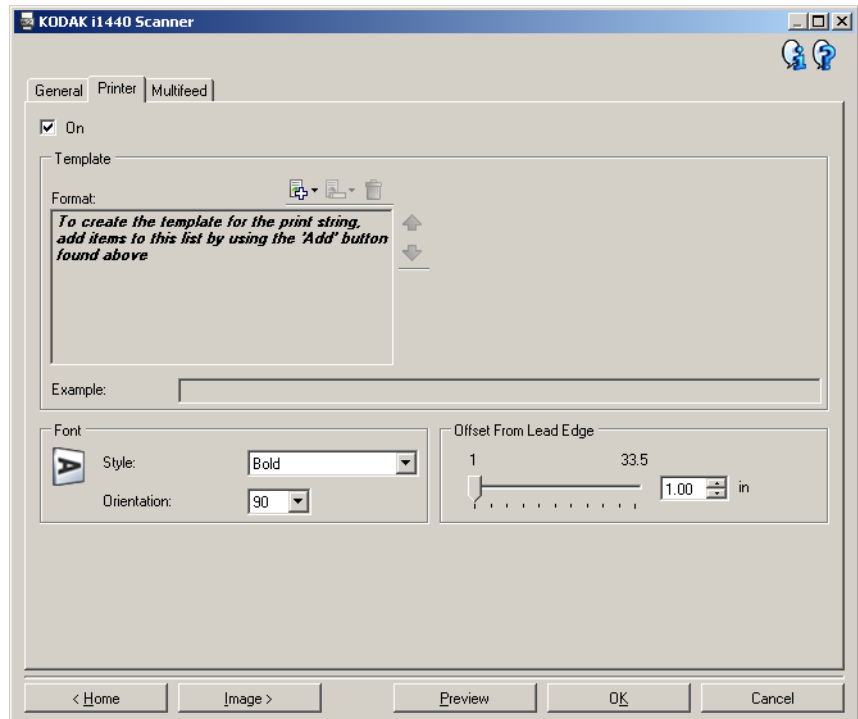
- This option is not available for all models.
- Using this option may decrease overall throughput.

Sheet Counter — enter a value that will be used to assign the document count for the next document entering the scanner. This is incremented sequentially by the scanner and is returned in the image header.

Diagnostics — displays the Diagnostics tab.

Device - Printer tab

The printer provides a vertical print capability and supports a alphanumeric characters, date, time, document count and a custom message.



On — turns printing on and makes the rest of the options on this tab available.

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

Toolbar buttons

	Add: displays a list of items you can add to your print string. When you select an item, that item will appear at the end of the <i>Format</i> list.
	Change: allows you to change the currently selected item in the <i>Format</i> list with one of the items from the list that is displayed.
	Delete: allows you to remove the currently selected item from the <i>Format</i> list.

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

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

- **Counter:** this is the document count for the scan session. This value is incremented sequentially by the scanner and returned in the image header.

- **Starting value:** allows you to set the document count for the next document that will be scanned.

- **Field width:** allows you to configure the width of the counter from 1 to 9. However, if for example, you only have 6 characters left in the print string, then the field width would be limited to 6.

- **Leading zeroes:** allows you to configure the format of the counter when the width of the value is less than the field width (the examples indicate a field width of 3 and the counter at 4). Options are:

- Display:** “004”

- Do Not Display:** “4”

- Display As Spaces:** “ 4”

- **Date**

- **Format:**

- MMDDYYYY**

- DDMMYYYY**

- YYYYMMDD**

- DDD (Julian)**

- YYYYDDD (Julian)**

- **Separator:** (the examples indicate a format of YYYYMMDD)

- None**

- Slash:** 2006/12/03

- Hyphen:** 2006-12-03

- Period:** 2006.12.03

- Space:** 2006 12 03

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

- **Time**

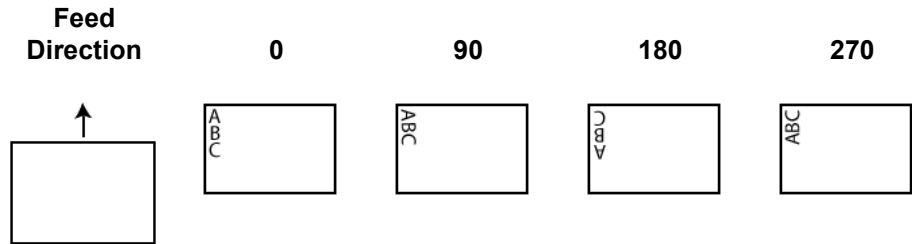
- **Specific time:** allows you to select a specific time if you do not want to use the current time within the scanner.

- **Message:** allows you to specify custom text to be included in your print string. A maximum of 20 characters is allowed.

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

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

- **Font** — you can select what orientation you want your information to be printed.
- **Style**: available character styles: **Normal** and **Bold**.
- **Orientation**: while the characters are printed vertically (starting at the lead edge of the document) this allows you to select the orientation of the print string. Available options are: **0, 90, 180, 270**.

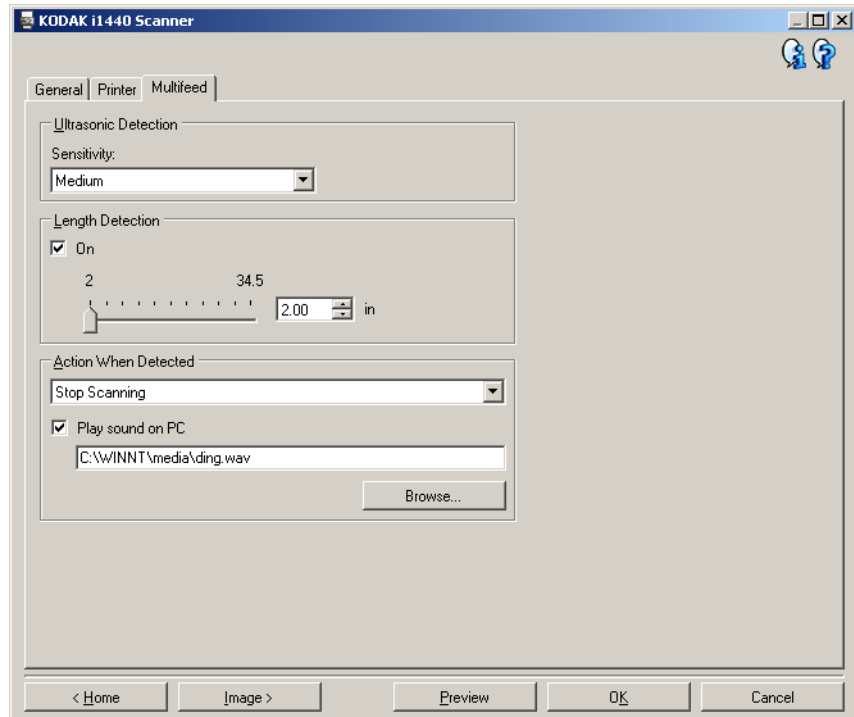


Offset from lead edge — select a value from **0.35** to **33.5** inches to determine how far the printed information will appear from the leading edge of the document.

NOTE: Printing automatically stops 6.3 mm (1/4-inch) from the trailing edge of the document even if the information has not been completely printed.

Device - Multifeed tab

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



Ultrasonic Detection

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

- **(none)**
- **Low:** least aggressive setting 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 are similar in 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 up to **34.5** inches.

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.

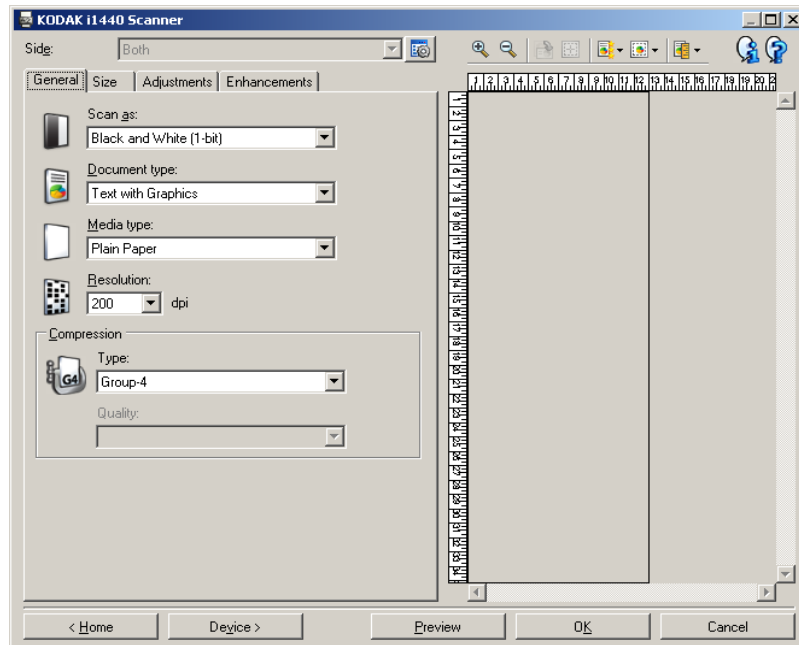
- **Stop Scanning:** scanning will stop and control will return to the scanning application (i.e., ends the job). Verify that the paper path has been cleared and restart the scan session from the scanning application.
- **Stop Scanning - leave paper in path:** scanning will stop immediately (i.e., making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

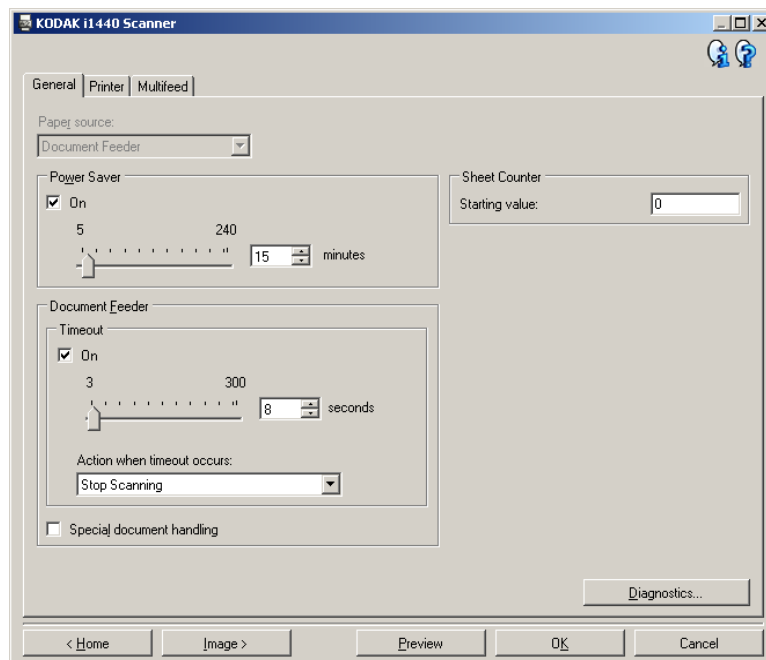
NOTE: The sound on the PC may not occur at the exact time the multifeed is detected by the scanner.

Changing Device settings

1. Select a Setting Shortcut from the main *Kodak Scanner* window that closely describes your desired output.
2. Select **Settings** to display the Image Settings window.



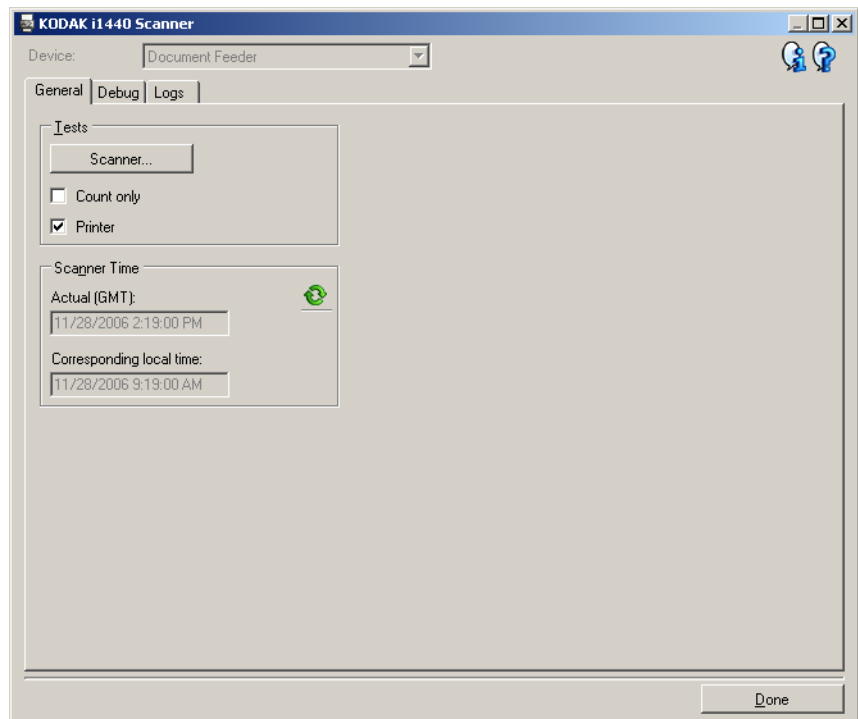
3. Select **Device** to display the Device Settings window.



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 *Kodak 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.



