Kodak

Ngenuity
Series Scanners

User's Guide

A-61662
6J7355

Safety

User Precautions

- Place the scanner on a sturdy, level work surface capable of supporting 50.8 kg (112 lbs) and leave adequate clearance on all sides of the scanner.
- When relocating the scanner, it is recommended that two people lift the scanner and use safe lifting techniques.
- Do not install the scanner in a location subject to dust, humidity or steam. This may cause electrical shock or a fire. Only use the scanner indoors in a dry location.
- Make sure the electrical power outlet is located within 1.52 meters (5 feet) of the scanner and is easily accessible.
- When disconnecting equipment from the electric socket, be sure to grasp the plug, not the cord.
- Be sure the power cord is securely plugged into the wall outlet. Failure to do so may cause electrical shock or fire.
- Do not damage, knot, cut or modify the power cord or use a damaged power cord. This may cause electrical shock or fire.
- The scanner requires a dedicated and properly grounded power outlet. Do not use an extension cord or power strip with the scanner.
- Do not leave the power cord plugged into the AC outlet if the scanner is not used for an extended period of time.
- Leave sufficient space around the power outlet so it can be easily unplugged in case of an emergency.
- Do not use the scanner if it becomes inordinately hot, has a strange odor, emits smoke, or makes unfamiliar noises. Immediately stop the scanner and disconnect the power cord from the power outlet. Contact Kodak Service.
- Do not disassemble, service or modify the scanner except as explained in the User's Guide.
- Do not move the scanner with the power cord and interface cable attached. This may cause damage to the cord/cable. Remove the power cord from the wall outlet before moving or relocating the scanner.
- Follow the Kodak recommended cleaning procedures. Do not use air, liquid or gas spray cleaners. These cleaners displace dust, dirt and debris to other locations within the scanner, which may cause the scanner to malfunction.
- 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.

Users and their employers 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, neckties, 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 employee 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 Ngenutiy* 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.
- *Kodak Ngenutiy* Scanners are Energy Star compliant and 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.

Please consult www.kodak.com/go/REACH for information about the presence of substances included on the candidate list according to article 59(1) of Regulation (EC) No. 1907/2006 (REACH).

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).]

EMC statements

United States

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequently energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

Japan

This is a Class A product based on the standard of the Voluntary Control Council for interference by information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective action.

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Ａ情報技術装置です。この装置を家庭環境で使用すると電波障害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

Taiwan

WARNING: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

警告使用者：

這是甲類的資訊產品，在居住的環境中使用時，
可能會照造成射頻干擾，在這種情況下，使用者
會被要求採取某些適當的對策。

Peoples Republic of China

WARNING: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

声明，该产

此为A级产品，在生活环境中品可能会造成无线电干扰。在这种情况下，可能需要
用户对其干扰采取切实可行的措施

Korea

Please note that this equipment has obtained EMC registration for commercial use. In the event that it has been mistakenly sold or purchased, please exchange it for equipment certified for home use.

이 기기는 업무용으로 전자파적합등록을 한 기기이오니 판매자

또는 사용자는 이점을 주의하시기 바라며, 만약 잘못 판매 또는

구입하였을 때에는 가정용으로 교환하시기 바랍니다.

European Union

WARNING: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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1 Overview

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Kodak Ngenuity 9000 Series Scanners offer optimal image quality and scans a wider range of documents than any other scanner in its class. With an easy-to-use operator interface and smart front panel functionality, *Ngenuity* Scanners are user-friendly and ideal for companies in industries such as health care, financial services, insurance, government, transportation and service bureaus.

These models are available:

- *Kodak Ngenuity* 9090DC Scanner — duplex scanner that scans 90 pages per minute in color, grayscale or black and white in landscape mode.
- *Kodak Ngenuity* 9090DB Scanner — duplex scanner that scans 90 pages per minute in black and white in landscape mode.
- *Kodak Ngenuity* 9125 Scanner — duplex scanner that scans 125 pages per minute in color, grayscale or black and white in landscape mode.
- *Kodak Ngenuity* 9150 Scanner — duplex scanner that scans 150 pages per minute in color, grayscale or black and white in landscape mode.

This User's Guide provides information and procedures for using and maintaining the *Kodak Ngenuity* 9000 Series Scanner. The information in this guide is for use with all models unless otherwise noted.

Supporting documentation

The following documentation is available in support of the *Kodak Ngenuity* Series Scanners:

- User's Guide
- Installation Guide
- Quick Maintenance Reference Guide

Optional accessories

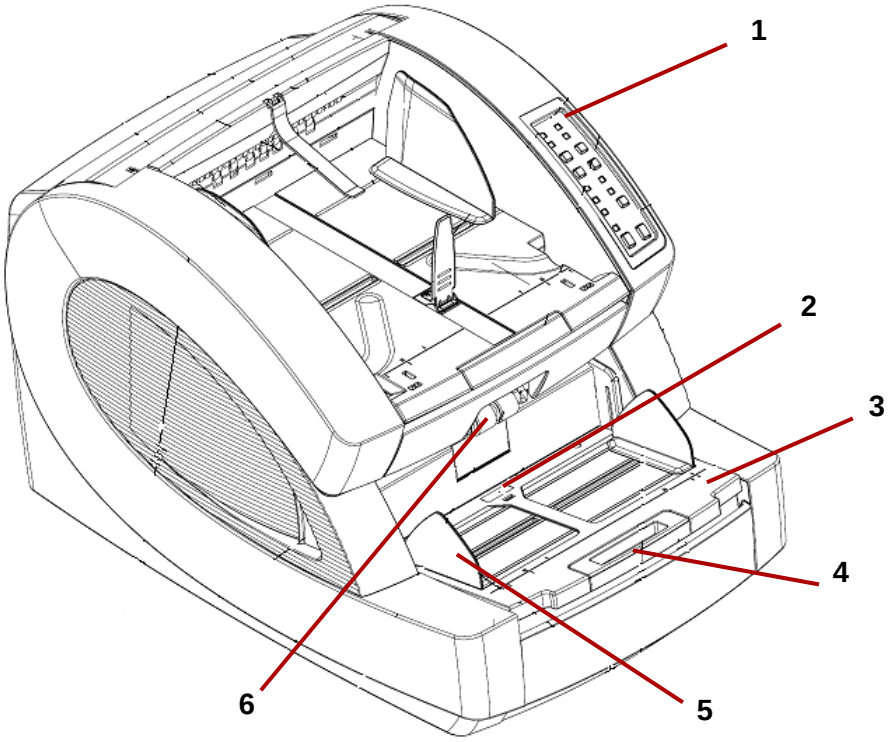
Front/Rear Printer Kit — front (pre-scan) and rear (post-scan) imprinting prints the user-specified alphanumeric string on the front/back side of documents when they are scanned, with the printed results also reflected on the scanned images. CAT No. 863 4230

What's in the box

- *Kodak Ngenuity* 9090DC, 9090DB, 9125 or 9150 Scanner
- 10-foot power cord and USB cable
- Camera calibration kit
- Starter cleaning kit
- *Kodak Ngenuity* Series Scanners brochure
- Installation CD which includes:
  - VRS Software
  - VRS User Manual and Release notes
  - Ngenuity Operator Utility (NOU)
  - ISIS/TWAIN Drivers
  - USB drivers
  - *Kodak Ngenuity* User's Guide
  - *Kodak Ngenuity* Installation Guide
  - *Kodak Ngenuity* Quick Maintenance Reference Guide

Scanner components

Front view



1 **Control Panel** — allows you to initiate scanner functions directly from the scanner.

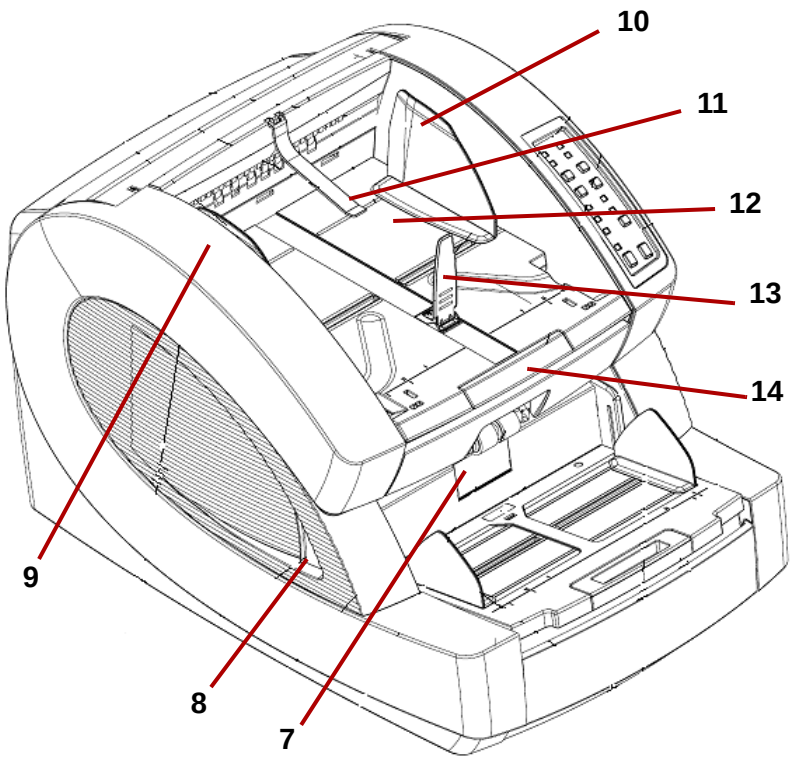
2 **Cork pad** — assists in preventing multifeeds by making it easier for the skimmer rollers to grab one document at a time.

3 **Feeder table** — place the documents to be scanned on the feeder table. It can be raised and lowered using the feeder table buttons on the control panel.

4 **Feeder table extender** — provides a support for longer documents that extend beyond the standard length. The extender can be pulled out to add approximately 7 inches (18 cm) to the feeder table.

5 **Document feed guides** — used to guide document(s) into the scanner's transport. They can be width-adjusted independently, which allows for left-, right-, or center-feeding of documents.

6 **Skimmer module** — contains two rollers that assist in grabbing and feeding documents into the scanner transport. The skimmer assembly can be placed in an up position for manual feeding or a down position for automatic document feeding.



7 **Separator roller door** — allows access to the separator roller. The separator roller assists in separating documents as they feed into the transport.

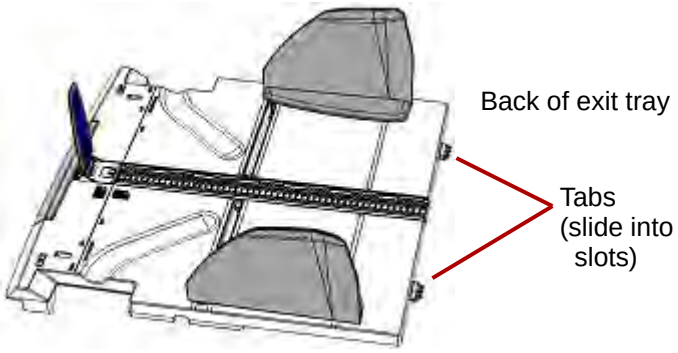
8 **Transport cover release lever** — there is a transport cover release lever on each side of the scanner. Pull one or both levers towards you while standing in the front of the scanner to release and open the transport cover.

9 **Transport cover** — opens in an upward position and will stay open in a full-up position with the support of two gas springs that are located inside the scanner.

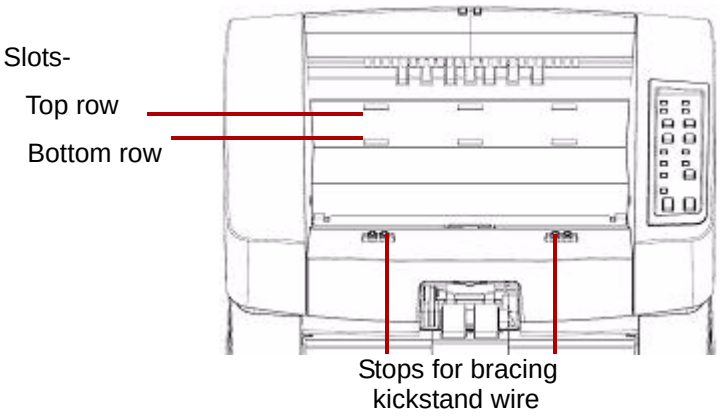
10 **Document output guides** — used to guide the scanned document(s) into a neat stack on the exit tray. They can be width-adjusted independently for left-, right- or center-document alignment.

11 **Exit deflector** — assists in the placement of documents in the exit tray.

12 **Exit tray** — where document(s) are deposited after they have passed through the transport. There are two sets of slots that are used for exit tray positioning depending on the types of documents being scanned.



Top/Front view of scanner - exit tray removed



These positions are available:

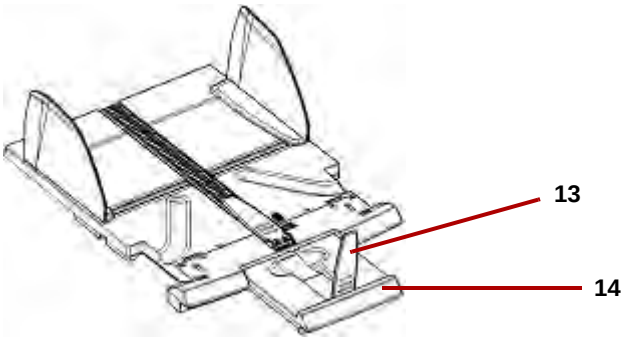
- **Flat**: exit tray rests on top of the scanner in a flat, horizontal position, with the tabs on the back of the tray hinged into the bottom row of slots.
- **Tilted Forward**: tabs at the back of the exit tray are in the top slots causing the exit tray to tilt in a downward position. This position aids stacking of long documents in the exit tray.
- **Tilted Backward**: tabs at the back of the tray are in the bottom row of slots. Pull the kickstand wire on the bottom of the exit tray down and out. Snap the kickstand wire in the slots of the scanner cover. This is useful when scanning small documents.

NOTE: If you have an optional imprinter, there is a door underneath the exit tray that allows access to the front page imprinter.

13 Document stop guide — adjust this guide to match the length of the documents being scanned, which aids in neat document stacking. Slide the document stop guide toward you to lengthen the distance or slide it away from you to shorten the distance.

The document stop guide should be folded down when scanning extra long documents that require the use of the exit tray extender.

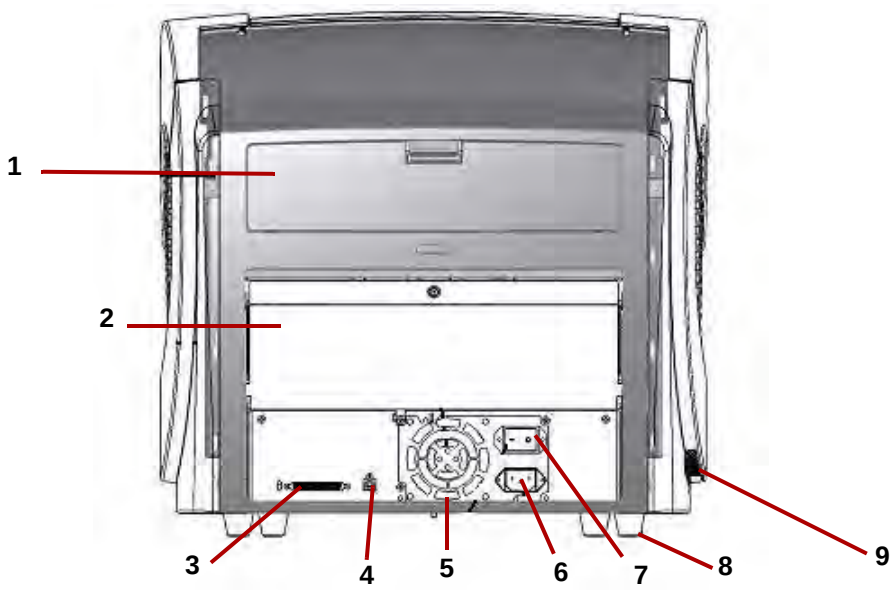
NOTE: Positioning the document stop guide too close to the back of the exit tray (towards the back of the scanner) can cause documents to jam as they exit the scanner.