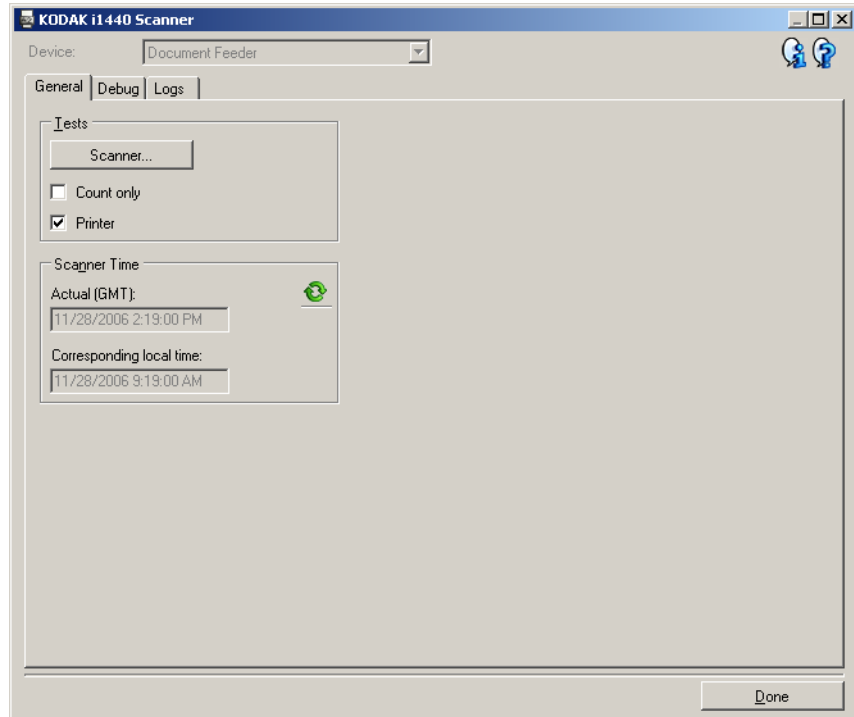
Device — allows you to select which device to perform diagnostics on. The options are: **Document Feeder** or **Flatbed**.

NOTE: This option is only available if you had 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 displays the scanner time.



Tests

- **Scanner:** similar to, but more extensive than, a power-on self test. Selecting this will immediately put the device through a series of checks to determine that all the scanner hardware is working.
- **Count only** — counts the number of documents entering the scanner without actually sending the images to the scanning application. This test is performed during any scan session in which this option is turned on.

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

- **Printer:** tests the functionality of the Printer, e.g., are all ink jets working. This test is performed during any scan session in which this option is turned on.

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

Scanner Time

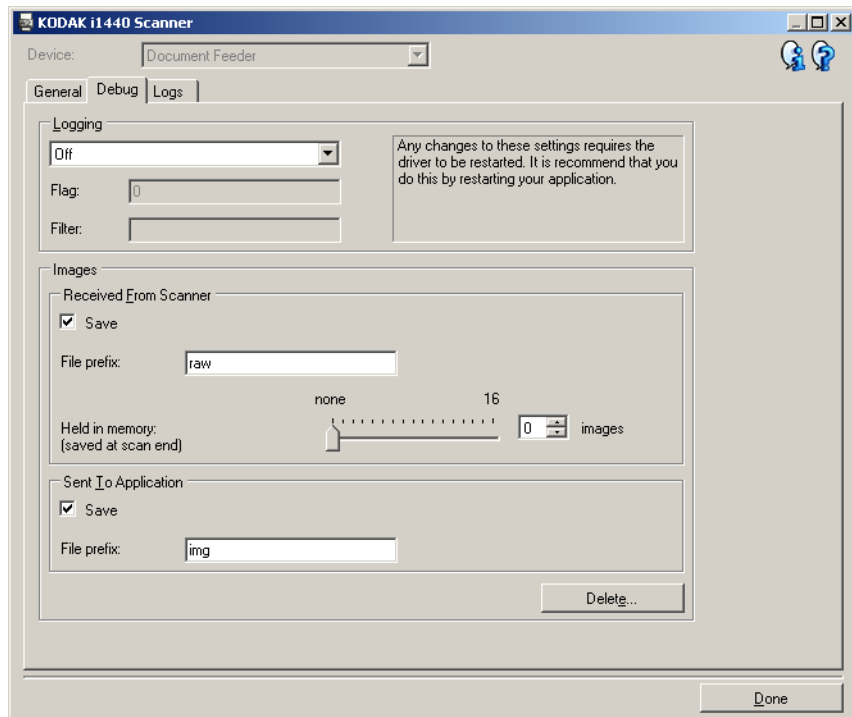
- **Actual (GMT):** displays the Greenwich Mean Time of the scanner.
- **Corresponding local time:** displays the scanner's Greenwich Mean Time in the PC's local time zone.



Refresh: redisplay the current scanner time.

Diagnostics - Debug tab

The Debug tab allows you to store the communications between the scanner and a scanning application, as well as the images, to a file that can be reviewed later by Kodak support personnel.



Logging — saves the communications between the scanner and a scanning application. The options are: **Off** (the default), **On** or **Custom**. It is suggested that you do not use the *Custom* setting, unless directed to do so by Kodak support personnel.

NOTES:

- **Flag** and **Filter** are only available for Custom; only make changes as directed by Kodak support personnel.
- For changes to take effect, you must restart your application.

Images

- **Received From Scanner:** normally, it is not necessary to save the images received at the PC from the scanner. It is suggested that you only turn this on when instructed by Kodak support personnel.
 - **Save:** normally, it is not necessary to save the images received at the PC from the scanner. It is suggested that you only turn this on when instructed by Kodak support personnel.
 - **File prefix:** the scanner will apply the entered text to the beginning of each file created. This can be used to more easily find and sort the saved images.
 - **Held in memory:** if scanning a large job and you only need to save the last few images, then turn this on by selecting the number of images you want to save.

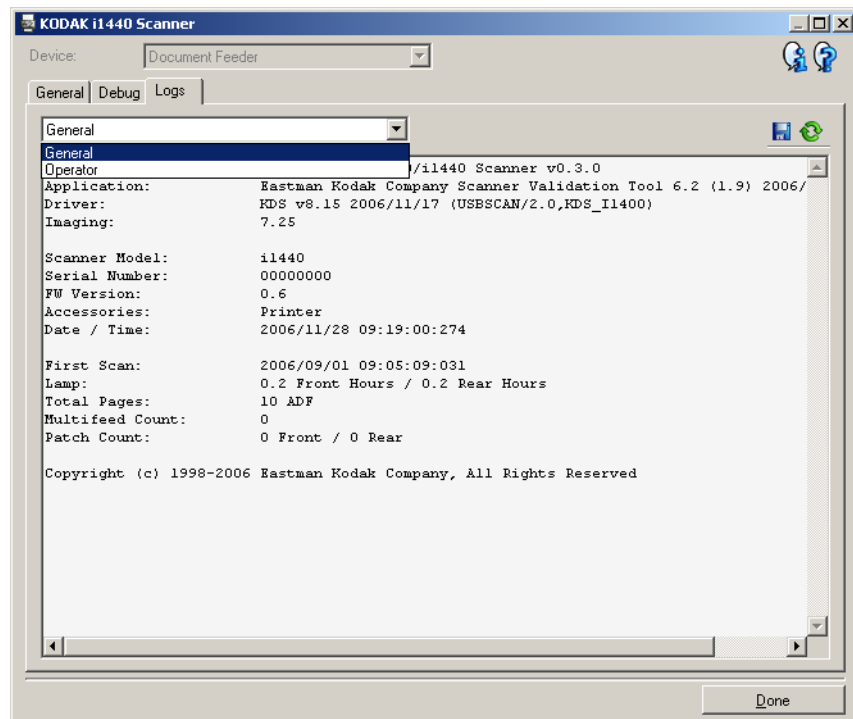
NOTE: Turning this on will use more PC memory.

- **Sent To Application:** normally, it is not necessary to save the images received at the scanning application from the scanner. It is suggested that you only turn this on when instructed by Kodak support personnel.
 - **Save:** normally, it is not necessary to save the images received at the scanning application from the scanner. It is suggested that you only turn this on when instructed by Kodak support personnel.
 - **File prefix:** the scanner will apply the entered text to the beginning of each file created. This can be used to more easily find and sort the saved images.

Delete — deletes any debug images that may have been created during previous scan sessions.

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 Kodak support personnel.
- **Debug:** displays communications between the scanner and the scanning application. This option is only available when **Logging** is turned on in the Debug tab. This log is cleared each time the scanning application connects to the scanner.

Toolbar buttons



Save As: saves all the logs for viewing by Kodak support personnel. When selected, you will be prompted for the location to save the logs along with the option of including any debug images.



Refresh: refreshes the currently displayed log.

Using the ISIS Driver

The ISIS Driver is software that communicates with the scanner. This driver is created and maintained by EMC Captiva and is provided with the scanner by Kodak. Many scanning applications support ISIS drivers and this driver can be used to interface with them.

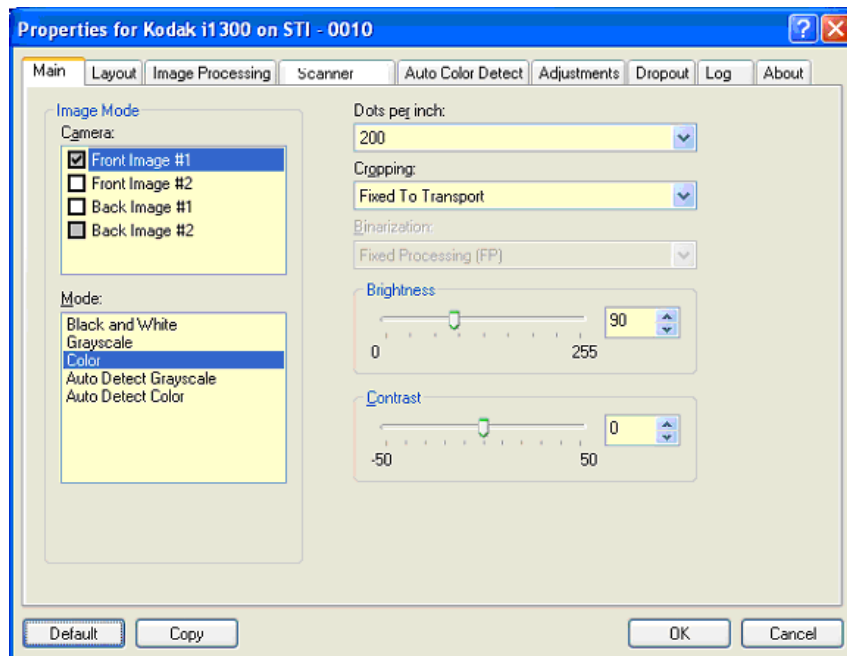
This section provides descriptions of the options on the tabs of the main ISIS Driver window and how to set these options.

For the purpose of this manual, all displayed windows assume the features available on the *Kodak i1420/i1440* Scanners. If you have a *Kodak i1410* Scanner, all options are limited to one-sided scanning only.

See the section entitled, “Starting the Scan Validation Tool” earlier in this chapter to access the main ISIS Driver window.

The main ISIS Driver window

The main ISIS Driver window provides a set of 9 tabs. You can select each of these tabs and make any choices necessary to meet your scanning needs. The buttons on the bottom of the window apply to all the tabs.



Default — when you select **Default**, the values will be reset to the factory defaults.

Copy — this function is only available when scanning two-sided documents. The Copy button provides a convenient way to set up the color, grayscale or black and white image settings on one side and transfer them to the other. For example, if you highlight and set up **Front Image #1**, you can use the Copy button to duplicate those settings for **Back Image #2**.

OK — saves the values set on all tabs.

Cancel — closes the window without saving any changes.

Main tab

The Main tab provides the following options:

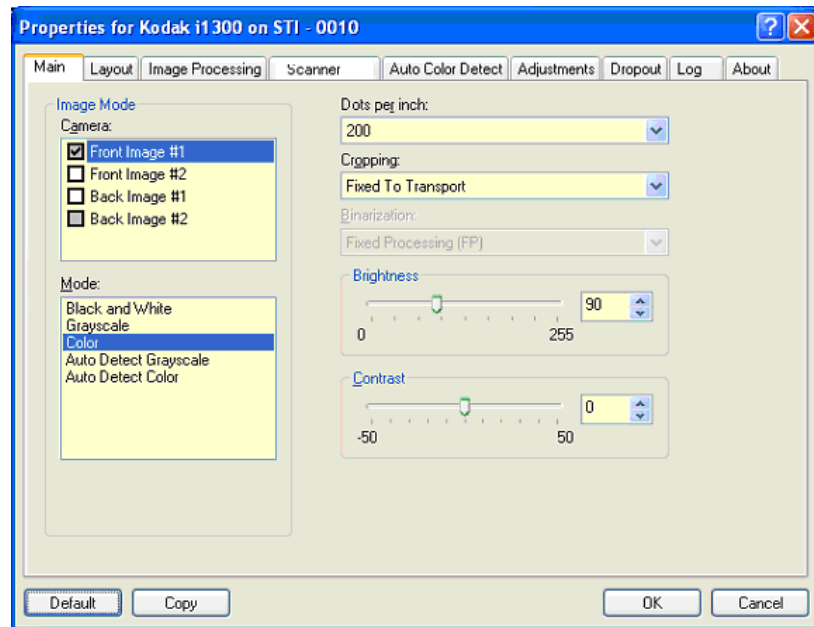


Image Mode

Camera — the selections in the Camera box list the available sides (front and back) of an image where you can define individual image processing values. Options include: **Front Image #1**, **Front Image #2**, **Back Image #1** and **Back Image #2**.

The *Kodak* Scanner drivers allow you to control the camera settings independently. Some settings apply only to black and white images, others apply to color/grayscale images. By selecting the appropriate camera and image mode, you can control the scanner's output.

Mode

- **Black and white:** if you want your electronic image to represent all elements of your document in black and white.
- **Grayscale:** if you want your electronic image to have a range of varying shades of gray from black to white.
- **Color:** if you want your electronic image to be in color.
- **Auto Detect Grayscale:** sets auto color detect for grayscale. See the section entitled, "Auto Color Detect tab" for more information.
- **Auto Detect Color:** sets auto color detect for color. See the section entitled, "Auto Color Detect tab" for more information.

Dots per inch (dpi) or resolution — indicates the scanning resolution, which largely determines the quality of the scanned image. The greater the resolution, the better the reproduction. However, scanning at a higher resolution also increases scanning time and file size.

Choose a resolution value from the drop-down list. The default is 200 dpi. Available resolutions are: 75, 100, 150, 200, 240, 300, 400, 600 and 1200 dpi.

Cropping — allows you to capture a portion of the document being scanned. All cropping options can be used with color/grayscale and black and white images. Front and Back cropping are independent, however, for dual stream scanning, color/grayscale and black and white cropping must be the same per side. Only one cropping option can be assigned per image.

- **Automatic:** dynamically adjusts the cropping window for different document sizes based on the edges of the image.
- **Aggressive:** eliminates any residual black border on any image edges. In order to achieve this, there is a possibility that a small amount of image data from the edge of the document may be lost.
- **Fixed to Transport:** (used for batches of same-sized documents) allows you to define the area to be imaged. Fixed to Transport cropping is used in conjunction with paper size and page layout and assumes you are center-feeding your documents. If you are not using center feeding, you must select the Layout tab to define your scan area. See the section entitled “Layout tab” later in this chapter.
- **Relative to Document:** (zone processing): (used for batches of same-sized documents) — zone processing is a floating fixed crop window (the zone) located relative to the upper left corner of a document. It allows you to select an area on the document to be delivered in either color/grayscale or black and white format (a separate window for both black and white and color/grayscale may be defined). Different parameters may be selected for both the front and back of the image.

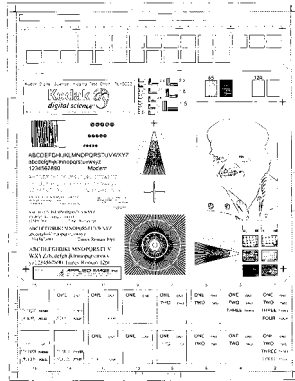
This option may be used in conjunction with Automatic cropping where a separate color/grayscale or black and white area to be saved is desired. It is useful in applications where a photograph, signature, embossment or seal appears in a consistent area for an application (you may want that small area in color/grayscale and the rest in black and white). To define a zone, select the Layout tab.

Binarization — these options work on grayscale images and outputs a black and white electronic image. Their strength lies in the ability to separate the foreground information from the background information even when the background color or shading varies, and the foreground information varies in color quality and darkness. Different types of documents may be scanned using the same image processing parameters and results in excellent scanned images.

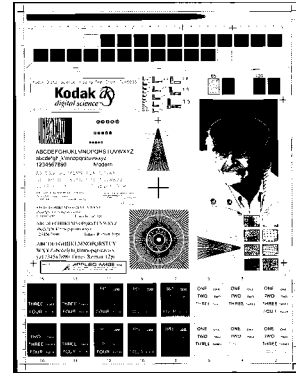
- **iThresholding:** allows the scanner to dynamically evaluate each document to determine the optimal threshold value to produce the highest quality image. This allows scanning of mixed document sets with varying quality (i.e., faint text, shaded backgrounds, color backgrounds) to be scanned using a single setting thus reducing the need for document sorting. When using iThresholding, only Contrast can be adjusted.
- **Fixed Processing (FP):** used for black and white and other high contrast documents. If Fixed Processing is selected, only Brightness can be adjusted.

- **Adaptive Thresholding (ATP):** separates the foreground information in an image (i.e., text, graphics, lines, etc.) from the background information (i.e., white or non-white paper background). When using Adaptive Thresholding, Brightness and Contrast can be adjusted.

Brightness — changes the amount of white in the color and grayscale image. Use the slider to select a value from 0 to 255. The default is 90.



Brightness: 50



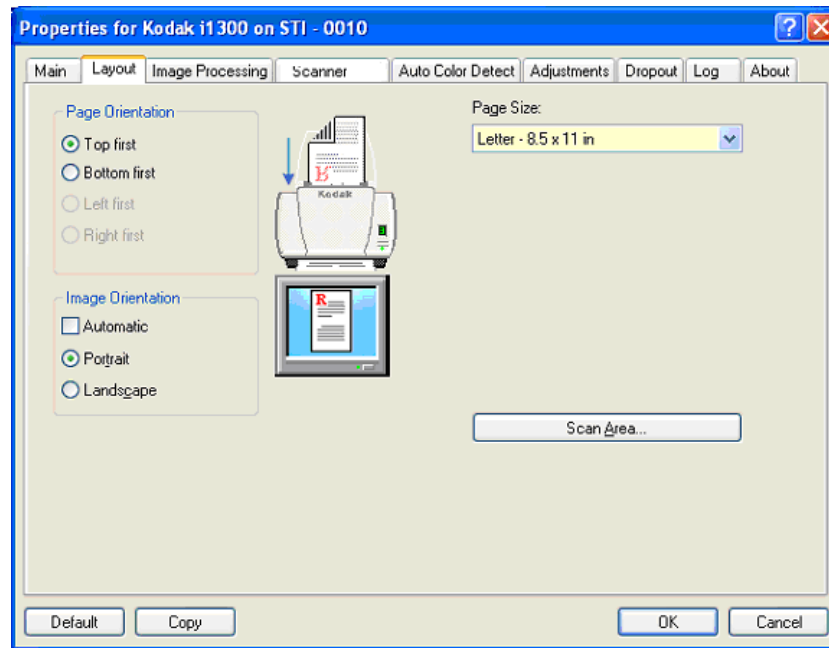
Brightness: 127

Contrast — adjusts the difference between black and white, thereby making an image sharper or softer.

The difference between black and white is small with a low contrast setting, so the image is softer. With a high contrast setting, the difference between black and white is large, so the image is clearer. Select a contrast value from 1 to 100. The default is 50.

Layout tab

The Layout tab provides the following options:



Page Orientation — allows you to select the way you place your documents in the scanner, **Top first**, **Bottom first**, **Left first** or **Right first**. When using the *Kodak i1400 Series Scanners*, select **Top first**.

Image Orientation

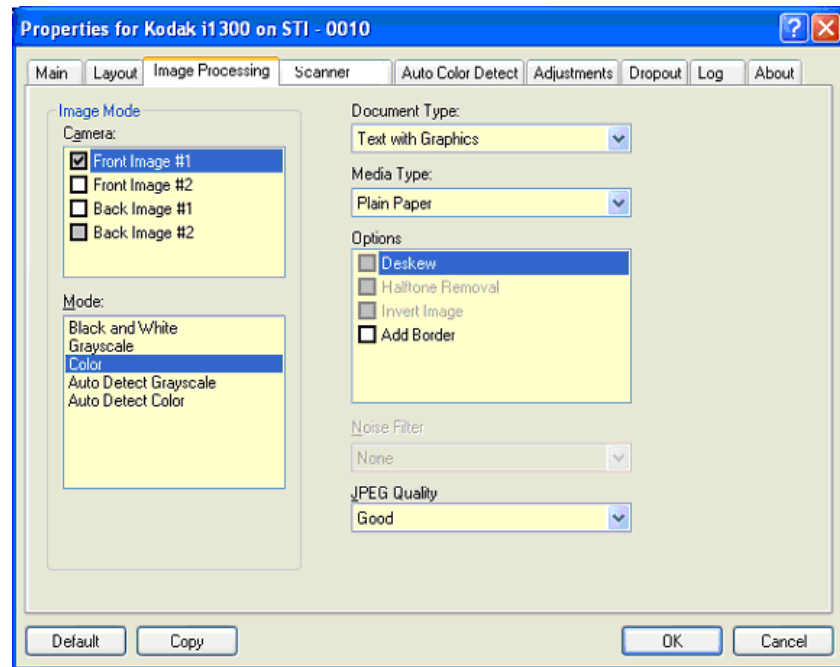
- **Automatic:** if you select **Automatic**, the Page Orientation options are not available.
- **Portrait:** displays the image orientation in the shape of a conventional portrait, where height is greater than width.
- **Landscape:** displays the image orientation in the shape of a conventional landscape painting, where width is greater than height.

Page Size — the default page size is set when a scanner is first selected. You can choose a different page size using the drop-down list.

Scan Area — displays the Scan Area dialog box. The Scan Area options are only available for images when the cropping option is **Fixed to Transport** or **Relative to Document**. See the section entitled "The Scan Area dialog box" later in the chapter for more information.

Image Processing tab

The Image Processing tab displays the Image Mode and Mode information that was previously described. Refer to the section entitled, “The main ISIS Driver tab” earlier in this chapter for descriptions.



Document Type

- **Text:** when the documents you want to scan contain mostly text.
- **Text with Graphics:** when the documents you want to scan contain a mix of text, business graphics (bar graphs, pie charts, etc.) and line art.
- **Photographs:** when the documents you want to scan are comprised mainly of photos.
- **Text with Photographs:** when the documents you want to scan contain a mix of text and photos.

Media type — select one of the following options based upon the texture/weight of the paper you are scanning. Available options are: **Plain Paper, Thin Paper, Glossy Paper, Card Stock, Magazine.**

Options

- **Deskew** — automatically straightens a document within ± 0.3 degrees of the leading edge of the document. Deskew can detect up to a 45-degree skew and correct up to a 24-degree angle at 200 dpi or a 10-degree skew angle at 300 dpi. This option is not available when **Fixed to Transport** or **Relative to Document** is selected.

NOTE: To prevent data loss, the document must have all four corners within the image path.

- **Halftone Removal** — enhances images containing dot matrix text and/or images with shaded or colored backgrounds using halftone screens and effectively eliminates noise caused by the halftone screen.

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

NOTE: You may want to change this option if your application misinterprets the image data and stores your image in reverse of what you expect.

- **Add Border** — allows you to add a fixed amount of border to the left, right, top and bottom edge of the image.

Noise Filter

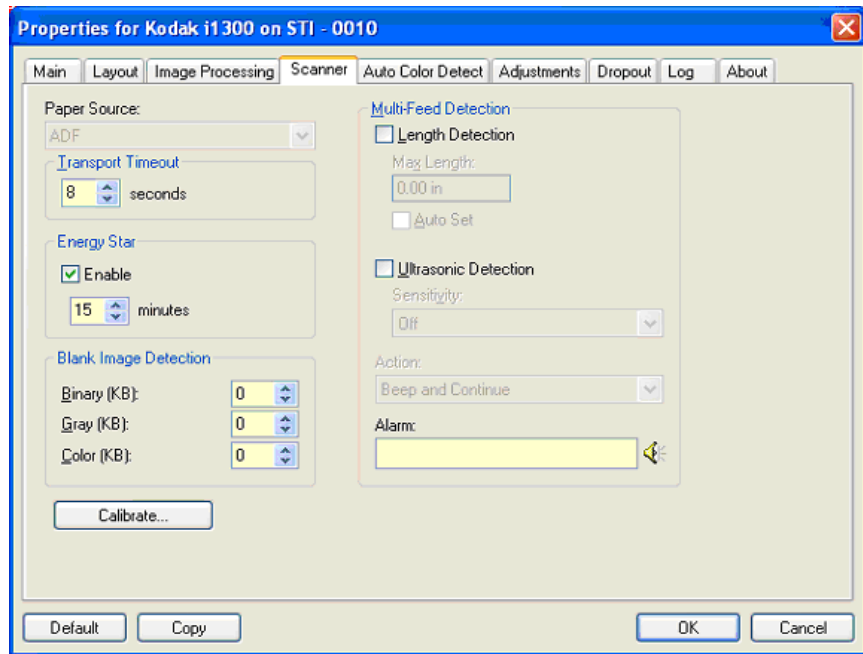
- **(none)**
- **Lone Pixel:** reduces random noise by converting a single black pixel to white when it is completely surrounded by white pixels or by converting a single white pixel to black when it is completely surrounded by black pixels.
- **Majority Rule:** sets each pixel based on its surrounding pixels. The pixel will become white if the majority of the surrounding pixels are white and visa versa.

JPEG (Joint Photographic Editor Group) **Quality** — if you choose JPEG compression, select one of the quality options:

- **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.

Scanner tab

The Scanner tab provides the following options.



Paper Source

NOTE: Flatbed options are only available if your scanner is equipped with the *Kodak i1400 Series A3 Flatbed Accessory*.

- **ADF:** if you are scanning documents from the input tray.
- **Flatbed:** if you are scanning documents using the flatbed.

Transport timeout — allows you to set the amount of time the scanner will wait after the last document enters the transport before the transport timeout action is taken. You can specify a time delay setting from **1** to **300** seconds.

Energy Star — allows you to set the amount of time the scanner will remain inactive before the scanner goes into an idle state. Choices are: **0** to **60** minutes.

Blank image detection — select the image size (KB), below which an image is determined to be blank. Images with sizes less than the number you select will not be created. If you use this option, you must specify a blank image size for each image type (**Binary**, **Gray** and **Color**) you want to delete. If you do not make an entry in these fields, all images are kept.

Multi-feed Detection options

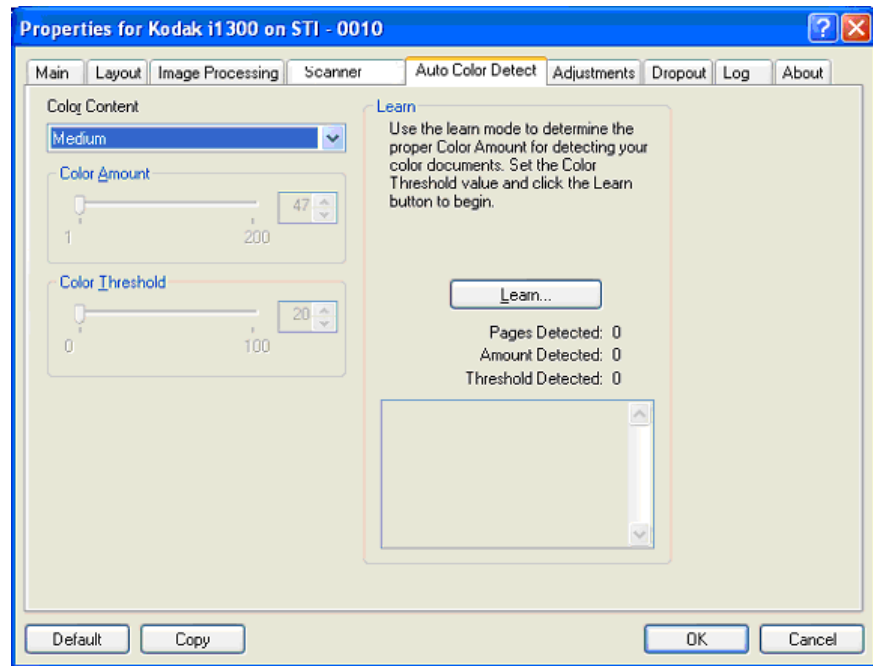
- **Length Detection** — enable or disable (the default) this option. If enabled, select the maximum length of the document that can be scanned without a multi-feed being detected. Length detection is used when scanning same-sized documents to check for overlap. For example, if you are scanning 8.5 x 11-inch (A4) documents in portrait mode, enter a value of 11.25 inches (28.57 cm) in the *Maximum Length* field. The maximum value is 13.99 inches (35.56 cm).
- **Auto Set:** automatically sets the maximum length value to .50-inch (1.27 cm) greater than the length of the currently selected page size.