14 Exit tray extender — pull the extender out when scanning longer documents.

A second document stop guide is located on the end of the exit tray extender when scanning extra long documents. When not in use, fold the extender down.

Rear view



1 **Imprinter door** — provides access to the optional imprinter for installation and maintenance. It requires an additional 3.5 inches (9 cm) of clearance to open fully.

2 **Straight pass-through door** — allows you to use the straight pass-through feature. When the door is open, documents are fed through this exit. This is useful for scanning thick or stiff documents. It requires an additional 3.5 inches (9 cm) of clearance to open fully. *Only open this door when you are using the straight pass-through feature, if the door is opened while scanning in rotary mode, a document jam will occur.*

3 **SCSI connector** — connects an optional SCSI cable (cable and SCSI card are not provided).

4 **USB connector** — connects the USB cable to the scanner and host PC.

5 **Fan** — for cooling the scanner. The fan is part of the scanner's power supply. Make sure to properly vent the scanner for optimal performance.

6 **Power connector** — connects the power supply to the scanner.

7 **Power switch** — turns the scanner on (I) and off (O).

8 **Foot** — four rubber feet allow for clearance below the scanner.

9 **Intake vent** (on side) — used for drawing air in for cooling. Be sure to position the scanner in such a way that the intake vent is not blocked.

NOTE: Be sure to maintain an addition 4-5 inches (10-13 cm) of additional clearance at the front, back and sides of the scanner for proper ventilation.

2 Installation

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Installation: with an optional SCSI connection 2-2

This chapter provides installation instructions for the *Kodak Ngenuity* 9000 Series Scanners. Instructions for a USB connection and an optional SCSI connection follow.

Installation: with a USB connection

1. Verify that your host PC meets the system requirements as specified in *Appendix A, Specifications*.
2. Unpack the scanner.

   NOTE: The scanner weighs approximately 112 pounds (50.8 kg). Be sure to incorporate the appropriate manpower before moving or lifting the scanner.

3. Without the scanner attached, turn on the host PC.
4. Load the Installation CD into the CD-ROM drive and install the software in the following order: Ngenuity VRS software first, then the Ngenuity Operator Utility (NOU). **Do not reboot** the host PC after installing each software application.

   NOTE: For the latest drivers, go to www.Kodak.com/go/scanners.

5. Power down the host PC.
6. Attach the host PC to the scanner using the supplied USB cable.

   NOTE: If you are using the optional SCSI connection, refer to the next section for installation instructions before proceeding.

7. Turn on the scanner. After the initialization sequence has finished, turn on the host PC.

   NOTE: If you are prompted to check for VRS updates, select **No**.

8. Complete the “Found New Hardware” wizard (twice) to install the USB drivers.
9. Launch the Ngenuity Operator Utility (NOU) by double-clicking the NOU icon  found on the desktop of the host PC.
10. Confirm the Ngenuity Operator Utility is communicating with the scanner and all the self tests have passed.

The installation is complete. You are now ready to scan. Refer to the instructions for your scanning application or document management software.

Installation: with an optional SCSI connection

The *Kodak Ngenuity* Scanner is equipped to accommodate a SCSI connection for communication between the scanner and host PC. The optional SCSI connection can be used in lieu of the standard USB connection.

To use a SCSI connection, a SCSI card and cable is required. Kodak does not provide a SCSI card or cable with the *Ngenuity* Scanner; therefore, these items must be purchased separately. A SCSI connection kit is not available through Kodak; however, Kodak has certified that Adaptec's 29160 LP or regular profile card is compatible with *Ngenuity* Scanners. The SCSI cable must be a D68-pin SCSI-3 cable.

1. Verify that your host PC meets the system requirements as specified in *Appendix A, Specifications*.
2. Unpack the scanner.

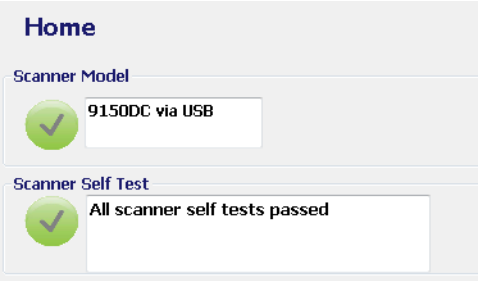
   NOTE: The scanner weighs approximately 112 pounds (50.8 kg). Be sure to incorporate the appropriate manpower before moving or lifting the scanner.

3. Without the scanner attached, turn on the host PC.
4. Load the Installation CD into the CD-ROM drive and install the software in the following order: Ngenuity VRS software first, then the Ngenuity Operator Utility (NOU). **Do not reboot** the host PC after installing each software application.

   NOTE: For the latest drivers, go to www.Kodak.com/go/scanners.

5. Power down the host PC and remove the power cord.
6. Install the SCSI card (Adaptec 29160) in the host PC. *See the instructions that are included with the SCSI card.*
7. Connect the host PC to the scanner.
8. Connect power to the scanner and reconnect power to the host PC.
9. Turn the scanner on and wait for the initialization sequence to complete.
10. Turn on the host PC.
11. Follow the prompts within the New Hardware Found wizard.
12. Launch the Ngenuity Operator Utility (NOU) by double-clicking the NOU icon  found on the desktop of the host PC.

The Ngenuity Operator Utility Home Screen (default) will update when the scanner self tests have passed and communication with the scanner has been established.



NOTE: If the Ngenuity Operator Utility failed to connect with the scanner, refer to *Chapter 6, Troubleshooting* for more information.

3 Control Panel and Ngenuity Operator Utility

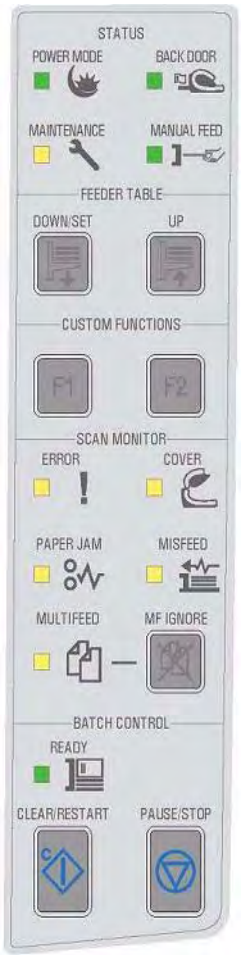
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Control panel



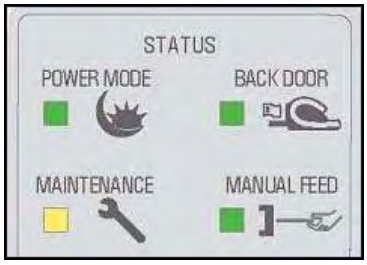
The control panel is located on the front of the scanner. The LEDs and audible tones notify you of the current state of the scanner (e.g., power state, maintenance needed, active features, errors, etc.).

The control panel has five sections:

- Status
- Feeder table
- Custom functions
- Scan monitor
- Batch control

This chapter provides detailed information for control panel functionality.

Status



The status area of the control panel consists of: **Power Mode**, **Back Door**, **Maintenance** and **Manual Feed**.

Power Mode — this green LED indicates the power status or transition between power modes.

Power State/Transition	Power Mode LED
Off	Off
Sleep>Powered up	Blinking, fast
Ready>Active	Steady green
Ready>Sleep	Blinking, fast
Sleep	Blinking, slow

When the scanner is in sleep mode, the Power Mode LED is the only indicator that is active; all others are off.

Depending on the current Power Mode, the buttons on the control panel perform different actions. The following table identifies the function of the buttons during various Power Modes and transitions.

Power State/Transition	Power Mode LED
Off	Control panel and scanner are not on.
Sleep>Ready	Buttons are not active during this transition.
Ready>Active	All buttons perform their normal functions. Press and hold the Stop button for 5 seconds to start the transition process to put the scanner into sleep mode.
Ready>Sleep	The scanner is almost ready to go into sleep mode. A momentary press of any button resets the sleep count-down timer.
Sleep	A momentary press of any button starts the Sleep > Awake transition to awaken the scanner.

Back Door — this green LED indicates if the straight pass-through door (located at the back of the scanner) is open or closed.

- **LED not lit**: when the straight pass-through door is closed, the rotary path to exit tray is in use.
- **LED On**: when the straight pass-through door is open, documents being scanned will be exited through the straight pass-through door.

Maintenance — this yellow LED indicates that maintenance or service conditions exist in the scanner.

Maintenance LED	Scanner state
Off (not lit)	No maintenance is required at this time.
Slow blinking	Maintenance is needed. See the section entitled, “Ngenuity Operator Utility” (Maintenance monitor) later in this chapter for more information.
Fast blinking	Scanner is busy or offline. This occurs when the scanner is in off-line mode and not capable of scanning (i.e., ADF test, camera calibration, downloading firmware, imprinter cleaning, etc.).
Steady on	Scanner self-test fault detected; scanner service may be required. Use the Ngenuity Operator Utility for more information on the self test failure.

Manual Feed — this green LED indicates that the feed mode has been changed from the default, **Normal ADF** (Automatic Document Feeder), to **Manual** feed mode. When the LED is illuminated, the scanner is in **Manual** feed mode.

Feed modes

The *Ngenuity* Scanner has four feed modes for feeding documents into the scanner’s transport:

ADF mode (default) — used for feeding batches of documents that are similar in size and weight. After a batch of documents is placed on the feeder table, the batch is fed automatically into the scanner’s transport.

Manual mode — this mode is used to feed exception documents that cannot be fed in ADF mode (e.g.,multiple forms). In this mode, you must feed documents manually into the scanner one at a time. When scanning in Manual mode, the **Manual Feed** LED on the control panel will be lit. See the next section, “Manually feeding documents” for more information.

Assisted Manual mode — once the scanner has entered Manual Feed mode, the skimmer can be lowered onto the feeder table to enable Assisted Manual mode. In this mode, the paper sensor on the feeder table will trigger the skimmer to pull the documents into the scanner transport. This mode can also be used to automatically feed small batches while the scanner is in Manual Feed mode.

Test Feed mode — used to test and verify the scanner’s feeding capabilities, as well as to feed transport cleaning sheets. This mode allows you to feed documents without generating a scan command from the host PC.

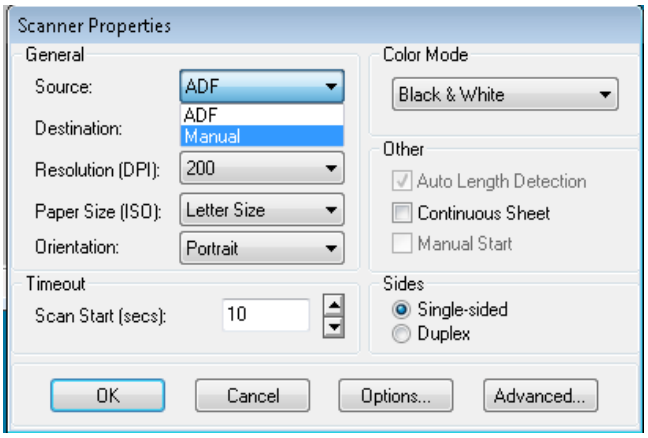
Unlike ADF and Manual (Assisted) modes, the Test Feed mode button is set from within *Custom Functions* in the Ngenuity Operator Utility.

NOTE: With the exception of the Test Feed mode, all feed modes are set through the Advanced Properties window within the scanning software application.

Manually feeding documents

For demonstration purposes, VRS Test Application is used in the following procedure.

1. Turn on the scanner and wait until the scanner is ready.
2. Lift the skimmer to the up position.
3. Turn on the host PC.
4. Launch the scanning application (in this example, VRS Test Application) and from the Menu bar, select **Source>Scanner** (Source = 9000 with VRS with AIPE).
5. When the scanner is connected, select **Source>Properties** to open the scanning application's Scanner Properties window.

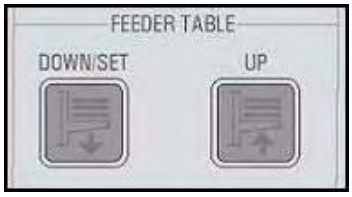


6. Select **Manual** from the *Source* drop-down box.
7. Lift the skimmer.
8. Remove any paper from the feeder.
9. Start a scan, either single or batch. The table will move up, and the Manual Feed LED will light. The scanner motor will start and beep indicating it is ready for scanning.
10. Carefully insert the page, keeping your hands and fingers away from the rotating rollers on the skimmer. The scanner will feed the page, run it through the scanner and generate an image.

    NOTE: If you selected batch scan, you can continue to insert pages, one at a time.

11. When you are finished, press **Stop**.

Feeder table



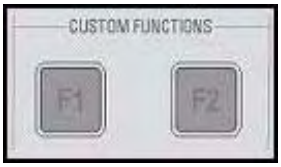
The Feeder Table adjustment buttons allow you to manually set the lowest position of the feeder table and lower the feeder. The feeder table must be empty when you are selecting the **Down/Set** or **Up** position.

Down/Set — positions the feeder table in the lowest position for ADF mode.

Up — this button is used in conjunction with the Down button when the feeder is empty, to set to the lowest point the feeder will drop to when you are scanning and the feeder becomes empty.

If the feeder table has documents in it, the **Up** button performs no function.

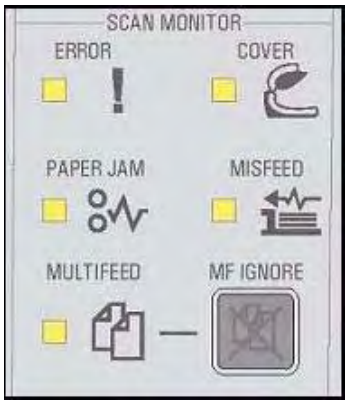
Custom functions



Two custom functions (F1 and F2) can be assigned via the Ngenuity Operator Utility. Available functions are: **Feed Test Batch**, **Page Eject** and **Clean Print Head**.

By default, F1 is assigned to **Feed Test Batch** and F2 is assigned to **Page Eject**. See the section entitled, “Ngenuity Operator Utility” later in the chapter for more information.

Scan monitor



The Scan Monitor indicates that an error has occurred during scanning. The Scan Monitor indicators are lit in yellow.

Error — indicates that an error exists that is not covered by one of the indicators (i.e., page sensor, error, scanner internal errors, etc.). When an error is indicated, refer to the scanning application for more information.

Cover — when illuminated, indicates that the scanner transport cover is open. Carefully close the scanner cover.

If this error occurs during scanning, press **Clear/Restart** after you have securely closed the cover.

Paper Jam — when illuminated, indicates a document jam within the scanner. Open the scanner transport cover, remove any jammed documents and close the cover. Press **Clear/Restart** to continue scanning.

Misfeed — when illuminated, indicates that a skimmer timeout or feeder jam has occurred.

- **Skimmer timeout**: the skimmer is active, but the document to be scanned does not move out of the feeder tray (commonly due to roller slippage).
- **Feeder jam**: the document to be scanned is fed but does not reach the scanner transport within the expected transit time.

Multifeed and **MF Ignore** — when illuminated, indicates a multifed document or warning. This indicator will momentarily light and remain lit or blink depending on the multifeed condition. For example:

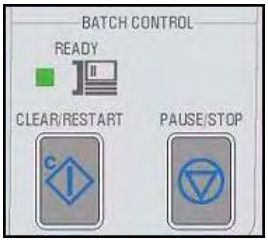
- If the multifeed mode is set to **Stop**, the indicator remains lit and the scanner stops when a multifeed is detected.
- If the multifeed mode is set to **Notify**, the indicator will light momentarily along with a sound or prompt for each multifeed that is detected while scanning.