Ultrasonic Detection — check this option to set multi-feed detection.

- **Sensitivity** — controls how aggressively the scanner will work to determine if more than one document is fed into the transport. Multi-feeds are triggered by detecting air gaps between documents. This allows multi-feed detection to be used with job sets containing documents with mixed thicknesses.
 - **Low:** the least aggressive setting and is less likely to detect labels, poor quality, thick or wrinkled documents as multi-fed documents.
 - **Medium:** use Medium sensitivity if your application has varying document thickness 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 are similar in thickness to 20-lb. Bond paper.
- **Action** — select an option of how you want the scanner to perform if it detects a multi-fed document.
 - **Beep and continue:** if selected, the scanner will beep, display and log the condition but continue to operate.
 - **End of Job:** if selected, the scanner log the condition and stop the feeder and transport (the scanner will be disabled).
- **Alarm** — select this option if you want the scanner to make a sound when a multi-feed is detected. You can click the **Speaker** icon to display the Open dialog box. From the Open dialog box, select the desired .wav file and click **OK**.

Auto Color Detect tab

The Auto Color Detect tab provides the following options.



Color Content

- **None**
- **Low:** documents require only a small amount of color to be saved as color or 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 require more color, as compared with the Low option, before they are saved as color or grayscale images.
- **High:** documents require more color, as compared with the Medium option, before they will be saved as color or 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:** makes the **Color Amount** and/or **Color Threshold** options available.

NOTE: When setting Auto Color Detect 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** option to manually adjust Color Amount and/or Color Threshold.

Color Amount: the amount of color that needs to be present in a document before it will be saved as either color or 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 intensity (i.e., 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.

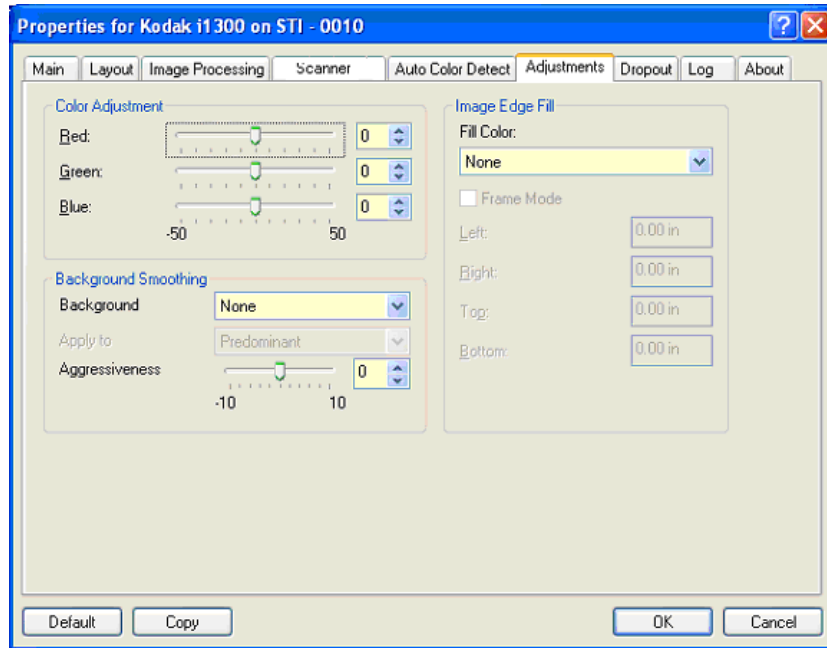
Learn — if **Low**, **Medium** and **High** options do not give you the desired results, use the **Learn** option.

1. Click **Learn** and follow the prompts.
2. Place at least 5 representative color documents in the input tray and click **OK**. These documents will be analyzed and the recommended color amount will be calculated for you.
3. Write down the **Color Amount** and **Color Threshold** values that are displayed in the dialog box as these are the settings you will be required to use in your application.

NOTE: These settings were calculated based on the representative color documents scanned. If these values do not provide the desired results with your production job set, you may need to manually adjust the **Color Threshold**.

Adjustments tab

The Adjustments tab provides the following options.



Color Adjustment

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.

- Adjust these settings by dragging the slider bar to the left or right, entering a value in the text box or using the up/down arrows.

Background Smoothing — using this option for documents or forms with a background color will help produce images with a more uniform background color.

- **Background:** select one of the following:
 - **None** - no background smoothing will be performed.
 - **Automatic** - smooths up to three background colors.
 - **Change to White** - identifies up to three background colors and substitutes each color with white.

- **Apply to:**

- **Predominant** - smooths the predominant background color to white.

- **Neutral** - smooths only the neutral color to white, and also smooths up to two additional background colors.

- **All** - smooths the neutral color and up to two additional background colors to white.

NOTE: The *Apply to* options are only available for **Method: Change to White**.

- **Aggressiveness:** allows you to adjust the extent at which the background(s) are determined. The values range from **-10** to **10**. The default is 0.

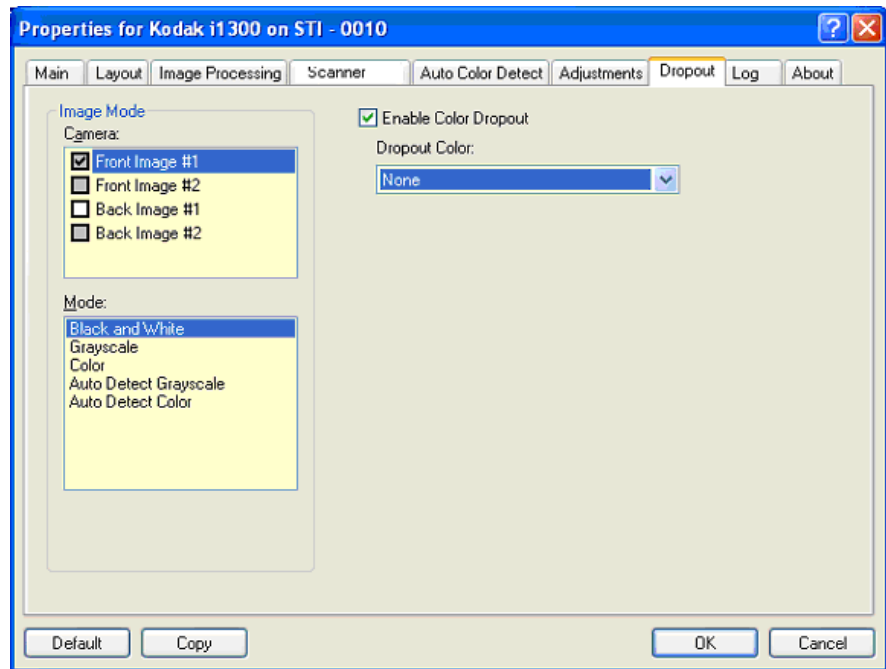
Image Edge Fill — fills the edges of the final electronic image by covering the area with the specified color. Image Edge Fill is performed after all other image processing options have been applied.

Frame Mode — fills in an equal amount of the selected color from the *Image Edge Fill* drop-down list on all sides of the image, or you can select a value in the **Top, Left, Right and/or Bottom** area(s) from each side of the scanned image to be filled.

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

Dropout tab

The Dropout tab displays the Image Mode and Mode information that was previously described. Refer to the section entitled, “The main ISIS Driver tab” earlier in this chapter for descriptions.

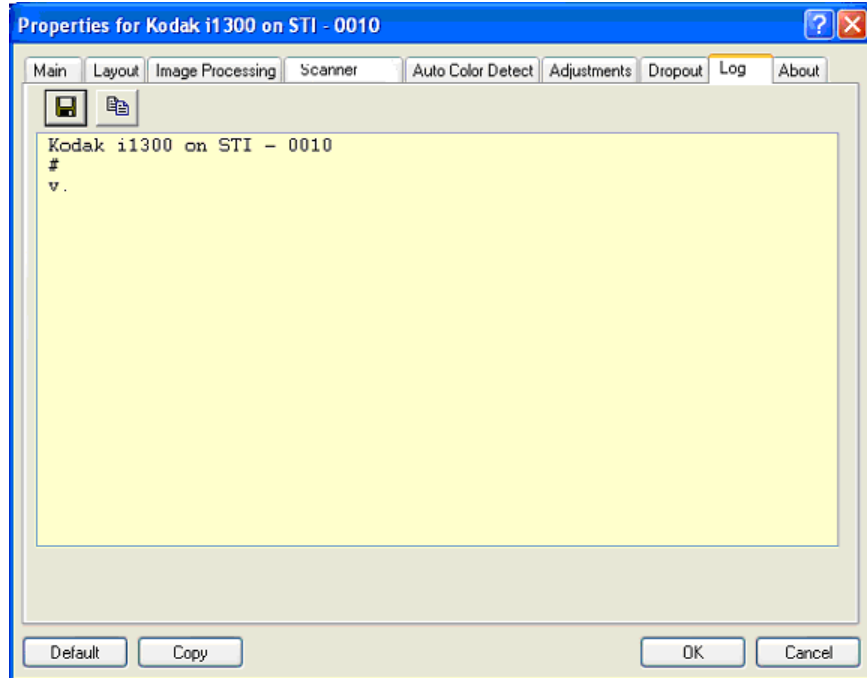


The Dropout tab is used to eliminate a form's background so that only the entered data is included in the electronic image (i.e., remove the form's lines and boxes). For black and white images, these settings effect the grayscale version of the document which the scanner analyzes to produce that electronic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

Enable Dropout Color — the i1400 Series Scanners can drop out red, green or blue. **None** is the default.

Log tab

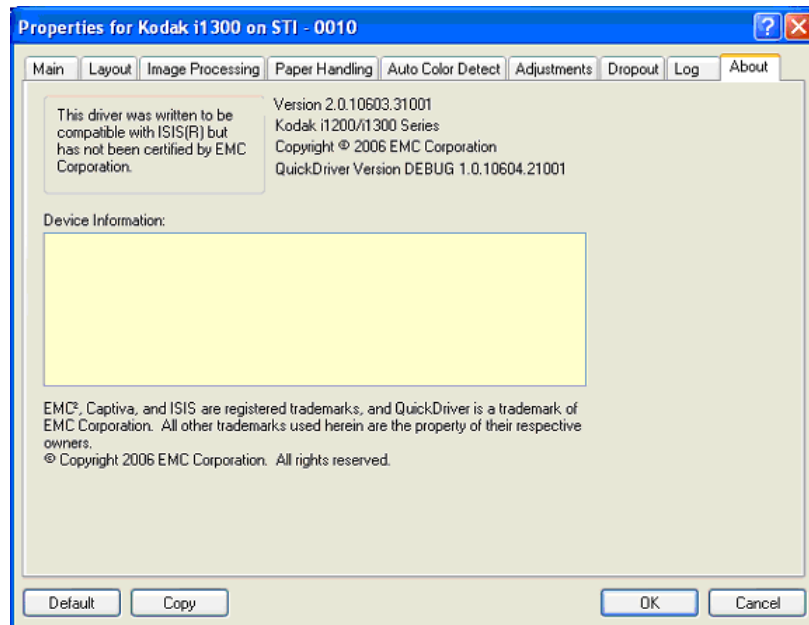
The Log tab provides a listing of any errors that have been encountered.



You can either save this information to a file by clicking the Save icon, or print the displayed information.

About tab

Displays information about your scanner and driver.

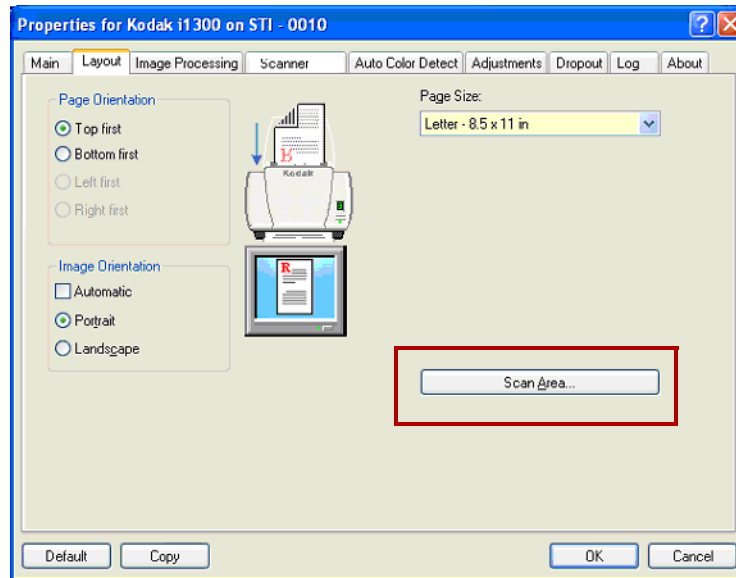


Scan Area dialog box

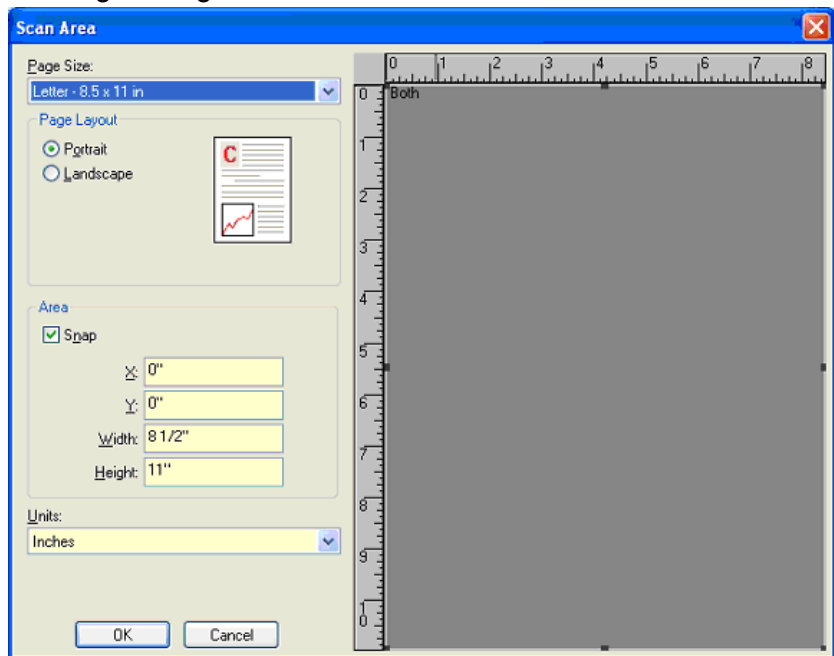
The Scan Area dialog box allows you to define the amount of image data which is returned to the host. The area can be defined in **Pixels**, **Inches** or **Centimeters**.

NOTE: Select the side and image to be defined by highlighting **Front Image #1**, **Front Image #2**, etc. based on the cropping option selected for each of these in the main ISIS Driver window. The scan areas defined for all camera selections are independent.

To access the Scan Area dialog box, select **Scan Area** on the Layout tab.



NOTE: The Scan Area dialog box is only available when **Fixed to Transport** or **Relative to Document** is selected on the Scanner Settings dialog box.



Page Size — the default paper size is set when a scanner is first selected. You can choose a different paper size using the drop-down list.

NOTE: Page Size and Page Layout selections also appear on the Layout tab. If you make a change on the Scan Area dialog box, the same selections appear on the Layout tab and vice versa.

Page Layout

- **Portrait:** displays the image orientation in the shape of a conventional portrait, where height is greater than width.
- **Landscape:** displays the image orientation in the shape of a conventional landscape painting, where width is greater than height.

Area

- **Snap** — enable this option to control the dimensions of the preview area to fixed 1/8-inch increments. This option is not available in **Pixels** mode.
- **X:** the distance from the left end of the scanner to the left-edge of the scanning area.
- **Y:** the position from the top end of the document to the top end of the scanning area.
- **Width:** the width of the scanning area.
- **Height:** the height of the scanning area.

Units — select whether you want the area to be defined in **Pixels**, **Inches** or **Centimeters**.

5 Document Printing

This chapter provides instructions for using the Document Printer and the Enhanced Printer. The following information and procedures can be found in this guide:

- Printer specifications.
- Changing print positions.
- Replacing the ink cartridge and ink blotter strips.

NOTE: Information about enabling printing and setting up print strings can be found in Chapter 4, *Image Processing*.

The Document Printer/Enhanced Printer operates at full scanner speed. The printer can add a date, time, document sequential counter, and custom messages.

The print string can be configured to include both literal (static) information (i.e., information that stays the same for each document, such as batch name or operator) and dynamic information (i.e., information that may change for each page scanned, such as the document sequential counter). The capture software application controls static fields; any information that the software allows you to enter can be sent to the printer.

All printer controls and functions are accessible through the ISIS Driver or TWAIN Datasource. Printing must be enabled or disabled for each scan session, which is usually done by using a *Setting Shortcut* (TWAIN GUI).

NOTES:

- Clean the scanner's paper path components daily when using the printer.
- You cannot print on documents that are smaller than 10 cm (4 in.).
- The ink cartridge must be installed before turning on the scanner, or it could result in errors when printing is attempted.

Printer specifications

Characteristic	Description
Maximum lines	1
Maximum characters	40
Print locations (vertical)	Set by capture software application
Print orientation	0, 90, 180 or 270 degrees
Font size	Bold or Normal NOTE: Not all languages can support a Bold font based on the complexity of the characters, such as half-width Katakana.
Print side	Rear (post-scan)
Minimum printing distance from document lead edge	0.89 cm (0.35 in.)
Static fields available	User-specified messages via capture software application
Dynamic fields available	Up to a nine-digit sequential document number, date, four-digit time
Languages supported	Any phonetic language. For example: Dutch, English, French, German, Italian, Portuguese, Spanish, Japanese (half-width Katakana)
Document Printer	
Print locations (horizontal)	14 front manually set
Ink cartridge	Black: 135 5155 10 cartridges per package
Characters per ink cartridge	up to 350,000 to 450,000 (based on font size used)
Enhanced Printer	
Print locations (horizontal)	9 front manually set
Ink cartridge	Black: HP-C6602A Red: HP-C6602R
Characters per ink cartridge	up to 1,500,000 to 2,000,000 (based on font size used)

Installing/Replacing the ink cartridge

Before using the printer, you must install the ink cartridge.

After initial installation, replace the ink cartridge when:

- printed characters appear light or uneven
- missing characters are evident
- a print test reveals inconsistent character quality
- cleaning has not improved the overall print quality

IMPORTANT: Dispose the empty ink cartridge in accordance with all federal, state and local laws.

1. Locate the printer access door on the back of the scanner.
2. Slide your fingers under the printer access door handle and pull the door toward you.

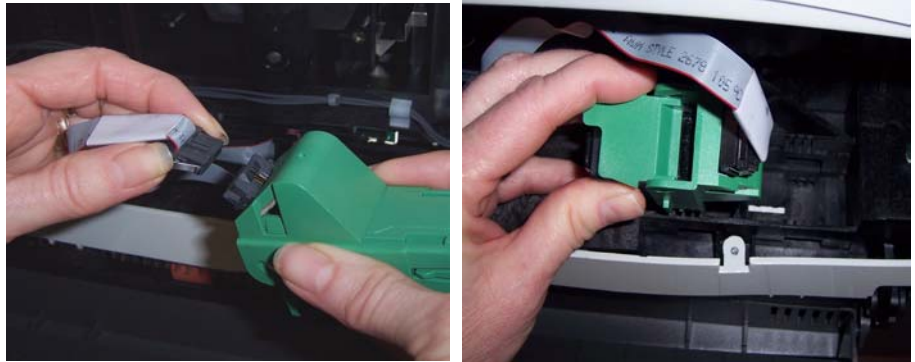


3. Lift the printer access door off the scanner.
4. If you have the Enhanced Printer, continue with the next step. If you have a Document Printer, continue with Step 5 in the next section.

ENHANCED PRINTER

5. If you are installing the ink cartridge for the first time, push the connector on the printer cable firmly into the printer carrier.

NOTE: If you are replacing an ink cartridge, the printer cable will already be installed and you just need to remove the printer carrier from its position and remove the empty ink cartridge.



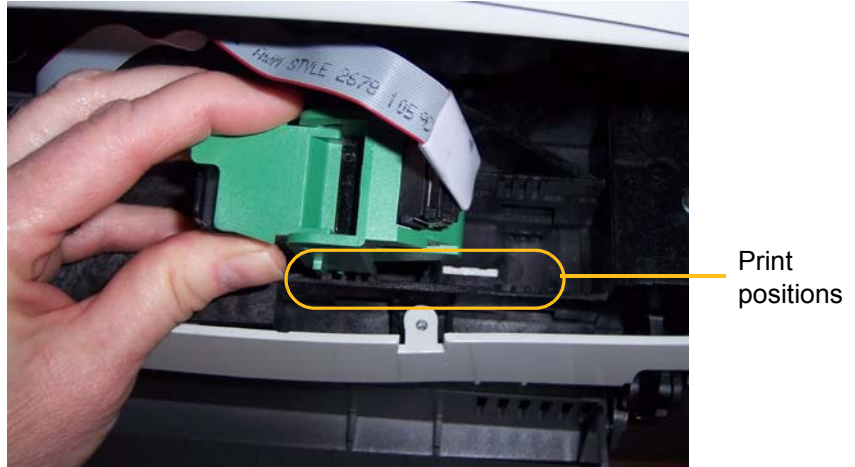
Push the connector on the printer cable firmly into the printer carrier. Remove the printer carrier from its position.

6. Open the ink cartridge and remove the tab from the new ink cartridge.
7. Lift the green tab on the printer carrier and slide the new ink cartridge in the printer carrier and close the tab.



NOTE: If the ribbon cable should become disconnected, snap it back into position.

8. Slide the printer carrier into the desired print position. See the section entitled, "Changing print positions" later in the chapter for more information.

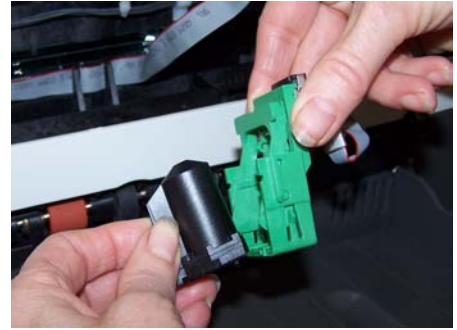
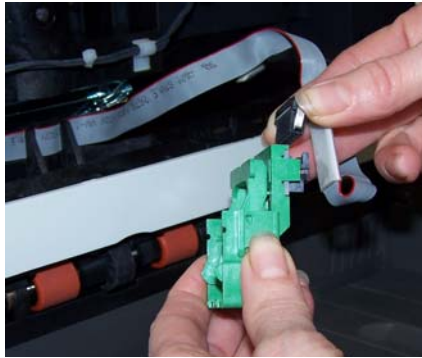


9. Reinstall and close the printer access door.
10. Run a print test.

DOCUMENT PRINTER

5. If you are installing the ink cartridge for the first time, push the connector on the printer cable firmly into the printer carrier.

NOTE: If you are replacing an ink cartridge, the printer cable will already be installed and you just need to remove the printer carrier from its position and remove the empty ink cartridge.



Push the connector on the printer cable firmly into the printer carrier.

Remove the printer carrier from its position and remove the ink cartridge.

6. Open a new ink cartridge and slide it into the printer carrier.
7. Lower the locking bar around the ink cartridge.



8. If the ribbon cable should become disconnected, snap it back into position.

9. Slide the printer carrier into the desired print position. See the section entitled, "Changing print positions" later in this chapter for more information.



10. Reinstall and close the printer access door.
11. Run a print test.

Changing print positions

The horizontal print position can be changed manually.

NOTE: Changing the print position is the same procedure whether you are using the Document Printer or the Enhanced Printer. The photos may be slightly different depending on the printer you are using.

Changing the print position

1. Locate the printer access door on the back of the scanner.
2. Slide your fingers under the printer access door handle and pull the door toward you.
3. Lift the printer access door off the scanner.



NOTES:

- Even though there are 14 horizontal print positions, if you are using the Enhanced Printer, you can only print in 9 of the positions.
- If you are using the Document Printer, all 14 print positions are available for printing.
- These positions are visible by a small detent on the printer rail.
- Printing automatically stops approximately ½-inch (1.27 cm) from the trailing edge of the document, even if the information has not been completely printed

4. Lift up on the printer carrier and remove it from position.



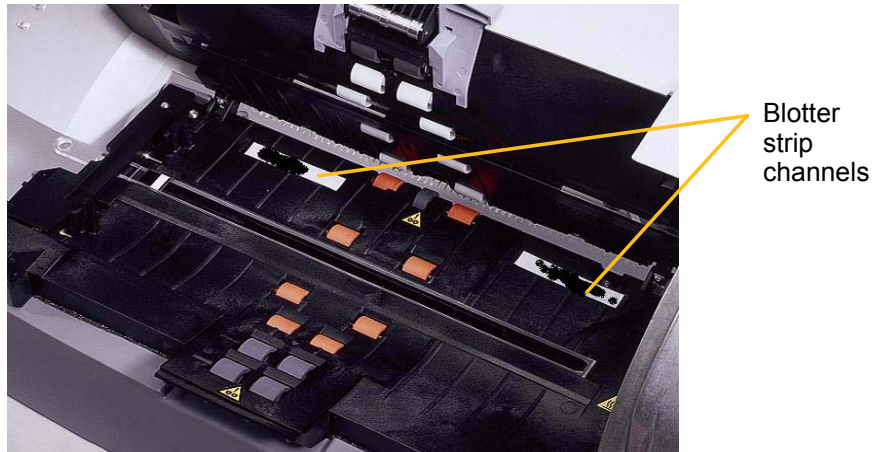
Print positions

5. Align the slot on the printer carrier with the desired position and slide the printer carrier in place.
6. Reinstall the printer access door.

Replacing the ink blotter strips

The two ink blotter strips in the scanner transport area collect ink overflow. To order additional ink blotter strips, see the section entitled, "Supplies" later in this guide.

1. Lift up the scanner cover release to unlatch the scanner cover.
2. Pull up to open the scanner cover.
3. Locate the two blotter strip channels. These channels are where the blotter strips will be installed or replaced.

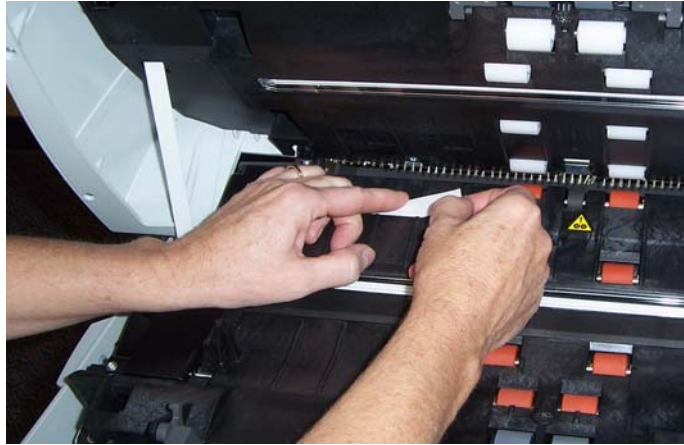


4. If you are replacing a blotter strip, proceed with Step 5, if not, go to Step 6.
5. Grasp the blotter strip, carefully pull it off of the channel and discard the soiled strip.



6. Remove the backing from a new blotter strip.

7. Align the blotter strip in one of the channels.



NOTE: Improperly aligned blotter strips may cause paper jams.

8. Press the adhesive side of the blotter strip down firmly into the channel.
9. Repeat Steps 4-8 for the other strip.
10. Lower the scanner cover and press it firmly until it snaps into place.

Supplies

The following supplies are available:

Description	CAT No.
Document Printer: Printer Ink Cartridges / Black (Qty 10)	135 5155
Document Printer: <i>Kodak</i> Print Ink Blotters (Qty 60)	840 5425
Document Printer: <i>Kodak</i> Printer Ink Cartridge Carrier	826 7486
Enhanced Printer: Black Ink Cartridge (HP C6602A)	818 3386
Enhanced Printer: Red Ink Cartridge (HP C6602R)	159 6832

Problem solving

Use the list below as a guide to check possible solutions to problems you may encounter when using the printer.