For more information, see *Chapter 4, Advanced Features*.

The **MF Ignore** button toggles the multifeed ignore feature on and off. When it is on, the scanner will ignore the multifeed sensor during the next page fed (one page only), and the Multifeed LED will blink.

By pressing the **MF Ignore** button during batch scanning, you can preempt the impending multifeed alarm without forcing a batch stop. This turns off the MF alarm detection for a single page starting with the next leading edge seen by the page entry sensor. To turn off MF detection for a series of documents, press and hold the **MF Ignore** button.

Batch Control



The Batch Control buttons allow you to start and stop scanning.

Ready — this indicator is illuminated green when the scanner is ready to scan.

- **ADF mode**: the Ready indicator will light when:
  - there are no errors active
  - documents are in the feeder
  - the skimmer is lowered
  - the feeder table has risen (or is rising) to where the skimmer is resting on the documents in the feeder.
- **Manual Feed mode**: the scanner is ready to scan. The LED will remain a steady green while the scanner is scanning.

Clear/Restart — allows you to clear an error when the error is resolved and resume scanning (e.g., paper is removed from the transport which caused a paper jam).

When using VRS, use **Clear/Restart** to clear a multifeed (which tells VRS to discard the multifeed image and rescan the document).

You can also use **Clear/Restart** to resume scanning after a batch pause.

Pause/Stop — used to stop feeding or stop the scanner's transport.

- If there is no scan command queued, no documents in the transport, and no feeding in progress, pressing **Pause/Stop** stops the transport before the automatic transport timeout (20 seconds).
- If the scanner is feeding documents, pressing **Pause/Stop** once will stop feeding and a host "scanner paused" error will occur. The Ready LED will blink to indicate when the batch is paused.
- If **Pause/Stop** is pressed twice or pushed and held for more than one second, a hard stop will occur (scanning stops with documents remaining in the transport) along with a host "scanner stopped" error (this host error will not happen if the scanner is running in Test mode). Press **Clear/Restart** to resume scanning (there is a slight delay before scanning resumes).

  NOTE: If **Clear/Restart** is pressed before all documents are cleared from the transport, an audible alarm on the scanner will sound and the Paper Jam LED will light. Clear the transport of all documents by pressing and holding the **Custom Function** button that is programmed for **Page Eject** and then press **Clear/Restart** to resume scanning (there is a slight delay before scanning resumes).

- Use **Pause/Stop** to place the scanner in Sleep mode by pressing and holding the **Pause/Stop** for 5 seconds or longer. This can only be done when the scanner is idle (no scan commands queued) and the transport is not running.

Ngenuity Operator Utility

The Ngenuity Operator Utility (NOU) is the application that communicates with the scanner to provide scanner status, configure scanner settings, and to monitor and assist with performing routine scanner maintenance.

Be sure your scanner is properly connected and the scanner and host PC are on before accessing the Ngenuity Operator Utility.

- From the host PC's desktop, double-click the Ngenuity Operator Utility icon. The NOU will run through an initialization sequence. When communication with the scanner is established, the scanner and connection type will be displayed on the Home screen of the NOU.

NOTE: The Ngenuity Operator Utility remains accessible, but not functional after connectivity with the scanner has been established and then the scanner is powered off or if the USB cable is disconnected. Any changes made to existing settings with the scanner powered off will not be present when the scanner is turned on.

If the scanner is powered off and the NOU is closed, the scanner must be turned on to reestablish connectivity to the NOU.

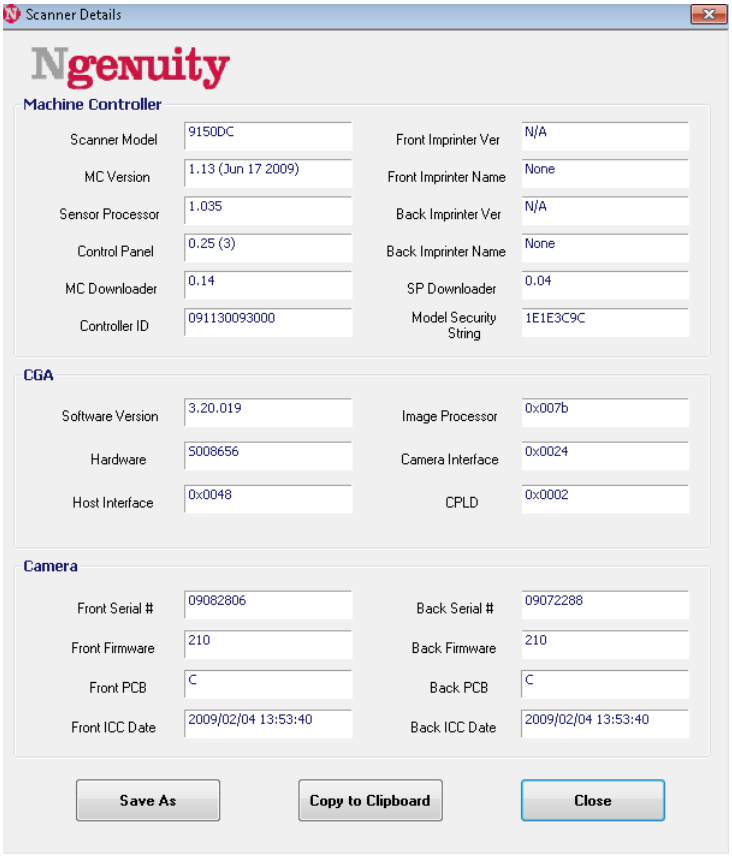
Ngenuity Operator Utility main screen

The Ngenuity Operator Utility main screen provides a menu bar and options for configuring basic scanner parameters and tasks. The sections that follow provide descriptions of the components on the Home screen including the Menu bar, Home button, Settings button and Maintenance button.



Scanner menu

Details — displays a Scanner Details dialog box which contains version information for scanner firmware components and camera information, as well as scanner model identification.



- If you click **Save As**, the Save As dialog box will be displayed allowing you to save this information on the host PC or a network (if connected) as a text file (.txt).
- **Copy to Clipboard** allows you to copy the displayed information to the Windows clipboard where you can paste it into another application. This will allow you to save the file in another file format, if desired. **Copy to Clipboard** is useful for sending the information via E-mail for troubleshooting purposes.
- Click **Close** to close the Scanner Details dialog box.

Update Configuration — for Kodak use only.

Update Firmware — to maintain optimal scanner performance and image quality, be sure the scanner is running with the most current versions of software and firmware. Only software and firmware from Kodak is certified to work with *Ngenuity* Scanners. Firmware updates should only be performed when instructed by Kodak Technical Support.

Exit — closes the Ngenuity Operator Utility.

Help menu

Displays help topics for the following: View Operator Manual, Product Support, and About Scanner Operator Utility.

View Operators Manual — launches a PDF file for the *Kodak Ngenuity* 9000 Series Scanners User's Guide.

NOTE: You must have Adobe Reader installed on your PC to view this file.

Product Support — displays the Product Support dialog box which provides technical support information and links.

About Scanner Operator Utility — displays the About dialog box which provides the Ngenuity Operator Utility application version and copyright information.

Home screen

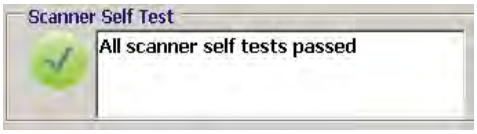
When you click the **Home** button on the main Ngenuity Operator Utility screen, the following information is displayed.



Scanner Model — displays the scanner connection status. If the scanner is properly connected, the icon indicates a successful connection. The scanner model and connectivity type (USB or SCSI) is also displayed.



Scanner Self Test — displays the results of the internal scanner fault monitoring. A green checkmark icon indicates that no scanner faults were detected. A red X icon indicates one or more scanner faults were detected. The text box will list each self test failure.



If there are one or more faults, the icon changes and each fault is listed.

If the Self Test monitor returns a fault(s), power cycle the scanner and check the Scanner Self Test monitor again. If the problem persists, contact Technical Support.

Maintenance monitor — this section of the Home screen displays any scanner maintenance and the type of maintenance needed (i.e., clean transport, replace feed rollers, etc.). Monitored maintenance includes:

- Clean feed rollers
- Clean transport
- Clean optics (e.g., imaging guides, camera glass covers, sensors)
- Replace feed rollers
- Calibration of the front/back camera
- Replace imprinter ink cartridge (if optional imprinter is installed)

If maintenance is required, the tool icon which is normally blue (no maintenance required) changes to yellow.

The Maintenance monitor also displays when or how soon specific maintenance should occur in the form of a bar graph. See *Chapter 5, Maintenance* for detailed maintenance procedures.

When a component's pre-set interval expires, the scanner's Maintenance light will blink slowly, the icon will change from blue to yellow and the bar graph will be red. In addition, an alert will be displayed (yellow triangle).



NOTE: The presence of a red bar graph will not disrupt or stop the scanner.

Resetting the maintenance reminders

If a component's maintenance interval expires triggering the maintenance reminders, a hyperlink for that component will navigate you to reset and restart the interval count. This process is necessary to ensure required maintenance continues to be monitored appropriately.

NOTE: The alerts for calibrating the front and back cameras cannot be adjusted. If an alert to calibrate the camera(s) is displayed, click the corresponding hyperlink to reset the reminder and begin calibration. For procedures on calibrating the cameras, see *Chapter 5, Maintenance.*

Settings button

When you click the **Settings** button on the Ngenuity Operator Utility main screen, the Configure Scanner Settings screen will be displayed.



You can configure basic scanner settings (e.g., Sleep timeout, Multifeed range, Custom Functions and Audio volume and sound) using this screen.

Sleep timeout — you can set the delay time in hours and minutes that the scanner can be idle with full power before going into "sleep" mode. The default timeout is 15 minutes; the maximum time is 4 hours.

Multifeed — allows you to adjust the sensitivity when scanning **Normal** or **Very thin** documents.

- **Normal**: for documents that range from thick card stock to thin carbon copies. This setting should be used for most documents.
- **Very thin:** used to detect multifeeds when scanning ultra-thin documents such as rice paper.

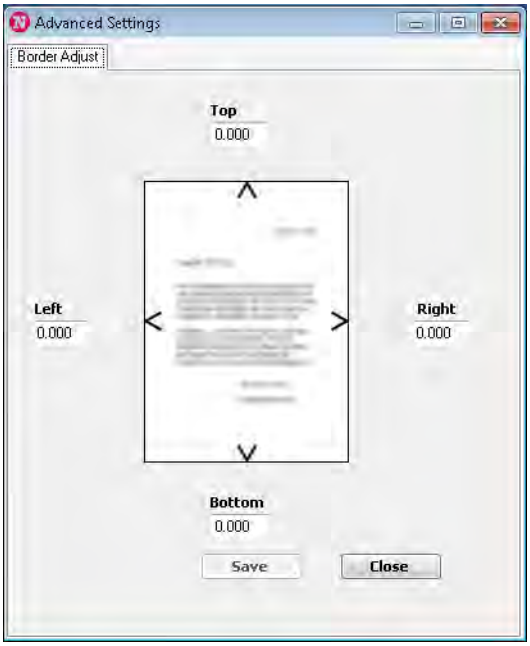
Custom Functions — allows you to set a function for the **F1** and **F2** buttons on the control panel. Available options are:

- **None**: no function will be performed when F1/F2 is pressed.
- **Feed Test Batch**: activates the Test feed mode which is used to test and verify the scanner's feeding capabilities and allows you to feed transport cleaning sheets. This is the default setting for the F1 key.
- **Page Eject**: will activate the transport to eject multi-fed documents or clear the transport after a stop. This is the default setting for the F2 key.
- **Clean Print Head**: if you have the optional imprinter installed, will activate the imprinter to clean the print head.

Audio — allows you to set the volume of a selected sound that alerts you to an error.

- **Volume**: can be set to **Mute, Low, Medium** or **High**.
- **Error Sound**: one of three sounds can be selected: **Sound1**, **Sound2**, **Sound3**. Click **Play Sound** to hear the currently active error sound.

Advanced — when you click **Advanced**, the Advanced Settings screen will be displayed.



From this screen, you can adjust the image boundaries or borders of a scanned image which is determined by autocrop. Each side of a scanned image can be individually adjusted by cropping or adding extra black border. This only affects images as part of the scanning process. This adjustment cannot be made to an existing image.

The range of adjustment is between -0.500 to 0.500 inches; negative values crop, and positive values add extra border. The default values are 0.000 for all sides.

When finished, click **Save** to save your changes and close the Advanced Settings window.

Maintenance button

When you click the **Maintenance** button on the Ngenuity Operator Utility main screen, the Maintenance screen will be displayed.



This screen provides scanner statistics for total hours, total pages fed and total pages scanned. The Maintenance screen also allows you to configure reminders for different maintenance tasks that are required to ensure optimal performance.

Scanner Stats — this area provides statistics for **Total On Time** (awake and sleeping), **Total Pages** (fed) and total **Scanned Pages**. These totals are updated every 2 seconds.

Configuration Maintenance Reminders — allows you to set the interval values for triggering the reminders that are visible in the Maintenance section of the Home screen.

Intervals can be set for cleaning the feed rollers (skimmer rollers: pick and drive and separator roller), the transport rollers, the optics and to replace the feed rollers (skimmer rollers and separator roller). These reminders can also be individually enabled and disabled. It is recommended that you **do not** disable any of these reminders.

To enable and adjust a maintenance reminder, click the check box next to the corresponding component and use the up/down arrows in the *Page Interval* column to change the value. Click **Save** to save your changes or **Restore** to reset the values to the previously saved settings.

The available interval settings and their defaults are:

Reminder	Range	Default
Clean Feed Rollers (skimmer rollers and separator roller)	1K - 50K	10K
Clean Transport Rollers	5K - 100K	50K
Clean Optics (camera covers, imaging guides, sensors)	5K - 150K	50K
Replace Feed Rollers (skimmer rollers and separator roller)	100K - 900K	600K

4 Advanced Features

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This chapter provides information about advanced features that can be used with *Kodak Ngenuity* 9000 Series Scanners. The controls for operating the Advanced Features are accessible within the VirtualReScan® (VRS) Interactive Viewer.

NOTE: When VRS is not installed, similar settings can be found in the Direct ISIS and TWAIN settings.

The features on the Advanced Properties dialog box can be used to control scanner-specific features that are not accessible through the Kofax VRS or scanning application screens. The general rule for VRS integrations is that if there is a control for a feature in both VRS and in the Advanced Properties dialog box, then the VRS control's setting will override the setting in the Advanced Properties dialog box. For example, if you have health forms where you need to drop out a form color or if you have documents with labels that cause false multifeed alarms, etc., you can change the scanner's settings on the Advanced Properties dialog box to enable Multifeed detection or electronic color dropout scanner features. These settings can be saved as part of a profile. Any settings made on the Advanced Settings screen will override the same settings defined in a saved profile. For more information on scanning with VRS Test Application and Profiles, see the Kofax VRS 4.5 (or newer) User's Guide.

NOTE: Any settings made in the Advanced Properties dialog box must be saved in a profile or they will be lost when the application is closed.

Some of the settings that can be made using the Advanced Properties dialog box include: color dropout, multifeed, rotation, document setup (i.e. allowing for large skew, etc.)

Accessing Advanced features

To access the VRS Interactive Viewer, *Ngenuity* VRS Professional software must be loaded on the host PC that the scanner is connected to. VRS Professional will be active when the scanning application being used is launched and a VRS scan source is selected. There are three types of scan sources, depending on the VRS driver used.