Problem	Possible Solution
Print quality is poor or inconsistent	<ul style="list-style-type: none">• Be sure the ink cartridge is not empty.• Be sure the ink cartridge is properly installed.• Be sure the ink cartridge is in the correct position for printing.• Verify that the printer has been enabled in the capture software application and that the expected print string has been specified.• Verify that all printer connectors are securely fastened and that the printer cable is securely attached.• Run a print test to verify that all jets are functioning properly.• Clean the print head (see "Printing problems when starting up due to dry print head" below.)
Printing problems when starting up due to dry print head	Remove the ink cartridge from the scanner and using a damp cloth or swab, dab (do not wipe) the ink jets on the ink cartridge, replace the ink cartridge and try again.
Not printing	<ul style="list-style-type: none">• Check to be sure that the ink cartridge is securely in the desired print position in the scanner.• Be sure the tape is removed from the print head.

6 Maintenance

Cleaning your scanner and preventative maintenance on a regular basis is required to ensure the best possible image quality.

Some document types generate more paper dust and debris and may require more frequent cleaning than recommended.

NOTES:

- Some debris from the rubber tires on the feed and separator modules is normal. Tire debris does not always mean that the tires are worn or damaged. After cleaning, inspect the tires for wear and replace the separator module or feed module if necessary.
- When cleaning rollers/tires, allow the rollers/tires to dry completely before scanning.
- Use only the recommended cleaning supplies.
- Do not use canned/compressed air.
- In addition to the recommended cleaning supplies, you may use a vacuum cleaner to remove debris from the scanner.
- Using unapproved cleaning fluids or solvents may damage the rubber tires.

Supplies and consumables

Contact your scanner supplier to order supplies.

Supplies/Consumables	CAT No.
<i>Kodak Feeder Consumables Kit for i1400 Series Scanners</i>	124 1066
<i>Kodak Extra-Large Feeder Consumables Kit for i1400 Series Scanners</i>	821 5808
<i>Kodak Imaging Guide Set for i1400 Series Scanners (1 upper guide, 1 lower guide)</i>	197 8253
Document Printer: Printer Ink Cartridges (10)	135 5155
Document Printer: <i>Kodak</i> Printer Ink Blotters (60)	840 5425
Document Printer: <i>Kodak</i> Printer Ink Cartridge Carrier	826 7486
Enhanced Printer: Black Ink Cartridges (HP C6602A)	818 3386
Enhanced Printer: Red Ink Cartridge (HP C6602R)	159 6832
Enhanced Printer: Ink Cartridge Carrier	113 3842
Staticide Wipes for <i>Kodak</i> Scanners (144)	896 5519
<i>Kodak Digital Science</i> Transport Cleaning Sheets (50)	169 0783
<i>Kodak Digital Science</i> Roller Cleaning Pads (24)	853 5981
<i>Kodak</i> i1400 Series A3 Flatbed	179 6747
<i>Kodak</i> i1400 Series A4 Flatbed	167 7288

IMPORTANT:

- Staticide Wipes contain isopropanol which can cause eye irritation and dry skin. Wash your hands with soap and water after performing maintenance procedures. Refer to the Material Data Safety Sheet (MSDS) for more information. The MSDS is available on the Kodak web site at www.kodak.com/go/MSDS.
- The roller cleaning pad contains sodium lauryl ether sulfate and sodium silicate which can cause eye irritation. Refer to the MSDS for more information.
- Allow all rollers to dry completely before using the scanner.
- Use only non-flammable cleaners such as those provided through Kodak Parts Services.
- Do not use cleaners in confined areas, use with adequate ventilation.
- Do not use cleaners on hot surfaces. Allow surfaces to cool to ambient temperature before use.
- Do not use canned/compressed air.

Cleaning the separator module

1. Power down the scanner.
2. Remove any documents from the feeder area.
3. Lift up the scanner cover release to unlatch the scanner cover.
4. Pull up to open the scanner cover.



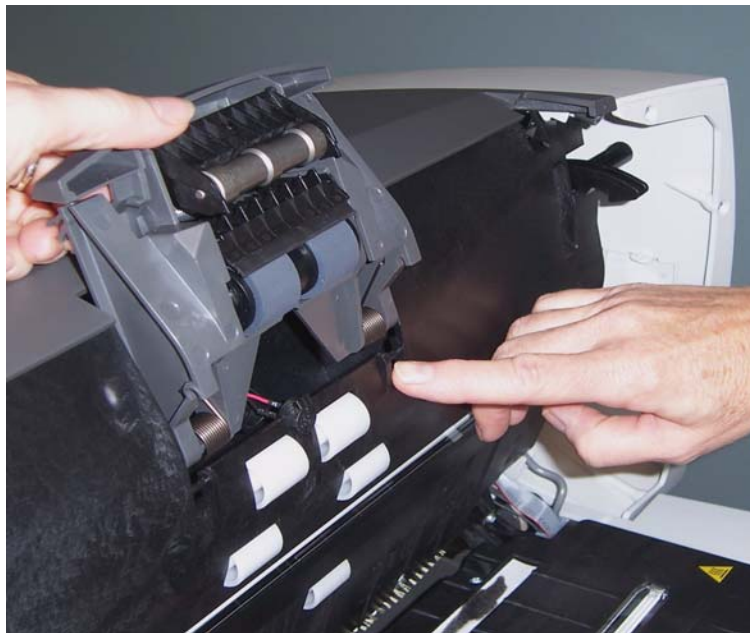
5. With one hand, push the separator module release lever back and with the other hand lift the separator module up and out of position.



6. Manually rotate and wipe the separator module tires with a roller cleaning pad.



7. Inspect the tires. If the separator module tires show signs of wear or damage, replace the tires or the separator module. See the section entitled, "Replacing the separator module and separator module tires" later in this chapter for procedures.
8. Insert the separator module and align the shaft ends.



9. Press until the separator module clicks into place.

Cleaning the feed module

1. Push against the raised edge on the left side of the front drive roller cover and pull the cover up and out to remove it.



NOTE: You may need to lift the input tray slightly to remove the front roller cover.

2. Remove the feed module by pushing it to the right and lifting it out.



3. Manually rotate and wipe the feed module tires with a roller cleaning pad.



4. Inspect the feed module. If the feed module tires show signs of wear or damage, replace the tires or the feed module. See the section entitled, "Replacing the feed module and feed module tires" later in this chapter for procedures.
5. Remove any dust or debris from the tray area under the feed module and the front roller cover.
6. Insert the feed module by aligning the pins and pushing it toward the right to fit it into position.
7. Reinstall the front drive roller cover.

Cleaning the drive rollers and transport area

1. Manually rotate and wipe the drive rollers with a roller cleaning pad.



2. Clean any dust or debris in the slots around the drive rollers.
3. Wipe the upper and lower transport areas with a roller cleaning pad.



4. Dry the transport area with a dry Staticide Wipe.
5. Push against the raised edge on the left side of the rear roller cover and pull the cover up and out to remove it.

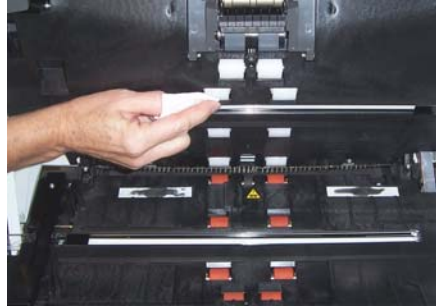


6. Remove any dust or debris under the rear drive roller cover.
7. Reinstall the rear drive roller cover.

Cleaning the imaging guides

Clean the exposed (top side) surfaces of the imaging guides. You do not need to remove the imaging guides for cleaning unless there is dust or dirt on the underside of the imaging guide. If you need to remove the imaging guides, follow the instructions for “Replacing the imaging guides” later in this chapter.

1. Wipe the upper and lower imaging guides with a Staticide Wipe.



2. Dry the imaging guides with a dry Staticide Wipe.
3. Lower the scanner cover and press it down firmly until it latches into place.

Cleaning the paper path

1. Remove the wrapping from the Transport Cleaning Sheet.
2. Adjust the paper feeder guides to fit the cleaning sheet.
3. Feed the cleaning sheet (adhesive side up) through the scanner in portrait orientation until all residue is removed from the drive rollers.
4. Adjust the feeder guides to fit, then feed the cleaning sheet (adhesive side up) through the scanner in landscape orientation until all residue is removed from the drive rollers.
5. Using the same cleaning sheet, repeat Steps 3 and 4, but feed the cleaning sheet through the scanner with the adhesive side down until all residue is removed from the drive rollers.

NOTE: When a cleaning sheet gets very dirty, discard it and use a new one.

Replacing parts

This section provides procedures for replacing the following parts. Use the list below as a guideline for frequency or replacement. Usage figures are not guaranteed. Customer-operating environments, document type, the condition of documents being scanned, and not following the recommended cleaning and replacement procedures, can cause the life of the consumables to vary.

- Separator Module: 200,000 document pages
- Pre-separation Pad: 250,000 document pages
- Feed Module: 500,000 document pages
- Imaging Guides: replace when guides are scratched or damaged

NOTES:

- *Kodak* Scanners use replaceable tires than can feed a wide range of document types, sizes and thicknesses. Tire life and performance will vary based on the customer's document set, the frequency of cleaning the transport and tires, and following the recommended schedule for changing tires. You should change the tires if you notice an increase in multiple feeds, stoppages, or a decrease in feeder performance that is not resolved by following the cleaning procedures.
- Certain paper types (such as carbonless paper or newsprint), failure to clean regularly, and/or use of non-recommended cleaning solvents can shorten roller life.

Replacing the feed module and feed module tires

1. Lift up the scanner cover release to unlatch the scanner cover.
2. Lift up to open the scanner cover.
3. Push against the raised edge on the left side of the front drive roller cover to the side and pull the cover up and out to remove it.



NOTE: You may need to lift the input tray slightly to remove the front roller cover.

4. Remove the feed module by pushing it to the right and lifting it out.



5. If you are just replacing the feed module, insert the new feed module by aligning the pins and snapping it into position.
If you are replacing the feed module tires, continue with the next step.

6. Lift and remove one core assembly.



7. Remove each tire by sliding it off of the core.
8. Install each new tire by gently stretching it over the core.



IMPORTANT:

- *Do not overstretch the tire; it may tear.*
 - *Make sure that the tire is centered on the core and lies flat.*
9. Replace the core assembly in the feed module and snap it into place.
 10. Repeat Steps 6-9 for the other core assembly.
 11. Reinstall the feed module.
 12. Reinstall the front roller cover.
 13. Close and latch the scanner cover.

Replacing the separator module and separator module tires

1. Lift up the scanner cover release to unlatch the scanner cover.
2. Lift up to open the scanner cover.



3. With one hand, push the separator module release lever back and with the other hand lift the separator module up and out of position.



4. If you are just replacing the separator module, insert the new separator module by aligning the shaft ends and snapping it into position.

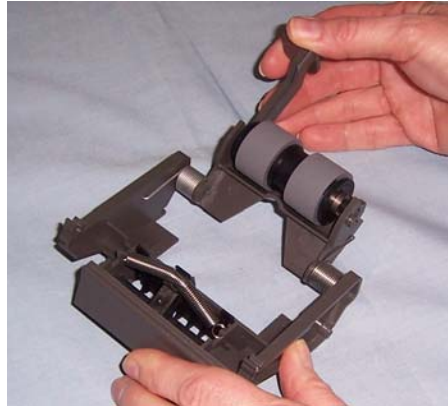


If you are replacing the separator module tires, continue with the next step.

5. Holding onto the separation module, rotate the release lever back

so you can access the separation roller.

NOTE: Use caution as the separation module is spring-loaded and will snap back if you do not hold it in place.



6. Hold onto the separator module in this position with one hand, and with the other hand remove the separator roller.



7. Gently lower the separator module release lever back into place and set the separator module aside.
8. Remove each tire by sliding it off the core.
9. Install each new tire by gently stretching it over the core.

IMPORTANT: Do not overstretch the tire; it may tear.

Make sure that the tire is centered on the core and lies flat.

10. Reinstall the core (the direction does not matter).
11. Reinstall the separator module.
12. Lower the scanner cover and press it down firmly until it latches into place.

Replacing the pre-separation pad

1. Remove the separator module as previously directed.
2. Locate the pre-separation pad on the separator module.
3. Hold the separator module in both hands and find the two pre-separation pad side tabs which protrude slightly from the back of the separator module.



4. Push on the pre-separation pad side tabs on the back until the pre-separation pad protrudes slightly from the front of the separator module.
5. Grasp the pre-separation pad and pull it out of the separator module.



6. Discard the worn pre-separation pad.
7. Align the side tabs of a new pre-separation pad with the slots on the separator module.
8. Push the pre-separation pad firmly in the slots until the pre-separation pad flap rests lightly against the separator module tires.
9. Reinstall the separator module.
10. Close the scanner cover.

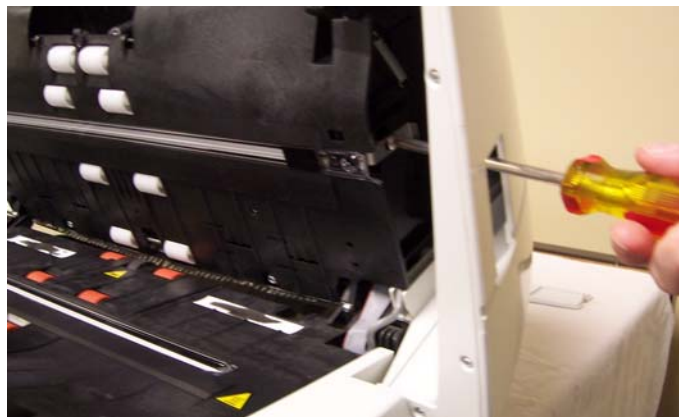
Replacing the imaging guides

Replacing the upper imaging guide *(for i1420 and i1440 Scanners only)*

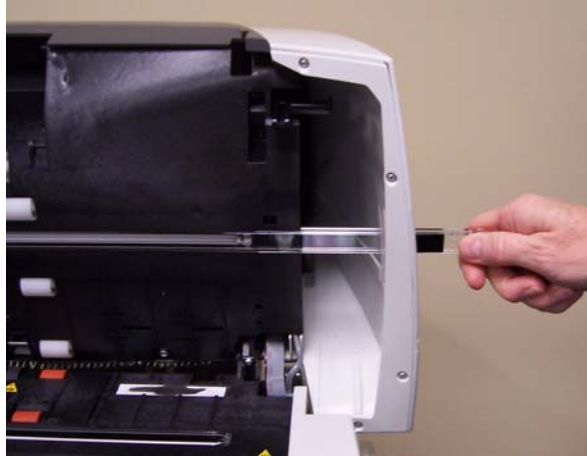
1. Open the scanner cover and locate the door on the right side of the scanner. Removing the side door will allow you to insert a screwdriver through the door opening to access the upper imaging guide.