- VRS ImageControls®-based Applications
- VRS ISIS-based Applications
- VRS TWAIN-based Applications

NOTE: This User's Guide only documents the VRS-based scanning setup.

For scanning applications that utilize the VRS-based driver, the VRS icon will be displayed in the Windows Taskbar on the host PC when the scan source (scanner) is selected.

To launch the VRS Interactive Viewer, right-click on the VRS Taskbar icon and select **Preview.**



The VirtualReScan Interactive Viewer window will be displayed.

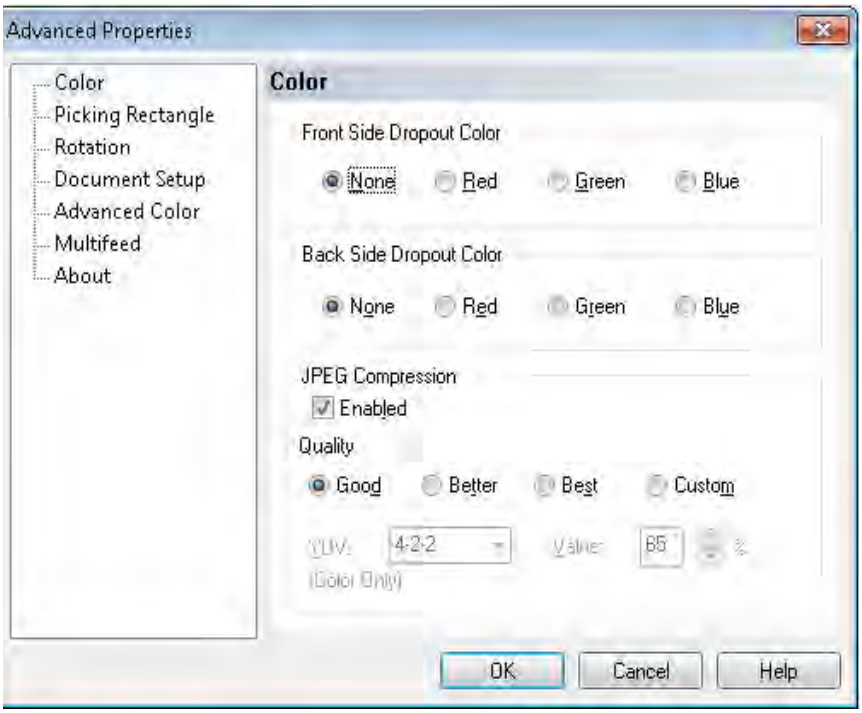


1. Within the Interactive Viewer, access the Advanced features by clicking the Scanner Driver Settings icon () to display the Advanced Properties window.

Advanced features

NOTE: If you have the optional Imprinter, see Appendix B for installation procedures, maintenance and instructions for using the front page (pre-scan) and back page (post-scan) imprinter.

Clicking the **Scanner Driver Settings** icon displays the Advanced Properties window.



To display the functions contained within a menu, click the corresponding hyperlink.

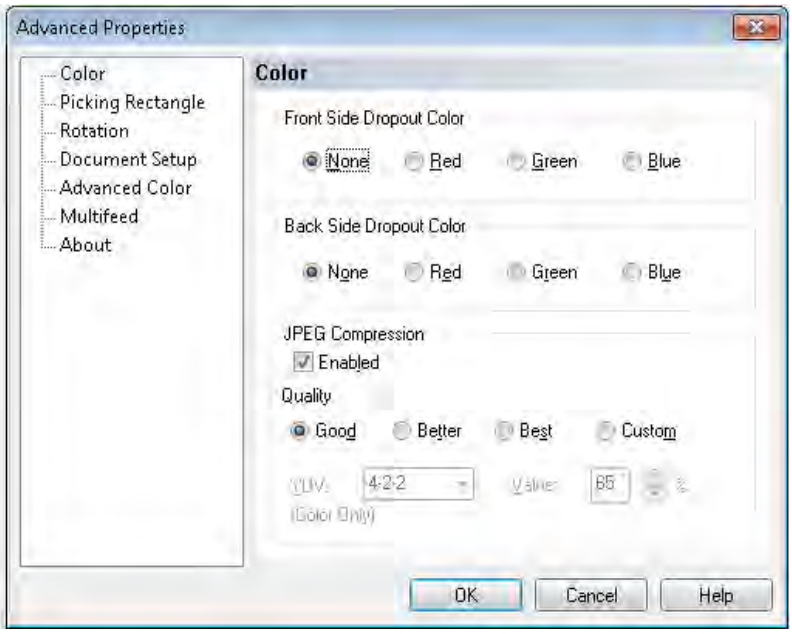
OK — saves any changes and closes the window.

Cancel — reverts the screen settings back to the last saved settings.

Help — displays a brief description of the controls on the Advanced Properties window.

Color screen

The Color screen allows you to dropout 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).



Front side dropout color — select the desired dropout color you want to eliminate from the front side. Selections are: **None**, **Red**, **Green** or **Blue**.

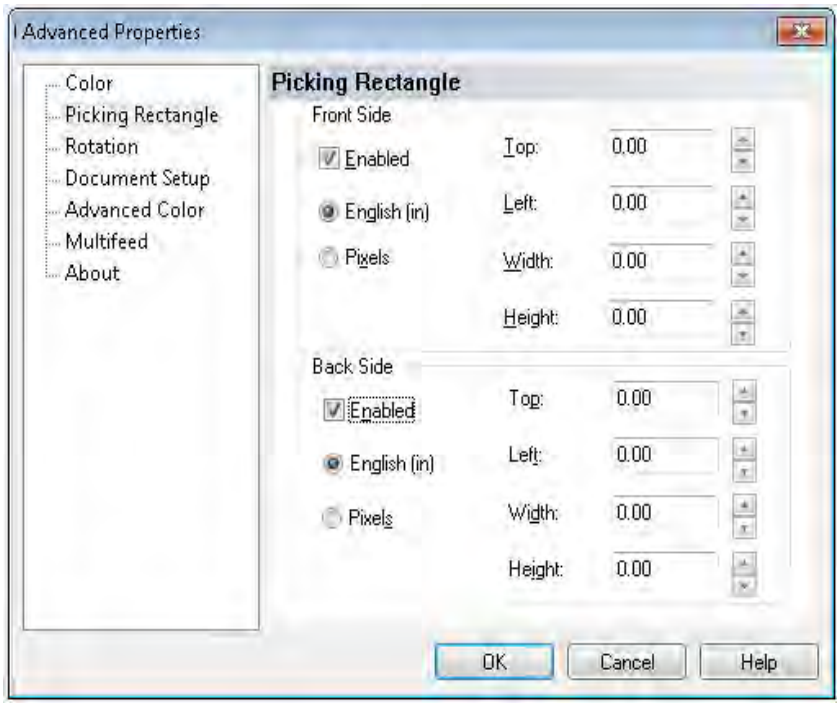
Back side dropout color — select the desired dropout color you want to eliminate from the back side. Selections are: **None**, **Red**, **Green** or **Blue**.

JPEG Compression — click **Enabled** to select a JPEG Quality option. Choices are:

- **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.
- **Custom**: select this option to customize your JPEG compression values. When selected, the **YUV** and **Value** percent options are available.
  - **YUV** is a type of color space used in JPEG compression. The 4-2-2 selection (default) uses downsampling (throws away a lot of the image color data) and generates smaller files compared to the 4-4-4 selection, which uses no downsampling (keeps as much image color data as possible) and generates large files.
  - **Value**: a high percentage value compresses the least (and generates larger files), while a low percentage value compresses the most, generating smaller files, which can result in lower quality images.

Picking Rectangle screen

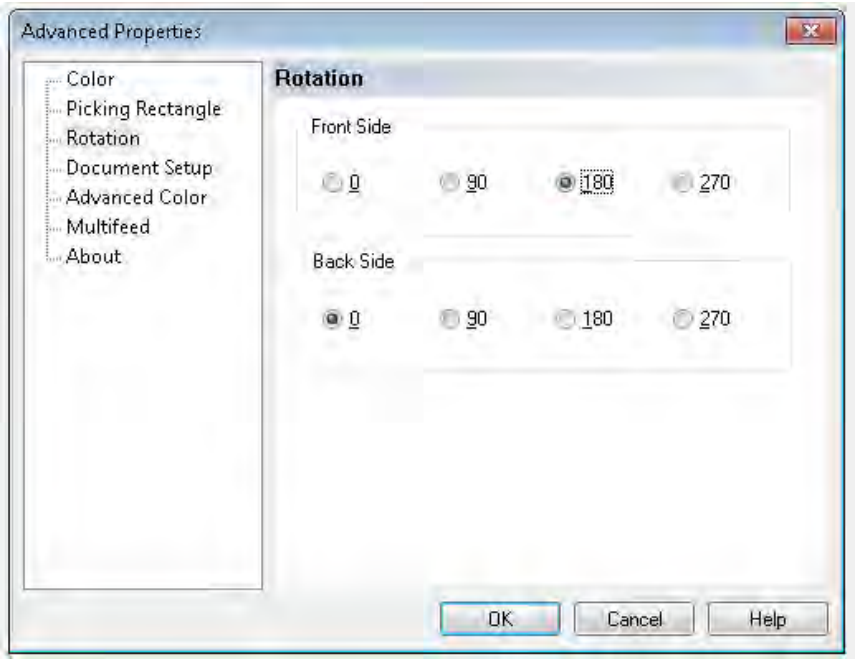
The Picking Rectangle screen provides the following options:



Front Side/Back Side — allows you to define the area to be imaged by selecting a value in the **Width** and **Height** drop-down boxes and its offset from the upper left corner of the image (defined by the **Top** and **Left** values). The picking rectangle is relative to the cropped image such that a value of Top=0.00 and Left=0.00 will always be the very left corner of the lead edge of the page that was fed into the scanner. The resulting image is a *cut out* of the original, larger image. Therefore, if you scan a letter-size page and have **Letter** paper size selected, you will get a rectangular cut out from that image, the location and size of which is determined by these values.

Rotation screen

The Rotation screen provides the following options.

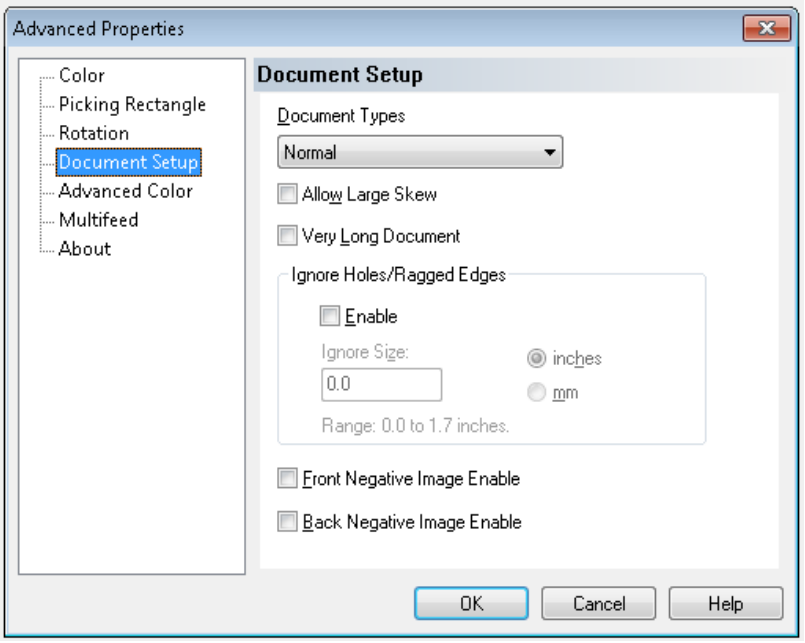


Front Side/Back Side — allows you to rotate the scanned image **0**, **90**, **180** or **270** degrees. 0 is the default.

NOTE: Any rotation performed by the scanning application or by Kofax VRS will be performed after this rotation. For example, if the Advanced Properties rotation is set to **90** degrees for both the **Front** and **Rear** and VRS auto cropping is enabled, and a document with text on the front and only a photo on the rear is fed in portrait mode with the left edge first, the result will be the front side with text will first be rotated right 90 degrees in the scanner, then rotated back to portrait by VRS auto crop. The rear image will be rotated right and will not be rotated by VRS auto crop.

Document Setup screen

The Document Setup screen provides the following options.



Document Types — allows you to change the transport speed to accommodate the feeding needs of various document types.

- **Normal**: highest transport speed for scanning standard document types. This is the full performance mode.
- **Fragile/Difficult**: lower transport speed which is useful for delicate documents that can easily tear.
- **Thick or Envelope**: for scanning thick paper or envelopes.
- **Tri-Fold**: for scanning tri-fold documents.

NOTE: Document types other than **Normal** may reduce scanner speed.

Allow Large Skew — if enabled, this option maximizes image data capture for documents that are fed into the scanner highly skewed, helping to eliminate clipped or missing corners.

Very Long Document — when enabled, this option adjusts the scanner's transport speed to accommodate a long document (more than 40 inches/1016 mm) to be scanned into individual images. The size of the images is determined by the **Paper Size** setting in the scanning application.

The Very Long Document option does not support the simultaneous use of some other options offered through VRS ImageControls and Direct Drivers. Following is a table that identifies those other controls as well as how the scanner and software handle the conflict when you attempt to use them together.

Conflicting Controls	Resolution
Single Page Scan	The scan is terminated and an error message is displayed. **Very Long Document** is not supported with single-page scanning. Use the batch scan command.
VRS Administration Utility - Warning tab	The document is scanned ignoring the warning conditions that are set. No error message is displayed.
On Errors QC Mode	The document is scanned ignoring the On Errors QC Mode options that are set. No error message is displayed.
Every Page QC Mode	The scan is terminated and an error message is displayed.
First Page QC Mode	The scan is terminated and an error message is displayed.
Deskew and Auto Crop	The document is scanned ignoring the **Deskew** and **Auto Crop** options that are set. No error message is displayed.
Image Rotation of 90, 180, or 270 degrees	Do not select rotation options if scanning using **Very Long Document**.
Auto Orientation	The scan is terminated and an error message is displayed.
Picking Rectangle	For best results, do not use **Very Long Document** and **Picking Rectangle** at the same time.
Automatic Color Detection	For best results, do not use **Very Long Document** and **Automatic Color Detection** at the same time.
Advanced Clarity	For best results, do not use **Very Long Document** and **Advanced Clarity** at the same time.

Ignore Holes/Ragged Edges — click **Enable** to adjust the entry and exit sensors so they ignore holes on the leading or trailing edge of a document (e.g. three-hole punched paper), that may cause the scanner to detect false starting or trailing edges of a document. If you are receiving *Page Sensor* or *Peripheral Malfunction* errors, enable this feature and adjust the value until the error disappears.

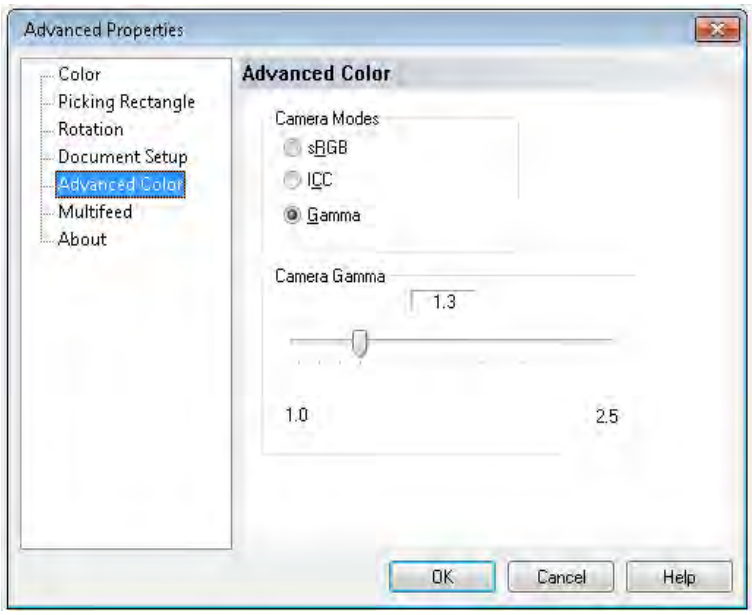
This option can be set using a measurement in inches or millimeters with a range of 0.0 to 1.7 inches (0 to 43 mm). Set **Ignore Holes/ Ragged Edges** to a width slightly larger than the holes in the paper (or whatever may be causing the false detection of the leading or trailing edges of a document).

NOTE: Enabling **Ignore Holes/Ragged Edges** may reduce scanning throughput.

Front/Back Negative Image Enable — allows you to request a black and white/grayscale image when scanning in black and white or grayscale only. This control is not supported when scanning in color.

Advanced Color screen

The Advanced Color screen provides the following options.



If the color on your images is not as expected, you can use the Advanced Color screen to make color adjustments to meet your scanning needs.

Camera Modes

- **sRGB**: uses specific camera gamma to achieve the best approximation of sRGB color response.

  NOTE: This setting applies to the camera output only; any post-capture image processing settings affect the color content of the final output file.

ICC: select this option to set up scanner cameras to be compatible with the scanner's ICC color correction profile and to cause VRS to embed ICC-compatible profile data into the image file. ICC profile data is used by some viewing or printing applications to compensate or adjust colors for optimal quality. ICC data is useful only for applications that are ICC-profile aware. To properly view the images, the viewing application must be ICC-profile aware.

NOTE: Do not use other post-processing color adjustments in combination with this option enabled.

For the ICC profile data to be successfully embedded, the scanning application must:

- be an ImageControls, Direct ISIS or Direct TWAIN application
- be set up for color scanning
- be set up to store TIFF, JPEG or PDF image file types
- not use VRS Automatic Color Detection (images may be converted to black and white)

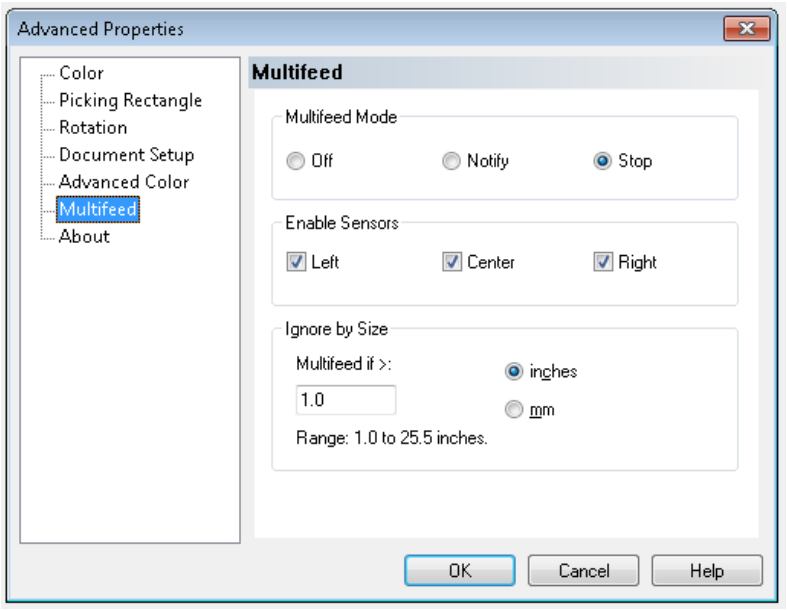
Gamma (default) — allows you to specify a specific camera gamma (1.0 - 2.5). The camera gamma value can be entered or selected by moving the slider to the desired value.

Select a lower gamma value to enhance color saturation for bright colors and a higher gamma value to enhance color variations for dark colors. For most documents the camera gamma should be kept at the default value of 1.3.

NOTE: Selecting one of these Camera Mode options activates that option for both the front and back camera.

Multifeed screen

The Multifeed screen provides the following options.

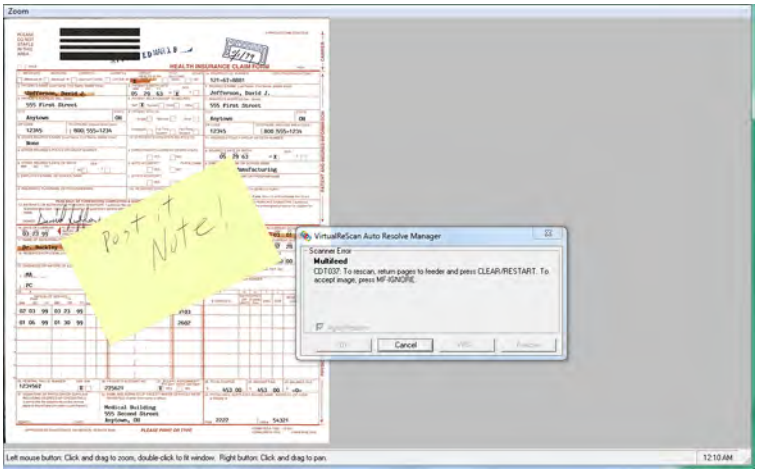


Multifeed Mode — determines the response of the scanner if a multifeed occurs.

- **Off:** no multifeed detection occurs. Scanning continues and all scanned images are retained.
- **Notify**: the scanner responds to the multifeed by sounding an audible alarm and momentarily lighting the Multifeed LED. Scanning continues, the multifeed is ignored and the image of the multifeed document is retained.

- **Stop**: when a multifeed is detected, the scanner sounds an audible alarm, the Multifeed LED lights steady and the scanner's transport stops. You can delete or keep the multifeed image.

  The VirtualRescan Auto Resolve Manager will display the front of the image of the document that triggered the multifeed alarm.



  - *To delete the image:* select the Custom Function button that is set to **Page Eject** (F1 or F2) to eject the multifeed document from the transport. Correct whatever caused the multifeed and place the multifeed document back in the feeder on top of the batch of documents to be scanned, and press **Clear/Reset** button on the scanner to restart scanning.
  - *To keep the image*: press **MF Ignore button** on the scanner. The scanner will automatically eject the multifeed document and continue scanning, keeping the multifeed image.

  NOTE: If the scanner's audio feature has been set to **Mute**, you will not hear the alarm that occurs with the **Notify** and **Stop** options when a multifeed is encountered.

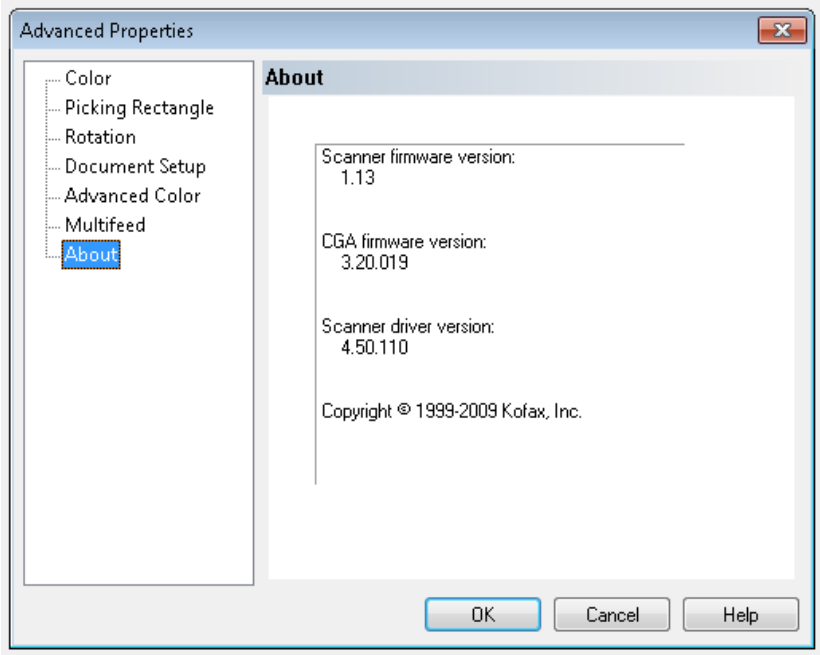
Enable Sensors — allows you to enable or disable the **Left**, **Center** and **Right** sensors that assist in triggering a multifeed alarm. One or more of these sensors can be enabled/disabled at any time. If all three are disabled, the Enable Sensors control grays out and the Multifeed Mode control automatically is set to **Off**.

Ignore by Size — allows you to set the maximum size of a multifeed that will ***not*** trigger a multifeed error. This is used to scan documents with labels or stickers (mailing labels), documents with taped photographs or receipts while multifeed detection is active.

Ignore by Size can be set in inches or millimeters, with a range of 1.0 to 25.5 inches (25-647 mm). The default setting for this control is 1.0 inch (25 mm).

About screen

The About screen displays the scanner version and copyright information.



5 Maintenance

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Keeping the scanner's hardware and software versions current, along with performing routine maintenance will ensure optimal image quality and prolong the life of your scanner.

The Maintenance monitor on the Home screen of the Ngenuity Operator Utility (NOU) provides reminders as to when scanner maintenance is required.



Based on the intervals set, the Maintenance LED on the control panel will also blink. To turn the Maintenance LED off and to reset the interval count for future reminders, perform a quick confirmation in the NOU after each maintenance procedure is completed.

Maintenance schedule

The following table is a recommended schedule for performing basic maintenance functions. Some procedures may need to be performed more frequently depending on your operating environment and the types of documents being scanned.

Maintenance	Recommended	Range	Symptoms
Clean feed rollers: pick, drive, and separator rollers	10,000 pages	1K - 50K	• Skewed documents • Multifeeds • Feeder jams
Clean transport rollers	50,000 pages	5K - 100K	• Multifeeds • Transport jams • Elongated images
Clean Optics: imaging guides, cameras glass covers, sensors. *Optics does not include lamps*. *The lamps (LEDs) should not be cleaned or wiped with any type of wipe or solvents.*	50,000 pages	5K - 150K	**Glass Camera Covers / Imaging Guides** • Streaks in the image • Reduced OCR/ICR/Barcode recognition rates • Blurred images **Page Sensors** • Entry/exit sensor errors **Feeder Sensors** • Feeder table does not lower when out of paper
Camera calibration	Every 1200 hours	N/A	Poor color image quality (e.g. white tinted green, red or blue)
Replace feed rollers	600,000 pages	100K - 900K	• Noticeably worn rollers • Page skewing, multifeeds and paper jams continue to occur after cleaning is performed
Ink cartridge(s) - only relevant if optional imprinter(s) installed	Approximately 34,000 pages (can vary depending on number of characters per page and font used, etc.)	N/A	Poor print quality

Cleaning supplies

Scanner consumables and cleaning supplies are available from resellers, web merchants and from the Kodak on-line store (http:/scannerstore.kodak.com).

- Ngenuity Roller Kit
- Ngenuity Cleaning Kit including:
  - Blower brush
  - Transport cleaning sheets
  - Roller and glass cleaner
  - Lint-free cleaning cloths
  - Cleaning wipes
  - Swabs

Cleaning procedures

Cleaning your scanner and performing 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.

Before cleaning your scanner or replacing consumables, review the following information:

- Turn the scanner off before performing maintenance procedures.
- Remove any jewelry or any items from hands or wrists that could become caught on internal scanner components.
- Some debris from the rubber tires on the skimmer module and separator roller 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 roller or skimmer module if necessary.
- When cleaning rollers/tires, allow the rollers/tires to dry completely before scanning.
- Use only the recommended cleaning supplies. Using unapproved cleaning fluids or solvents may damage the rubber tires.
- Do not use cleaners in confined areas, use with adequate ventilation.
- Do not use flammable compressed aerosols on or around the scanner.

NOTE: To access the Material Safety Data Sheet (MSDS), you will need to provide the catalog number of the supply. See “Supplies and Consumables” later in this chapter for catalog numbers.

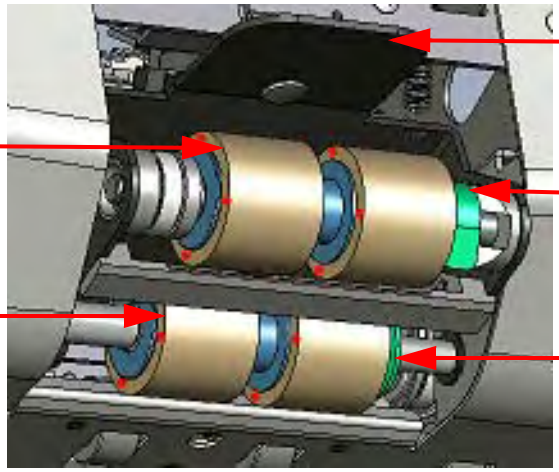
Cleaning the feed rollers

Feed rollers include the skimmer (pick and drive) roller and separator roller.

All feed rollers should be cleaned and/or replaced at the same time to ensure optimal scanner function. Maintenance reminder intervals (both cleaning and replacing) are based on all feed rollers having the same life cycle.

Cleaning the skimmer rollers

The skimmer module is comprised of two rollers; the pick roller and the drive roller. Both rollers contain two, removable rubber tires. One outer edge of each tire contains at least 3 dots.



These dots are used as a point of reference for correctly installing the tires on the roller and also the rollers into the skimmer housing. **When installing the tires, the 3 dots should always be facing left.** If the tires or rollers are installed incorrectly in the skimmer housing, the skimmer module will not function properly.

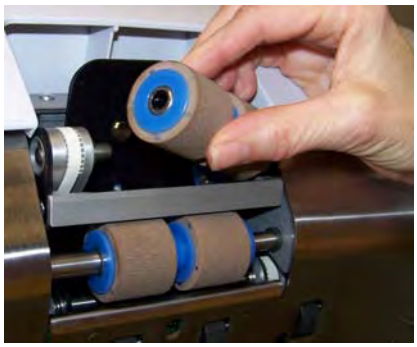
All four tires and the separator roller should be replaced at the same time.

When the skimmer rollers become dirty, they may begin to slip on paper or cause multifeeds. To prevent feeding problems and avoid rubber tire replacements, it is recommended that you clean the skimmer rollers (tires) every 10,000 pages or as needed. Different document types, the condition of the documents being scanned, and the volume of scanning may require more frequent cleanings.

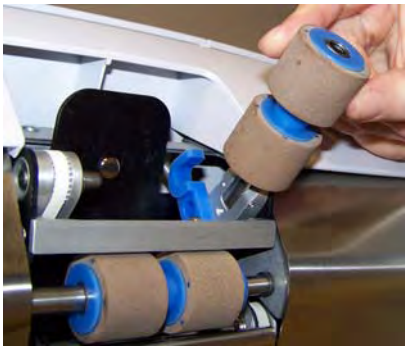
Always remove the rollers from the scanner for cleaning to ensure best results.

1. Turn off the scanner and open the transport cover.
2. Remove the pick roller by rotating the blue pick roller release lever up, push the pick roller to the right and rotate it out of position.