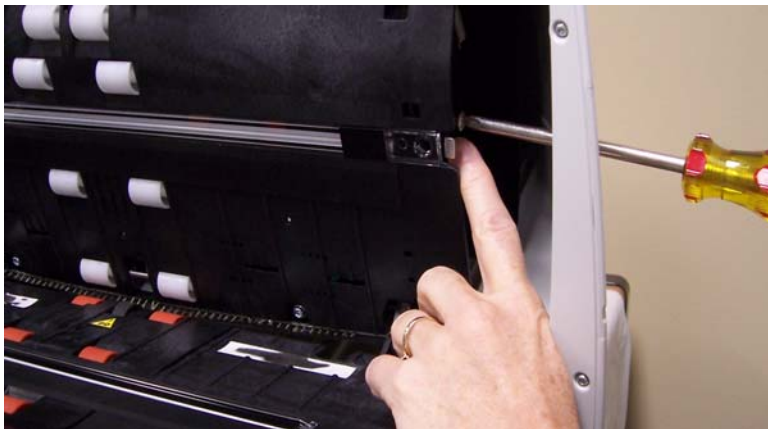
2. Push down on the tab (shown above), remove the side door and set it aside.
3. Using a Phillips Head screwdriver, loosen the screw from the upper imaging guide bracket (slide the bracket over).



4. Pull gently on the end of the imaging guide and slowly remove it from the scanner.



5. Discard the used imaging guide.
6. Remove any dust or debris from the guide track. Do not allow debris to fall into the scanner.
7. Wipe both sides of the new upper imaging guide with a fresh Staticide Wipe.
8. Dry both sides of the new upper imaging guide with a dry Staticide Wipe.
9. Align the new upper imaging guide in the guide track and slowly push it in.
10. Realign the upper imaging guide bracket and tighten the screw.



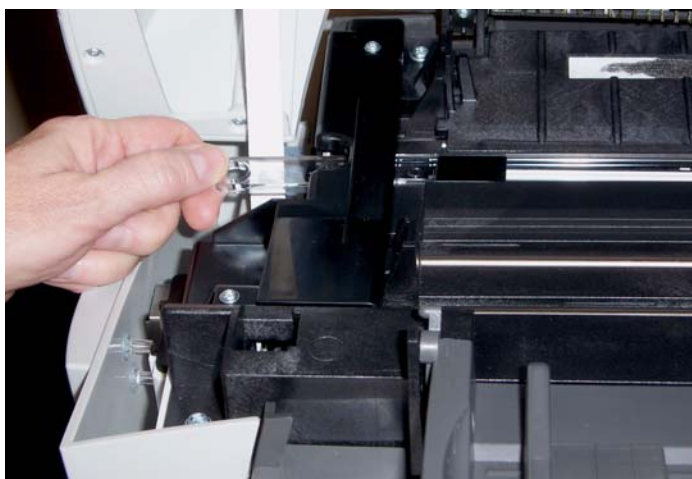
11. Reinstall the side door.

Replacing the lower imaging guide (for all scanner models)

1. Locate the lower imaging guide.
2. Using a Phillips Head screwdriver, loosen the screw from the lower imaging guide.



3. Slide the imaging guide out of the bracket and remove it from the scanner.



4. Discard the used imaging guide.
5. Remove any dust or debris from the guide track. Do not allow debris to fall into the scanner.
6. Wipe both sides of the new lower imaging guide with a fresh Staticide Wipe.
7. Dry both sides of the new lower imaging guide with a dry Staticide Wipe.
8. Align the new lower imaging guide in the guide track and slowly push it in.
9. Reinstall and tighten the screw.
10. Close the scanner cover.

7 Troubleshooting

Occasionally you may encounter a situation with your scanner where it may not function properly. Refer to the information in this chapter to help you resolve the situation before calling Technical Support.

Indicator lights and error codes

The indicator lights provide information on the current state of the scanner.



Steady green: indicates the scanner is ready to scan.

Flashing green: indicates the scanner is scanning or in power saver mode.

Steady red: indicates a scanner error, such as the scanner cover is open.

Steady red and green — scanner is powering up.

After you power up the scanner, the red and green indicator lights will illuminate. After approximately one minute, both lights go out. When the green indicator light comes back on, the scanner is ready to begin scanning. However, the host computer may require several seconds to detect the scanner.

Service indicator lights

After you power up the scanner both LEDs are on.

Red: CPU not running code. The red indicator will go out after about 30 seconds. This indicator will always be off, unless you are downloading firmware, calibrating the scanner, the cover is opened or there is an error condition.

Green: the green indicator is on at all other times.

Lamps

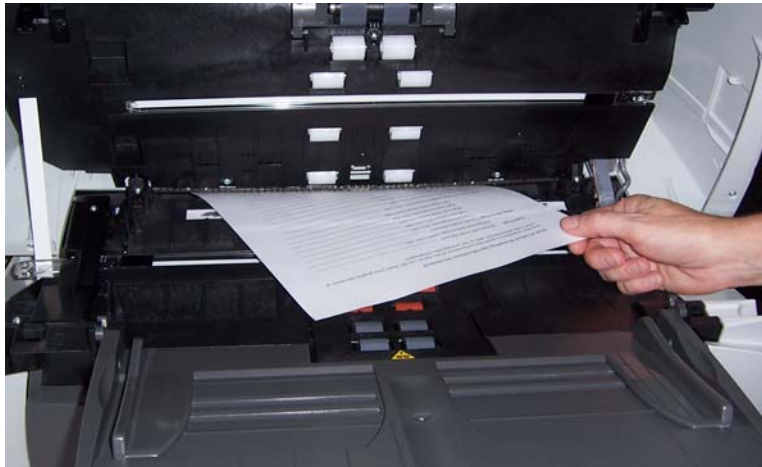
The scanner has a lamp saver feature to prolong lamp life. The lamps shut off after five minutes of scanner idle time.

Clearing document jams

1. Remove any documents from the feeder area.
2. Lift up the scanner cover release to unlatch the scanner cover.
3. Pull up to open the scanner cover.



4. Locate the jammed document and remove it.



5. Lower the scanner cover and press it down firmly until it latches into place.

Problem solving

Use the chart below as a guide to check possible solutions to problems you may encounter when using the *Kodak i1400 Series Scanner*.

Problem	Possible Solution
The scanner will not scan/feed documents	<p>Make sure that:</p> <ul style="list-style-type: none"> • the power cord is plugged in and the power is on. • the scanner cover is completely closed. • the proper power-up sequence was followed, the scanner's green light is on, and the software has enabled scanning. • documents are making contact with the feed module. • the height of batched documents is less than 10.2 mm (0.4 in.) or approximately 150 sheets of 60 g (16 lb.) paper. • documents meet specifications for size, weight, and type, etc. • for thicker documents, you lift the gap release lever during feeding. • you check the feed module and separator module for signs of wear, and replace these parts if necessary. <p>You can also power the scanner down and power up again.</p>
Documents are jamming	<p>Make sure that:</p> <ul style="list-style-type: none"> • the output tray and guides are adjusted for the length and width of documents being scanned. • all jammed documents have been removed from the paper transport area. • documents meet specifications for size, weight, and type, etc. • all staples and paper clips have been removed from the documents. • the separator module and feed module are clean and properly installed. • the drive rollers are clean. • the imaging guides are clean.
"False" paper jams are occurring	<ul style="list-style-type: none"> • Make sure that the paper transport area is clean.
35.6 cm (14 in.) or longer documents are not feeding or are jamming	<p>Make sure that the input and output tray extenders are pulled out to provide support for long documents.</p>
Image quality is poor or has decreased	<p>Make sure that the scanner is clean. Refer to Chapter 5, <i>Maintenance</i>.</p>
The lamps shut off too soon	<p>The lamps in the i1400 Series Scanners will turn off after 15 minutes of no scanner activity. If the lamps are off, but the scanner has not yet gone into the Energy Star mode (default 15 minutes), there will be a delay of about 10 seconds for the lamps to warm up again.</p> <p>If you set the Energy Star timeout to a new value greater than 15 minutes, you must scan at least one document for that setting to be enabled. After this setting has been enabled, it will be enforced until a new setting is selected or the scanner is powered off and back on.</p>

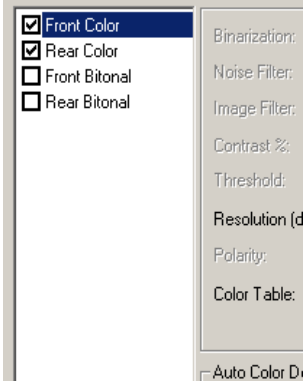
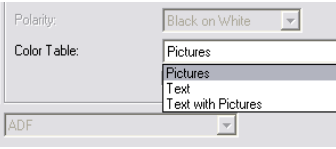
Problem	Possible Solution
Documents are skewed during scanning	<p>Make sure that:</p> <ul style="list-style-type: none"> • the document side guides are adjusted to fit the documents being fed. • documents are being fed perpendicular to the feed module. • documents are being fed in the center of the ADF. • all staples and paper clips have been removed from the documents. • the feed module, separator module, and drive rollers are clean. • the scanner cover is firmly closed and latched.
Scanner pauses excessively during scanning	<p>Make sure that:</p> <ul style="list-style-type: none"> • the host computer meets minimum requirements for scanning. • there is enough free space on the hard disk drive. • all other applications are closed. • the USB connection is 2.0. <p>You can also try changing the scanning options (compression, etc.) in your scanning application.</p>
Documents are multifeeding	<p>Make sure that:</p> <ul style="list-style-type: none"> • the leading edges of all batched documents are centered in the ADF so that each document will come in contact with the feed rollers. • the feed module and separator module are clean and not worn. • documents with an unusual texture or surface are fed manually.
Roller marks or streaks appear on documents after scanning	Clean the feed module, separator module, and drive rollers. Refer to Chapter 6, <i>Maintenance</i> .
Vertical lines appear on the image	• Clean the imaging guides. Refer to Chapter 6, <i>Maintenance</i> .

Appendix A Specifications

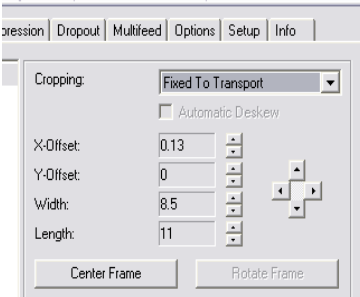
Scanner Type/Speed	<ul style="list-style-type: none"> • i1410 Scanner: simplex color scanner with an automatic document feeder, 60 pages per minute (landscape) • i1420 Scanner: duplex color scanner with an automatic document feeder, 60 pages per minute (landscape) • i1440 Scanner: duplex color scanner with an automatic document feeder, 75 pages per minute (landscape)
Scanning Technology	CCD type Grayscale output bit depth is: 16 Color capture bit depth is: 16 Color output bit depth is: 8
Output Resolutions	75, 100, 150, 200, 240, 300, 400, 600 and 1200 dpi
File Format Output	TIFF, JPEG, PDF (with bundled software)
Scan Area	Scans up to 30.5 x 86 cm / 12 x 34 inches. See the section entitled, "System requirements" for more information.
ADF Capacity	100 sheets
Recommended Daily Volume	i1410/i1420: 7,500 pages per day i1440: 10,000 pages per day
Illumination	Fluorescent
Electrical requirements	100 - 240 V (international), 50/60 Hz
Scanner Dimensions	Height: i1410: 23.6 cm (9.3 in.) i1420/i1440: 35.4 cm (14 in.) without trays; 36.4 cm (14.4 in.) with trays folded up Width: i1410: 55.88 cm (22 in.) i1420/i1440: 55.88 cm (22 in.) Depth: 26.67 cm (10.5 in.) without trays; 30 cm (11.8 in.) with trays folded up
Scanner Weight	i1410: 12.5 kg (27.5 lb.) i1420: 13.9 kg (30.5 lb.) i1440: 13.9 kg (30.5 lb.)
Host Connection	USB 2.0
Operating Temperature	10°C to 35°C
Humidity	10 to 85%
Environmental Factors	Energy Star qualified scanners
Power Consumption	Standby: less than 4 W Operating: less than 60 W
Acoustic Noise (Sound Power level)	Operating: less than 58 dB Standby: less than 46 dB
Bundled software	<i>Kodak Capture Lite</i>

Appendix B TWAIN Image Processing Terminology

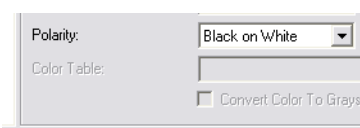
If you have used previous scanners from Kodak, you will notice that the user interface has been updated. Many of the image processing features you are familiar with may have been renamed or moved. The table below will help you to find the feature's new name and/or location.