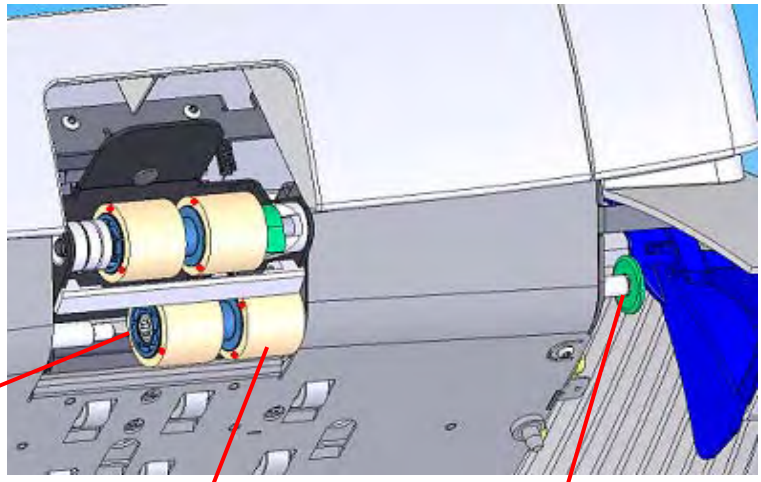


3. Using the cleaning wipe, scrub the roller tires in a side-to-side motion, Rotate the roller to clean the entire surface.
4. Re-install the clean pick roller.
   - With the pick roller positioned so the dots are facing the left side, slide the roller onto the right pick roller shaft.



   - Holding on to the roller, rotate the pick roller shaft down and slide the roller all the way to the left. The right side of the roller should be clear of the pick roller release lever.
   - Bring the pick roller release lever down and snap it into place.

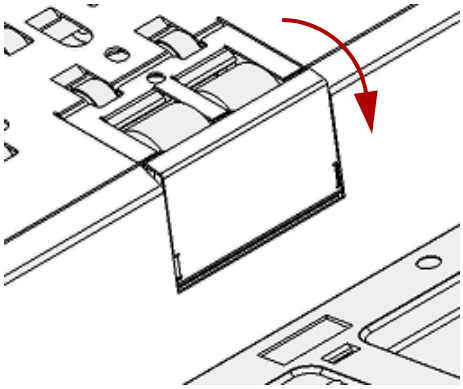
5. Remove the drive roller by placing your fingers on the left side of the drive roller and push the roller as far right as possible. Hold it in place. The spring-loaded drive roller shaft will move to the right side of the scanner's upper tray. Hold the driver roller shaft in place and slide the drive roller off to the left and off the shaft. Gently release the drive roller shaft back into position.



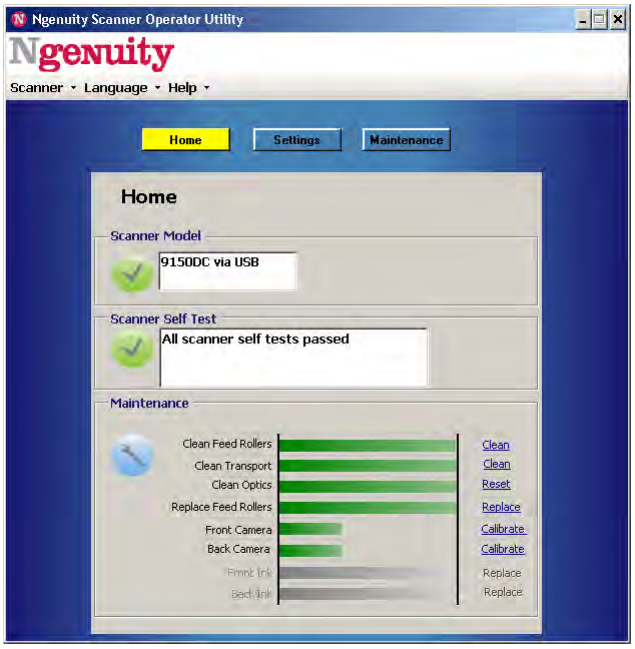
6. Using a cleaning wipe, scrub the drive roller tires in a side-to-side motion. Rotate the roller to clean the entire surface of the tires.
7. Re-install the drive roller.
   - With the drive roller positioned so the dots are facing the left side, slide the roller onto the right drive roller shaft.
   - Angle the right side of the drive roller onto the drive roller shaft Push the roller onto the shaft and push the roller and shaft far enough to the right so that the left side of the roller can be positioned onto the left drive roller shaft.
   - When the side of the drive roller is properly aligned onto the left drive roller shaft, gently release the drive roller shaft back into place.
8. Continue with cleaning the separator roller.

Cleaning the separator roller

9. Pull the separator roller door forward and hold it in place while you remove the separator roller by lifting it off the cradle.



10. Using a cleaning wipe, scrub the separator roller tires in a side-to-side motion. Rotate the roller to clean the entire surface.
11. Open and hold the separator roller door to reinstall the separator roller. Align the separator roller correctly with the slots. Align the flat end of the shaft with the slot in the cradle and gently seat the shaft, which should fall in place. Do **not** apply pressure to seat the shaft.
12. Gently release the separator roller door back in place. Verify that the separator roller is seated level.
13. Close the transport cover and reset the maintenance reminder by clicking on the **Clean Feed Rollers** hyperlink on the Maintenance monitor.



14. Click **Yes** on the dialog box to confirm the feed rollers have been cleaned. The reminder will be reset for the next required maintenance session.

Cleaning the optics

Optics include the **imaging guides, camera glass covers** and **sensors**. All of the optics components should be cleaned at the same time.

NOTE: The lamps are not part of the optics. The lamps (LEDs) should not be cleaned with wipes or solvents.

Cleaning the imaging guides and camera glass covers

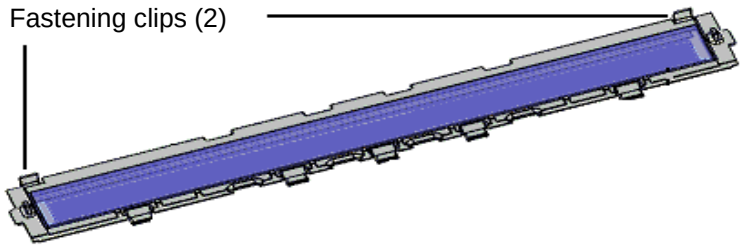
To prevent streaks in images, reduced OCR/ICR/Barcode recognition rates, blurred images, etc., you should clean the imaging guides every 50,000 pages.

The two imaging guides which are inside black, plastic frames are located in the top and bottom transport trays. When removing a imaging guide for cleaning or replacement, the entire assembly (imaging guide and frame) are removed and replaced as one piece.

Clean the camera glass covers at the same time you clean the imaging guides.

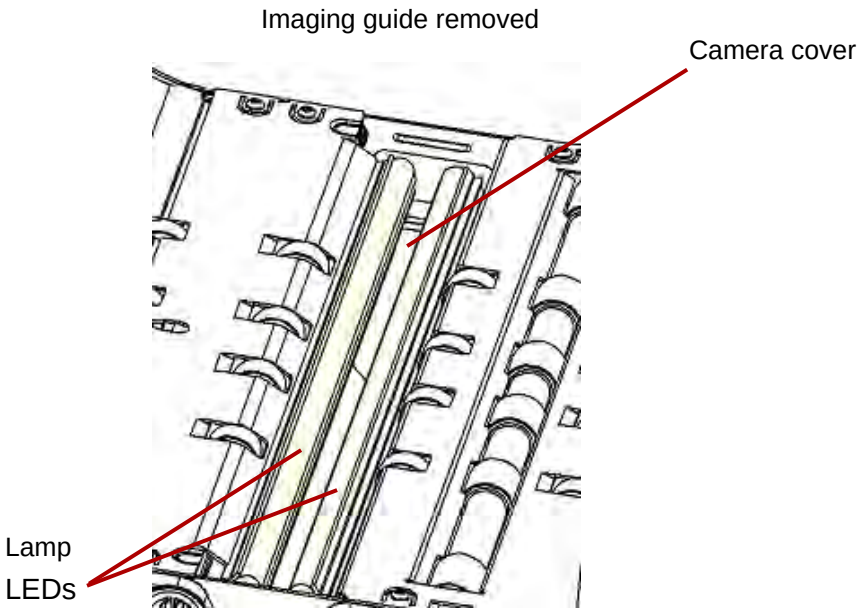
CAUTION: Do not remove the imaging guide from the black frame.

1. Open the transport cover.
2. Gently pull the 2 fastening clips that secure the top imaging guide towards the front of the scanner to release and remove the imaging guide from the transport.

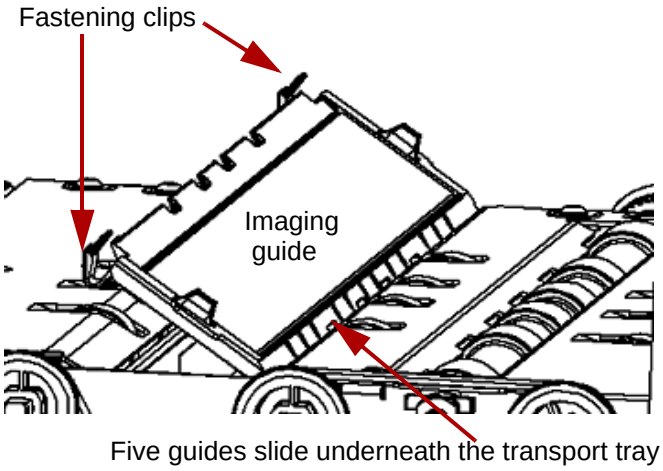


3. Spray the glass cleaner on a lint free cloth, taking care that any overspray does not fall inside the scanner.
4. Wipe down both sides of the imaging guide. Be careful not to touch the cleaned glass.

5. With the imaging guide still out of the scanner, locate the glass camera cover between and below the LED lamps.



6. Using a clean dry swab, gently wipe across the glass camera cover to remove any dirt and dust particles. Do not spray any solvent on the swab unless a dry swab will not remove the residue on the glass. If you need to use solvent, spray the solvent on the swab. Use only the supplied glass and roller cleaner. **Do not spray solvent in or around the internal components of the scanner.**
7. When the camera cover is clean, re-insert the cleaned imaging guide into the scanner by holding the frame of the imaging guide so that the fastening clips are on the back side of the imaging guide. Slide the guides under the transport tray towards the feeder table and ease the back side of the imaging guide into position.



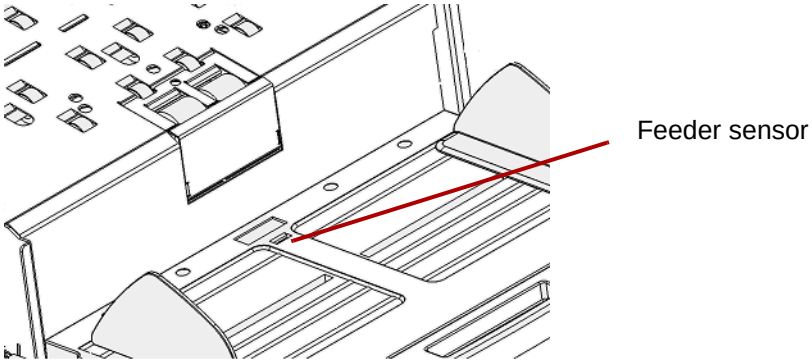
8. Repeat Steps 2 - 7 to clean the bottom imaging guide and bottom camera cover.
9. When finished, close the transport cover.

Cleaning the sensors

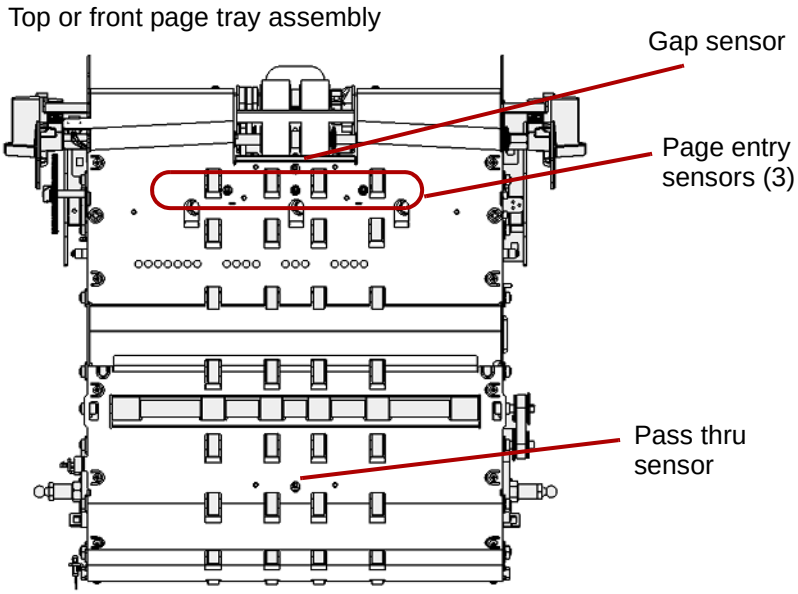
There are 7 sensors that require regular cleaning. Use only the supplied blower brush to clean these sensors. Do not use any type of cotton swab or cloth as these items may leave lint in the sensors.

NOTE: If problems persist after cleaning the sensors, it may be necessary to use forced air to clean the sensors. If using forced air, use the extension tube on the can to spray the forced air. Do not turn the can upside down or tip it sideways.

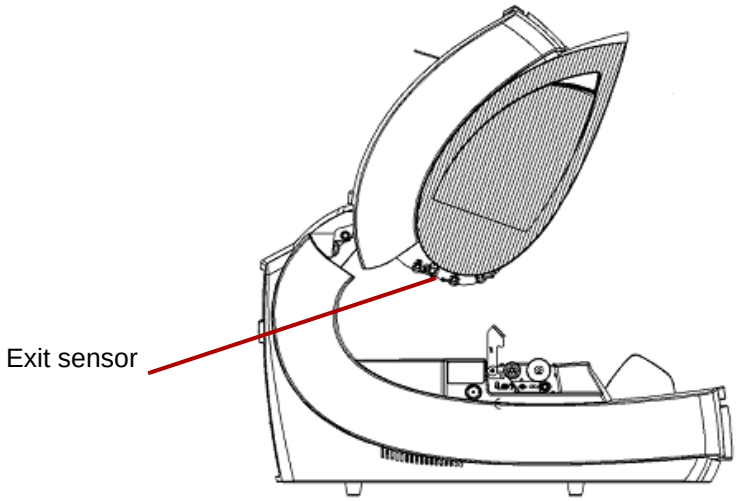
10. **Feeder sensor**: Place the brush end of the blower brush into the feeder sensor area and squeeze the blower brush several times to clean the feeder sensor on the feeder table.



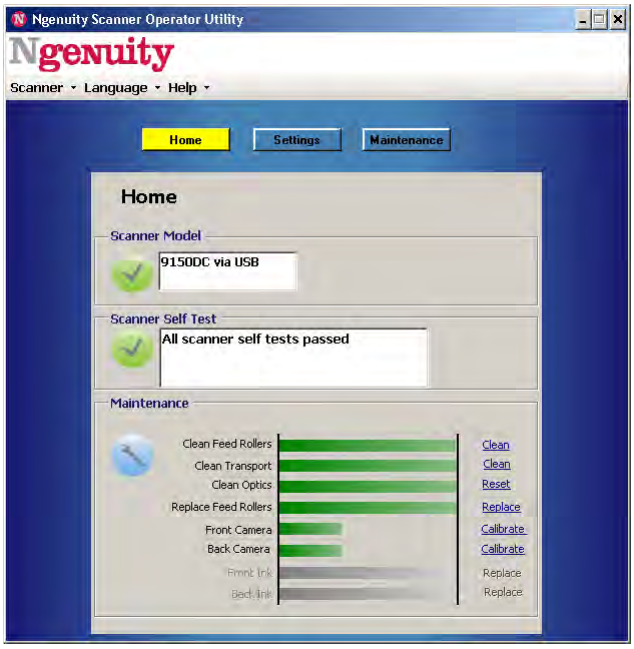
11. **Gap sensor, page entry sensors and pass thru sensor:** Open the transport cover to clean these 5 sensors by placing the brush end of the blower brush into the each sensor area and squeeze the blower brush several times to clean.



12. **Exit sensor**: The exit sensor is located on the transport toward the back of the scanner. Clean the exit sensor by placing the brush end of the blower brush into the exit sensor area and squeeze the blower brush several times.



13. When all sensors are clean, close the transport cover and reset the maintenance reminder by clicking on the **Clean Optics** hyperlink on the Maintenance monitor.



14. Click **Reset** on the dialog box to confirm the optics have been cleaned. The reminder will be reset for the next required maintenance session.

Cleaning the transport

Over time, the transport will become dirty and may feed documents erratically or skew the documents as they enter the scanner. To prevent erratic feeding, clean the transport every 50,000 pages or as needed.

NOTE: It is recommended that you clean the imaging guides again after cleaning the transport with a transport cleaning sheet.

1. Establish communication between the scanner and the Ngenuity Operator Utility.
2. Verify that one of the Custom Functions is set to **Feed Test Batch**.
3. Press **F1** or **F2** key depending on which key is assigned to “Feed Test Batch”. This will start the scanner transport. By default, the F1 key is assigned the **Feed Test Batch** function.
4. Feed the transport cleaning sheet in landscape orientation into the scanner transport.
5. Observe the cleaning sheet, and run it through the transport again, changing its position slightly each time, until the tires leave no dark streaks.
6. Turn the transport cleaning sheet over and run it through the scanner transport two times.
7. Press and hold the **Pause/Stop** button (2-3 seconds) until the scanner stops running.
8. Press the **Clear/Restart** button.
9. When finished, discard the transport cleaning sheet. After running the cleaning sheet, inspect the imaging guides. It may be necessary to clean off any residue from the cleaning sheet that may be on the imaging guides.

Replacement procedures

This section provides procedures for replacing the following parts. When replacing parts, turn the scanner off by pressing the power switch located in the back of the scanner.

Replacing tires

With proper cleaning, tire life of each skimmer roller (pick and drive) is approximately 600,000 pages. Different document types, the condition of the documents being scanned, and the volume of scanning may alter that estimation.

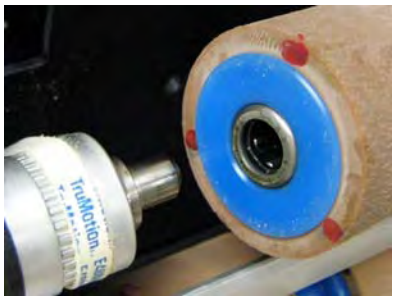
The four tires on the skimmer module and the separator roller should be replaced at the same time.

1. Open the transport cover.

Replacing the skimmer rollers

2. Remove the skimmer rollers. See the section entitled, “Cleaning the feed rollers” earlier in this chapter for procedures.
3. Remove the tires from the shaft, leaving the shaft in the same position as a reference for putting on the new tires.

   NOTE: Another point of reference for correctly installing the tires is: the side of the tire containing the dots should be on the same side of the shaft with silver metal sleeve on the end (the opposite side of the shaft is a plastic sleeve) - this applies for both tires for each roller (drive and pick).



Metal sleeve

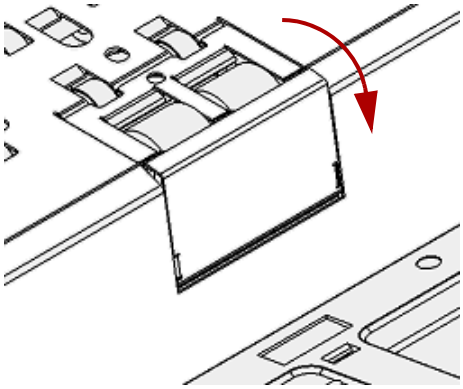


Plastic sleeve

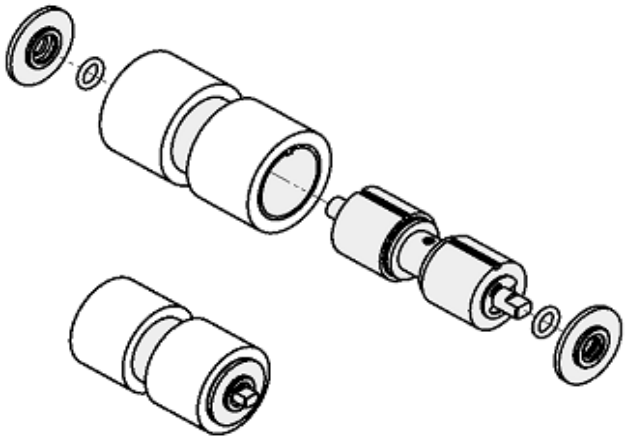
4. Dispose the old tires.
5. Install the new tires with the dots facing the same side the metal sleeve is visible on, taking care to position the tires flush against the inside lip of the plastic hub. The dots on the tires should always be facing to the left.
6. Install the skimmer rollers.
7. After completing, verify the tires are on correctly. The roller core that the tires mount on will only properly fit in one orientation (with the metal sleeves on the left), so after installing the rollers, verify that the dots on the tires are **all** on the left side.

Replacing the separator roller

8. Pull the separator roller door forward and hold it in place while you remove the separator roller by lifting it off the cradle.



9. Remove the roller from the rest of the assembly as shown.



10. Reassemble the components using a new roller, duplicating the assembly.
11. Open and hold the separator roller door to reinstall the separator roller. Align the separator roller correctly with the slots. Align the flat end of the shaft with the slot in the cradle and gently seat the shaft, which should fall in place. Do **not** apply pressure to seat the shaft.
12. Gently release the separator roller door back in place. Verify that the separator roller is seated level.
13. Close the transport cover.
14. When all four tires on the skimmer rollers and the separator roller have been replaced, reset the maintenance reminder by clicking on the **Replace Feed Rollers** hyperlink on the Maintenance monitor.
15. Click **Yes** on the dialog box to confirm the tires/rollers have been replaced. The reminder will be reset for the next required maintenance session.

Replacing the imaging guides

Replace the imaging guides when they become damaged or heavily scratched.

1. Open the transport cover.
2. Gently pull the 2 fastening clips that secure the top imaging guide towards the front of the scanner to release and remove the imaging guide from the transport.
3. Install the new imaging guide into the scanner by holding the frame of the imaging guide so that the fastening clips are on the back side of the imaging guide. Slide the guides under the transport tray towards the feeder table and ease the back side of the imaging guide into position.
4. Repeat Steps 2 and 3 to replace the bottom imaging guide.
5. Close the transport cover.

Lamps (LEDs)

IMPORTANT: The LEDs on Ngenuity Scanners should NOT be cleaned or wiped with any type of wipes and/or solvent.

The LED illumination system on *Ngenuity* Scanners should last the life of the scanner with normal use. If something happens that requires the replacement of the LEDs, contact Kodak Technical Support.

Camera calibration

Before calibrating, clean the scanner optics to ensure a successful calibration. See the section entitled, “Cleaning the optics” earlier in this chapter.

Camera calibration is important for maintaining consistent image quality. Calibrating the cameras resets the white level and balance and the black level and balance in the scanner. It performs red, green, blue (RGB) color balance and gain setting, and horizontal light level correction. The final measurement results in a correction function which levels the brightness over the complete scan width.

It is recommended that you calibrate the cameras together, although they can be calibrated independently. Calibration of both cameras takes approximately 4-7 minutes.

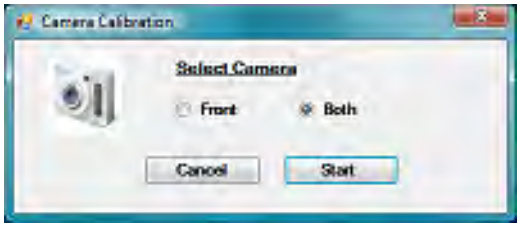
NOTE: Before calibrating the camera(s), make sure full power is applied to the scanner (not in Sleep mode) for at least 5 minutes.

1. Open the Ngenuity Operator Utility and establish communication with the scanner.

2. Click on one of the *Calibration* links in the Maintenance section of the Ngenuity Operator Utility Home screen.



The Camera calibration dialog box will be displayed.



3. Click **Both**, and then click **Start**. The message, ***Lift skimmer, then manually feed calibration sheets into scanner*** will be displayed.
4. Lift the skimmer. The scanner will automatically go into Manual Feed Mode, the feeder table will rise and the transport will begin to run.
5. When the feeder table rises to the full-up position, stack the two calibration sheets on top of each other, and feed both sheets at the same time in landscape orientation. Do not allow them to separate. A counter and a progress bar will mark the progress of the calibration.

   NOTES:

   - Do NOT open the scanner cover or shut down the scanner or host PC while calibration is in progress.
   - Do NOT manipulate any software applications on the host PC or other host PC controls while calibration is in progress.
6. When the calibration function has completed all steps successfully, a confirmation screen will be displayed.
7. Click **Close**. The calibration sheets will be automatically ejected from the scanner.

NOTE: If the confirmation screen states that the calibration was unsuccessful, turn off the scanner, shut down the host PC and clean the scanner's optics. After cleaning, inspect the imaging guides for contamination, excessive scratches or gouges, or dirt that has not been removed by normal cleaning. Also inspect the camera glass for dirt or damage. Inspect the LED arrays to verify all the LEDs are operational. Then try the calibration again. If the calibration is unsuccessful a second time, contact Technical Support.

Supplies and consumables

Contact your scanner supplier to order supplies or go to: www.scannerstore.kodak.com.

Supplies/Consumables	CAT No.
Small Roller Kit	176 6674
Medium Roller Kit (Includes: 24 skimmer rollers, 6 separator rollers)	844 3491
Large Roller Kit	115 8153
Cleaning Kit (Includes: transport cleaning sheets, roller and glass cleaner, blower brush, cleaning cloths, cleaning wipes and swabs)	805 1120
Blower Brush	179 7158
Imaging Guide Assembly	162 0640
Accessories	**CAT No.**
Front/Rear Printer Kit	863 4230

NOTE: Items and catalog numbers are subject to change. For the most up to date list of supplies and consumables go to: www.kodak.com/go/scannersupplies.

6 Troubleshooting

Contents

Clearing a document jam 6-1
Problem solving 6-2
Contacting Service 6-3

Clearing a document jam

IMPORTANT: Only remove jammed documents from the transport when the scanner transport cover is OPEN.

1. Pull the scanner transport cover release lever forward to open the transport cover.



2. Remove any jammed document(s) from the transport.

   NOTE: If the document is in several pieces, carefully inspect the entire transport path to verify the entire document has been removed. If no document is found and the Jam Error persists, clean the paper path sensors. For procedures, see “Cleaning the optics” in Chapter 5.

3. Gently close the transport cover and resume scanning.

Problem solving

Occasionally you may encounter a situation with your scanner where it may not function properly. Use the chart below as a guide to check possible solutions to help you resolve the situation before calling Technical Support. If a problem persists after reviewing the problems and possible solutions below, turn the scanner off, unplug the power cord and call Technical Support.

Symptom	Cause	Remedy
Installation/Setup/Connectivity		
Found New Hardware wizard appears when connecting with USB on a PC that has already had communication established with the scanner.	The USB cable was unplugged from one port on the host PC to another after communication had been established with the scanner using the original port.	Move the USB cable back to the original port on the host PC or complete the Found New Hardware wizard.
Kofax errors displayed on host PC when attempting to install and use the USB connection with a SCSI card installed.	Presence of the SCSI card conflicting with the USB function.	Uninstall the SCSI card from the host PC.

Error Message	Possible Cause	Possible Remedy
Self Test Error Messages		
Feeder Table Fault	The stack of documents in the feeder table is too heavy.	Remove some of the document weight from the feeder table and power cycle the scanner.
Internal Communication Fault	The control processor has lost communication with one or more of the following: imprinters, sensor processor or the control panel.	Contact Technical Support.
Bad or Missing Front Camera	The front (top) camera is not communicating.	Contact Technical Support.
Bad or Missing Back Camera	The back (bottom) camera is not communicating.	Contact Technical Support.
Front and/or Back Imprinter Self Test Failed	An imprinter was detected and enabled, but is no longer communicating.	Check that the cable is firmly connected and not damaged.
Sensor Fault	One or more sensors could not be calibrated.	Check that paper was not left in the transport at power on, and that the sensors are clean and not blocked. See Chapter 5, *Maintenance*.
Bad or Missing Control Panel (Front Panel)	The scanner's control panel is not communicating.	Contact Technical Support.
CGA Port Not Responding	...	Contact Technical Support.
Corrupt or Missing MC Firmware	...	Contact Technical Support.

Symptom	Cause	Remedy
Image and Feeding		
• Streaks in the image • Reduced bar code recognition rates • Blurred images • Artifacts in the image	• Imaging guide(s) and/or camera cover(s) need to be cleaned • Camera(s) need to be calibrated	• Clean the imaging guides • Clean the camera covers • Calibrate the camera(s) See Chapter 5, *Maintenance*
• Skewed documents • Multifeeds • Feeder jams	• Feeder needs cleaning • Skimmer rollers need cleaning	• Clean the skimmer rollers • Clean the separator roller See Chapter 5, *Maintenance*
• Transport jams • Page frame errors	• Transport needs cleaning • Page sensors need cleaning	• Clean the transport area • Clean the transport sensors See Chapter 5, *Maintenance*
Entry/exit sensor errors	Transport sensors need cleaning	Clean the transport sensors See Chapter 5, *Maintenance.*
Feeder table does not automatically lower after the last page is fed	Feeder sensor needs cleaning	Clean the feeder sensor. See Chapter 5, *Maintenance.*
Image is too dark	Camera(s) need to be calibrated	Calibrate the camera(s) See Chapter 5, *Maintenance.*
Slippage of documents or multifeeds	• Front skimmer roller (pick roller) is worn out • Skimmer needs cleaning	Clean and/or replace the skimmer rollers See Chapter 5, *Maintenance.*
Color image lacks fidelity	Camera(s) need to be calibrated	Calibrate the camera(s) See Chapter 5, *Maintenance.*
Scanner throughput has decreased	Tires on skimmer rollers (pick and drive rollers) are installed incorrectly	Confirm skimmer rollers (pick and drive rollers) are installed properly. See Chapter 5, *Maintenance.*
Dog-earring pages	The straight pass-through door is not fully or completely closed.	Confirm the straight pass-through door is fully closed. If problem persists, contact Technical Support.

Contacting Service

1. Visit www.Kodak.com/go/dicontacts to obtain the most current phone number for your country.
2. When calling, please have the following information ready:
   - A description of your problem.
   - The scanner model and serial number.
   - Computer configuration.
   - Software application you are using.