Previous Location/Name	Current Location/Name	
Feature: Camera Selections		
	<p>Location: Imaging tab</p> <p>Options:</p> <ul style="list-style-type: none"> • Automatic Color Detect • Duplex Dual Stream (check Front Color, Rear Color, Front Bi-tonal, Rear Bi-tonal) 	<p>Location: Advanced tab and Content Settings tab</p> <p>Options:</p> <ul style="list-style-type: none"> • Images per side: One - based on document content When selected, the Content Settings tab will be displayed which contains the additional options. • Images per side: Multiple When selected, the <i>Images to Configure</i> options will be displayed which allows selection of the streams to create.
Feature: Color Tables		
	<p>Location: Imaging tab</p> <p>Options:</p> <ul style="list-style-type: none"> • Text with Pictures • Text • Pictures or Photographs 	<p>Location: Image Settings - General tab</p> <p>Options:</p> <ul style="list-style-type: none"> • Document Type: Text with Graphics Media type: Plain Paper • Document Type: Text Media type: Plain Paper • Document Type: Photograph Media type: Glossy Paper

Feature: Cropping

	<p>Location: Paper tab</p> <p>Options:</p> <ul style="list-style-type: none"> • Automatic with Automatic Deskew • Automatic without Automatic Deskew • Aggressive • Fixed to Transport without Overscan • Fixed to Transport with Overscan • Relative to Document 	<p>Location: Image Settings - Size tab</p> <p>Options:</p> <ul style="list-style-type: none"> • Document: Automatically Detect and Straighten Image: Entire Document Border: (none) • Document: Automatically Detect • Document: Automatically Detect and Straighten Image: Entire Document Border: Remove • Document: Manually Select Border: (none) • Document: Manually Select Border: Add • Document: Automatically Detect and Straighten Image: Part of Document
---	---	---

Feature: Polarity

	<p>Location: Imaging tab</p> <p>Options:</p> <ul style="list-style-type: none"> • Polarity 	<p>Location: Image Settings - Adjustments tab</p> <p>Options:</p> <ul style="list-style-type: none"> • Invert colors
--	---	---

Appendix C Warranty - US and Canada only

Congratulations on the purchase of a *Kodak* Scanner. *Kodak* Scanners are designed to provide end users with the highest performance and reliability. All *Kodak* Scanners are covered by the following Limited Warranty.

Limited Warranty for *Kodak* Scanners

Eastman Kodak Company provides the following Limited Warranty on *Kodak* Scanners (excluding spare parts and consumables) distributed by Kodak or through Kodak's authorized distribution channels:

Kodak warrants that a *Kodak* Scanner, from the time of sale through the Limited Warranty period applicable to the Product, will be free of defects in materials or workmanship and will conform to the performance specifications applicable for the particular *Kodak* Scanner.

All *Kodak* Scanners are subject to the Warranty Exclusions described below. A *Kodak* Scanner found to be defective or which does not conform to the product specifications will be repaired or replaced with new or refurbished product at Kodak's option.

Purchasers may determine the applicable Limited Warranty period for the *Kodak* Scanners purchased by calling (800) 822-1414, or by visiting www.Kodak.com/go/warranty or by reviewing the Limited Warranty Summary Card enclosed with the *Kodak* Scanner.

Proof of purchase is required to demonstrate eligibility for warranty service.

Warranty exclusions

Kodak's Limited Warranty does not apply to a *Kodak* Scanner that has been subjected to physical damage after purchase, caused, for example, by casualty, accident, acts of God or transportation, including (a) by a failure to properly package and ship the Scanner back to Kodak for warranty service in accordance with Kodak's then current Packaging and Shipping Guidelines, including failure to replace the shipping restraint prior to shipping, or by a failure to remove the shipping restraint prior to use; (b) resulting from the user's installation, system integration, programming, re-installation of user operating systems or applications software, systems engineering, relocation, reconstruction of data, or removal of the product or any component (including breakage of a connector, cover, glass, pins, or seal); (c) from service, modification or repair not performed by Kodak or a service provider authorized by Kodak or by tampering, use of counterfeit or other non-Kodak components, assemblies, accessories, or modules; (d) by misuse, unreasonable handling or maintenance, mistreatment, operator error, failure to provide proper supervision or maintenance, including use of cleaning products or other accessories not approved by Kodak or use in contravention of recommended procedures or specifications; (e) by environmental conditions (such as excessive heat or other unsuitable physical operating environment), corrosion, staining, electrical work external to the product or failure to provide electro-static discharge (ESD) protection; (f) by failure to install firmware updates or releases available for the product and (g) by such other supplemental exclusions published from time to time online at www.Kodak.com/go/warranty or by calling (800) 822-1414.

Kodak provides no Limited Warranty for products purchased from countries other than the United States. Purchasers of products from foreign distribution channels must seek warranty coverage, if any, through the original source of purchase.

Kodak provides no Limited Warranty for products that are purchased as part of a third party manufacturer's product, computer system or other electronic device.

Any warranty for these products is provided by the OEM (Original Equipment Manufacturer) as part of that manufacturer's product or system.

The replacement product assumes the remainder of the Limited Warranty period applicable to the defective product or thirty (30) days, whichever is longer.

Installation Warning and Disclaimer

KODAK WILL NOT BE RESPONSIBLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES RESULTING FROM THE SALE, INSTALLATION, USE, SERVICING OR IMPROPER FUNCTIONING OF THIS PRODUCT, REGARDLESS OF THE CAUSE. SUCH DAMAGES FOR WHICH KODAK WILL NOT BE RESPONSIBLE, INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF REVENUE OR PROFIT, LOSS OF DATA, DOWNTIME COSTS, LOSS OF USE OF THE PRODUCT, COST OF ANY SUBSTITUTE PRODUCT, FACILITIES OR SERVICES OR CLAIMS OF CUSTOMERS FOR SUCH DAMAGES.

If there is any conflict between other sections of this appendix and the Limited Warranty, the terms of the Limited Warranty prevail.

How to obtain Limited Warranty service

Kodak Scanners are supplied with information on unpacking, setup, installation and operation. Careful reading of the User's Guide will answer most of the technical questions the end user might have regarding proper installation, operation and maintenance of the product. However, should additional technical support be required, you may visit our website at: www.Kodak.com/go/warranty or contact:

Kodak's Response Center
(800) 822-1414

The Response Center is available Monday – Friday (excluding Kodak holidays) 8 a.m. to 5 p.m. EST.

Before placing the call, the eligible purchaser should have the *Kodak* Scanner model number, part number, serial number and proof of purchase available. The eligible purchaser should also be prepared to provide a description of the problem.

Response Center personnel will assist the end user in resolving the problem over the phone. The end user may be asked to run some simple, self-diagnostic tests and report the resulting status and error code messages. This will assist the Response Center in determining if the problem is the *Kodak* Scanner or another component and if the problem can be resolved over the phone. If the Response Center determines a hardware problem exists that is covered either under the Limited Warranty or a purchased Maintenance Agreement, a Return Material Authorization Number (RMA) will be assigned as needed, a service request will be initiated and repair or replacement procedures will follow.

Packaging and shipping guidelines

Purchaser must ship all warranty returns in a method that guarantees full protection of the product from shipping damage. Failure to do so will void the *Kodak* Scanner warranty. Kodak advises the purchaser to keep the original box and packing materials for storing or shipping. Kodak is not responsible for issues related to shipping damage. The purchaser must return only the *Kodak* Scanner. Prior to shipment, purchaser must remove and retain all “add-on” items, (i.e. adapters, cables, software, manuals, etc.). Kodak accepts no responsibility for these items and they will not be returned with the repaired or replacement *Kodak* Scanner. All products should be returned to Kodak in the original shipping container, or an authorized packaging box for the units being returned. Purchaser must install the shipping restraint before the *Kodak* Scanner is shipped. When the original packaging is not available, contact Kodak’s Response Center at (800) 822-1414 for part numbers and replacement packaging ordering information.

Return procedure

Eligible purchasers seeking services for *Kodak* Scanners covered under this Limited Warranty must obtain a Return Material Authorization number (“RMA”) by calling (800) 822-1414 and within ten (10) business days from the date of issuance of the RMA must return the *Kodak* Scanner to the address designated in the RMA at the end user’s own expense and risk, in compliance with Kodak’s current Packaging and Shipping Guidelines.

Any defective products or parts replaced by Kodak become the property of Kodak.

Customer responsibility

BY REQUESTING SERVICE, THE ELIGIBLE PURCHASER ACKNOWLEDGES THE TERMS OF THE LIMITED WARRANTY, INCLUDING THE DISCLAIMER AND LIMITATION OF LIABILITY PROVISIONS. PRIOR TO SEEKING SERVICE, THE END USER MUST BACK-UP ANY DATA OR FILES THAT MAY BECOME DAMAGED OR LOST. KODAK IS, WITHOUT LIMITATION, NOT RESPONSIBLE FOR LOST OR DAMAGED DATA OR FILES.

Warranty Service descriptions

Eastman Kodak Company (Kodak) offers a range of service programs to support its Limited Warranty and to assist with the use and care of the *Kodak* Scanner (“Service Methods”). A *Kodak* Scanner represents an important investment. *Kodak* Scanners provide the productivity needed to stay competitive. The sudden loss of this productivity, even temporarily, could seriously affect the ability to meet commitments. Downtime can be very expensive, not just in the cost of the repair but also in time lost. To help alleviate these problems, Kodak may use one of the service methods listed below, depending upon product type, in providing service under its Limited Warranty.

Included with selected *Kodak* Scanners is a Limited Warranty Registration card and a Limited Warranty Summary card. The Limited Warranty Summary card is specific by model. The Limited Warranty Summary card contains important warranty information, including the model number and the Limited Warranty. Refer to the Limited Warranty Summary card to determine the available Service Methods applicable to the particular *Kodak* Scanner.

If the Limited Warranty Registration card or Limited Warranty Summary card cannot be located, additional information may be obtained about the product, including updated warranty and service program information and restrictions, online at www.Kodak.com/go/warranty or by phone at (800) 822-1414.

To avoid service delays, Kodak urges end users to complete and return the enclosed Limited Warranty Registration Card at the first opportunity. If you cannot locate the Limited Warranty Registration card, you may register online at www.Kodak.com/go/warranty or by phone at (800) 822-1414.

Kodak also provides a variety of service programs that may be purchased to assist with the use and care of the *Kodak* Scanner.

Kodak is committed to providing its customers with quality, performance, reliability and service under the Limited Warranty.

On-site service

For the selected *Kodak* Scanner, and after the Response Center verifies a hardware problem, a service call will be opened and logged. An *Kodak* Field Engineer will be dispatched to the product location to perform repair service if the product is located within the contiguous forty-eight (48) United States, in certain areas of Alaska and Hawaii, and if there are no security, safety or physical requirements that would restrict the Field Engineer's access to the scanner. For additional information on service areas, please visit our website at: www.Kodak.com/go/docimaging. On-Site Service will be provided between the hours of 8 a.m. and 5 p.m. local time, Monday through Friday (excluding *Kodak* holidays).

AUR

AUR may be one of the easiest and most comprehensive service offerings in the industry. In the unlikely event of a product defect, for eligible purchasers of certain *Kodak* Scanners, *Kodak* will replace that product within two business days.

The AUR provides advance replacement on specific failed or broken *Kodak* Scanner. To be eligible to take advantage of the AUR, the eligible purchaser must obtain an RMA number, sign an Advance Replacement Agreement and provide a credit card deposit to secure the replacement product. The RMA number should be kept in the event that the status of the replacement product needs to be checked. The eligible purchaser will be asked for the address where the replacement product is to be shipped. The eligible purchaser will also be faxed packing and shipping instructions for the malfunctioning product. The eligible purchaser will then receive a replacement product within 2 business days after the service call initiation and Kodak's receipt of the signed agreement. The malfunctioning product must be received by Kodak within ten (10) days of the end user's receipt of the replacement product or the end user's credit card will be charged the list price of the replacement product. Shipment of replacement Imaging Product will be made at Kodak's expense and choice of freight carrier. Shipments not made under Kodak's directions and choice of freight carrier may void the Limited Warranty.

Before the product is returned to Kodak, be sure to remove all options and accessories (which include power cord, documentation, etc.) that are not covered by the Limited Warranty. The box and packaging in which the replacement product was shipped must be used to return the malfunctioning product. If the malfunctioning product is not returned in the box and packaging in which the replacement product was shipped the Limited Warranty may be voided. The Return Material Authorization Number ("RMA") must be clearly marked on the outside of the box to ensure proper receipt and credit of the defective product.

Depot service

If the *Kodak* Scanner is not eligible for Advance Exchange or On-Site Service, an eligible purchaser may utilize our Depot Repair Service. The eligible purchaser will be instructed to ship the product to the nearest authorized Depot Repair Center. Product must be shipped at the eligible purchaser's risk and expense to the repair center. Before the product is returned to the repair center, be sure to remove all options and accessories (which include power cord, documentation, etc.) not covered by the Limited Warranty. All products should be returned to Kodak in the original shipping container, or in a recommended packing box. The *Kodak* Scanner must have the shipping restraint installed before it is shipped. When the original packaging is not available, contact Kodak's Response Center at (800) 822-1414, for ordering information. Eligible purchasers seeking services for *Kodak* Scanners must obtain a Return Material Authorization number ("RMA") by calling (800) 822-1414, and within ten (10) business days from the date of issuance of the RMA must return the *Kodak* Scanner to the address designated in the RMA at the end user's own expense and risk. The Return Material Authorization Number ("RMA") must be clearly marked on the outside of the box to ensure proper receipt and credit of the defective product.

Upon receipt of the product, the repair center will repair product within ten (10) business days. The repaired product will be shipped back two-day express mail at no expense to the eligible purchaser.

Important restrictions

Eligibility: The Advance Exchange Program and the Depot Service are available to eligible purchasers in the fifty (50) United States, and On-Site Service is available in the contiguous forty-eight (48) states and in certain areas of Alaska and Hawaii for products purchased from authorized distributors of Kodak. The *Kodak* Scanner will be ineligible for any service under warranty if the product falls under any of Kodak's then-current Warranty Exclusions, including a purchaser's failure to return defective products to Kodak in compliance with Kodak's then current Packaging and Shipping Guidelines. Persons are only considered "eligible purchasers" or "end users" if they originally purchased the *Kodak* Scanner for their own personal or business use, and not for resale.

Consumables: Consumables are items that wear out under normal use and must be replaced by the end user as needed. Consumables, supplies, other expendable items and those items identified as being the user's responsibility in the User's Guide are not covered under the Limited Warranty.

If any of the above excluded parts or services are required, they may be available through an authorized service provider at their hourly rates and at terms then in effect.

Any defective products or parts replaced by Kodak become the property of Kodak.

Contacting Kodak

For Information on *Kodak* Scanners:

Website: www.Kodak.com/go/docimaging

For U.S. Service, Repair and Technical Assistance by Telephone:

Telephone technical support is available Monday-Friday between the hours of 5 a.m. to 5 p.m. excluding Kodak holidays. Phone: (800) 822-1414

For Technical Documentation and FAQ's available 24 hours a day:

Website: www.Kodak.com/go/docimaging

For Service Program Information

Website: www.Kodak.com

Phone: (800) 822-1414

Kodak