Appendix A Specifications

Contents

Specifications A-1
System requirements A-2

Feature	Specification	
Scanning speed **200 dpi; lettersize; black and white/color/grayscale; simplex/duplex;** **9090DB: black and white and grayscale only**	**9150: Portrait** 120 ppm / 240 ipm **9125: Portrait** 120 ppm/ 240 ipm **9090DC: Portrait** 70 ppm/ 140 ipm **9090DB: Portrait** 70 ppm / 140 ipm	**9150: Landscape** 150 ppm/ 300 ipm **9125: Landscape** 125 ppm/ 250 ipm **9090DC: Landscape** 90 ppm / 180 ipm **9090DB: Landscape** 90 ppm / 180 ipm
Daily duty cycle	90,000 to 150,000	
Roller life (bond)	600,000 scans	
Resolution	Output: 600 dpi; Optical: 600 dpi	
Camera technology	SharpShooter Trilinear 7.6K CCD	
Lighting technology	White LEDs, instant warm-up designed to last the life of the scanner with normal use	
Image enhancement	Onboard Ngenuity VRS 4.5 (or greater) Professional.	
Interface	USB 2.0 (cable included); SCSI III, D68-SCSI-3	
Support drivers (included)	ImageControls, ISIS, TWAIN	
Multifeed detection	Ultrasonic multifeed featuring: three sensors, Preemptive Ignore, VRS Ignore, Ignore by Size	
Imprinting	Optional user-installable pre- and post-scan imprinter, time and data stamping, 72 characters	
Document size	1.7 x 2.5 in. (43 x 64 mm) to 12.5 x 40 in. (318 x 1016 mm)	
Document size (very long document mode)	up to 219 yards (200 m)	
Maximum image width	12.25 in (311 mm)	
Paper thickness	Rotary: .0015 - .035 in. (.038 mm - 0.89 mm) Straight pass-through: .0015 - .070 in. (.038 mm - 1.78 mm)	
Paper weight	7 to 320 lb. bond (30 to 1,200 g/m^2)	
Feeder capacity (20 lb. bond/75 g/m^2)	700 sheets variable feeder tray capacity control	
Scanner dimensions (HxWxD): unpacked	19.5 x 20.5 x 30 in (49.5 x 52.1 x 76.2 cm) (with straight pass-through door closed)	
Scanner weight: unpacked	112 lbs (50.8 kg)	
Electrical rating	AC 100-120 V / 220-240 V; 1.9/.9A; 60/50 Hz	

Feature	Specification
Power requirements	AC 100-120 V / 220-240 V; 60/50 Hz
Power consumption	175W (maximum); 6.7W (Sleep mode)
Environment	Temp: 50 - 100°F (10 - 37.8°C) Humidity (non-condensing): 10 - 80%
Additional features	Straight pass-through paper path, special document mode, advanced color functionality
Additional contents	USB cable, Installation Resource CD with Ngenuity Operator Utility and Ngenuity VRS Professional, power cord, Starter Cleaning Kit, Camera Calibration Kit
Additional options	User-installable pre- and post-scan imprinter, Roller Kit, Cleaning Kit

System requirements

Following is the minimum recommended system configuration to run *Kodak Ngenuity* 9000 Series Scanners:

Recommended:

- Intel Core 2 Duo / AMD Athlon 64 x2 Dual Core, 2.4 GHz or better
- HDD: 500 GB
- DIMM DDR 3200: 2 GB
- PCI Bus 32-bit
- USB 2.0
- Video AG or PCIe: 128 MB

Minimum:

- Intel Pentium D / AMD Athlon; 2 GHz
- HDD: 250 GB
- DIMM DDR 2700: 1 GB
- PCI Bus 32-bit
- USB 2.0

If using a SCSI connection: SCSI Card - Adaptec 29160 Regular and Low Profile.

Operating system

- Microsoft Windows 2000 Professional with SP4
- Microsoft Windows XP Professional with SP2
- Microsoft Windows Vista Business

Appendix B Using the optional Imprinter

Contents

Installing the front page imprinter and ink cartridge B-2
Removing the front imprinter B-4
Installing the back page imprinter and ink cartridge B-4
Removing the back imprinter B-6
Maintenance B-7
- Replacing the ink cartridge B-7
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This appendix provides installation procedures, maintenance and instructions for using the front page (pre-scan) and back page (post-scan) imprinter.

Front page (pre-scan) imprinting prints the user-specified alphanumeric string on the front side of documents *before* they are scanned, with the printed results captured on the scanned images.

Back page (post-scan) imprinting prints the user-specified alphanumeric string on the back side of documents *after* they have been scanned. The printed results are *not* captured in the scanned images.

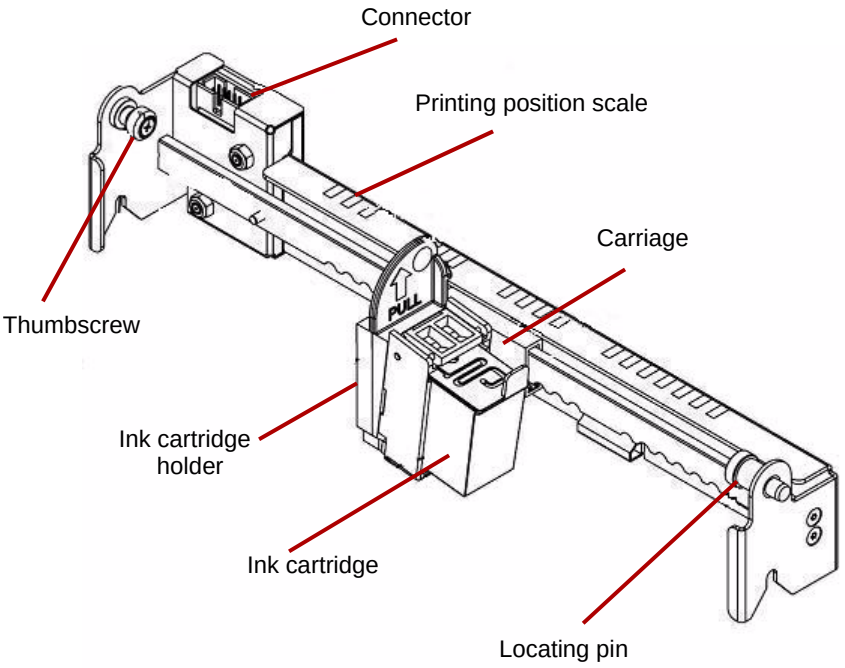
NOTE: Simultaneous back-page and front-page imprinting is performed using Direct ISIS or TWAIN drivers.

The imprinter is controlled from the scanning application installed on the host PC. It can imprint a string of characters for each document one at a time or a repeating character string with an automatically incrementing suffix on each document that is scanned.

Item	Specifications
Maximum number of characters	72 characters
Print line(s)	1
Document paper type	Low grade to regular bond documents can be used. *Glossy paper should not be used, as the ink drying time is too long and smearing will result.*
Print area	17 user-selectable horizontal print positions
Fonts	User selectable: Standard/Wide; Standard/Normal; Large/Wide; Large/Normal
Character orientation	0, 90, 180, 270
Print resolution	96 dpi

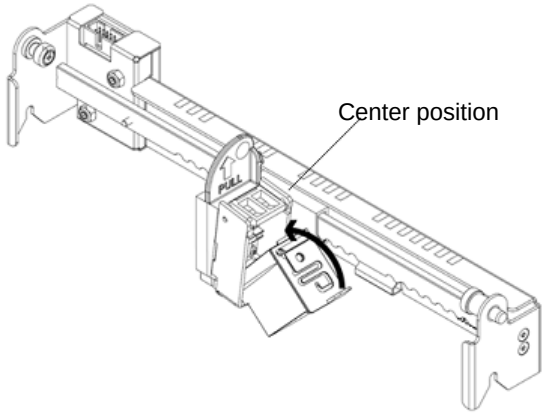
Installing the front page imprinter and ink cartridge

To ensure proper installation of the ink cartridge, install the imprinter cartridge *before* installing the imprinter into the scanner. Be sure the ink cartridge is properly seated.

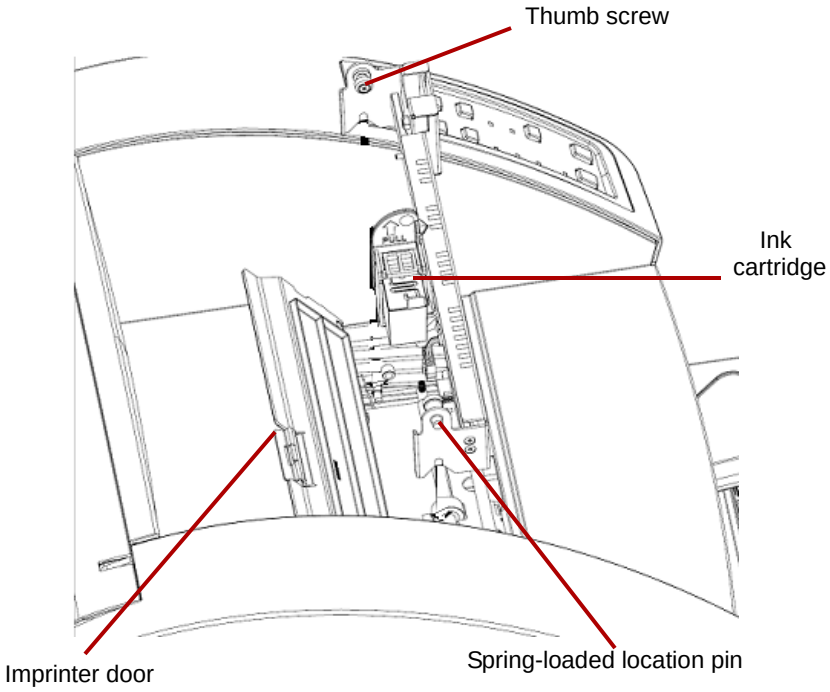


1. Remove the imprinter and ink cartridge from the box.
2. Remove the protective tape from the ink cartridge.

3. Move the carriage to the center position.
4. Hold the ink cartridge holder with one hand and place the ink cartridge (bottom end first) into the holder and snap it into place.

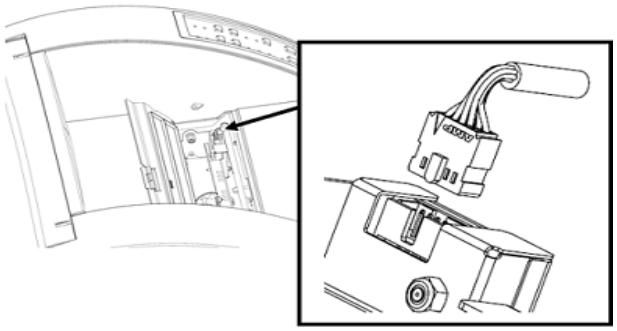


5. Turn off the scanner and power down the PC.
6. Remove the scanner exit tray.
7. Open the front page imprinter door.
8. Insert the imprinter's spring-loaded locating pin into the corresponding hole found in the scanner's front page assembly (left side) with the ink cartridge holder.



9. Hand-tighten the thumb screw located on the right side of the imprinter into the corresponding hole found in the scanner's front page assembly.

10. Connect the imprinter cable to the connector on the imprinter unit noting the orientation of the key on the plug and the slot on the connector.



11. Close the imprinter door.
12. Replace the exit tray.
13. Turn on the scanner and the PC.
14. Launch the Ngenuity Operator Utility and confirm the imprinter is recognized.

NOTE: Do not leave the ink cartridge in the imprinter when not in use.

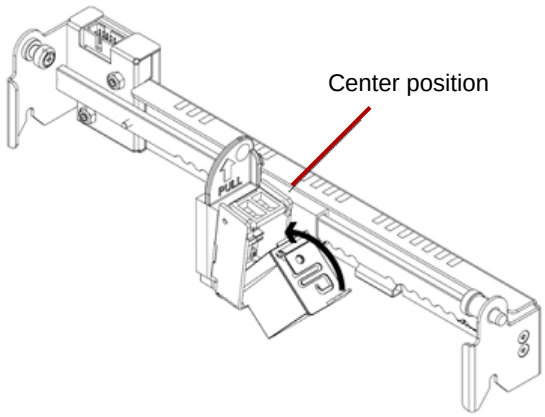
Removing the front imprinter

1. Turn off the scanner.
2. Remove the exit tray.
3. Open the front page imprinter door.
4. Unplug the imprinter cable.
5. Unscrew the thumb screw located on the right side of the imprinter.
6. Pull the spring-loaded locating pin on the left side of the imprinter unit away from the wall of the scanner.
7. Lift the imprinter up and out of the scanner.
8. Close the front page imprinter door, reinstall the exit tray and turn on the scanner.

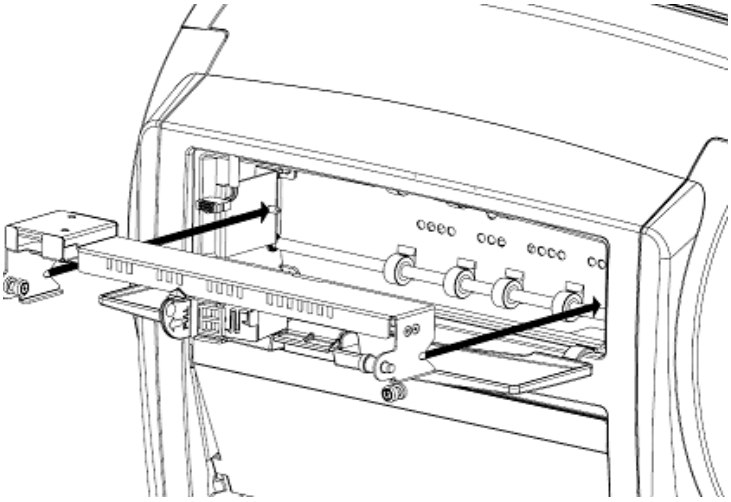
Installing the back page imprinter and ink cartridge

To ensure proper installation of the ink cartridge, install the imprinter cartridge *before* installing the imprinter into the scanner. Be sure the ink cartridge is properly seated.

1. Remove the imprinter and ink cartridge from the box.
2. Remove the protective tape from the ink cartridge.
3. Move the carriage to the center position.
4. Hold the ink cartridge holder with one hand and place the ink cartridge (bottom end first) into the holder and snap into place.

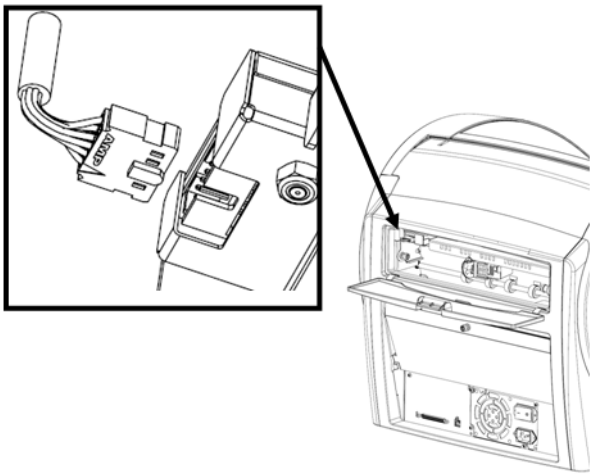


5. Turn off the scanner and power down the PC.
6. Open the back page imprinter door located in the back of the scanner.
7. Install the imprinter with the ink cartridge holder facing the bottom of the scanner, inserting the spring-loaded locating pin into the corresponding hole found in the back page assembly.



8. Hand-tighten the thumb screw located on the left side of the imprinter into the corresponding hole found in the scanner's back page assembly.

9. Connect the imprinter cable noting the orientation of the key on the plug and the slot on the connector.

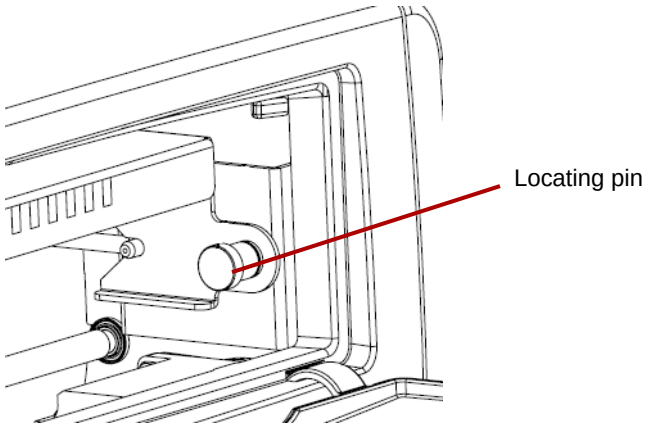


10. Close the back page imprinter door.
11. Turn on the scanner and the PC.
12. Launch the Ngenuity Operator Utility and confirm the imprinter is recognized.

NOTE: Do not leave the ink cartridge in the imprinter when not in use.

Removing the back imprinter

1. Turn off the scanner.
2. Open the back page imprinter door.
3. Unplug the imprinter cable.
4. Unscrew the thumb screw located on the left side of the imprinter.
5. Pull the spring-loaded locating pin away from the wall of the scanner releasing the pin from the scanner's back page assembly.

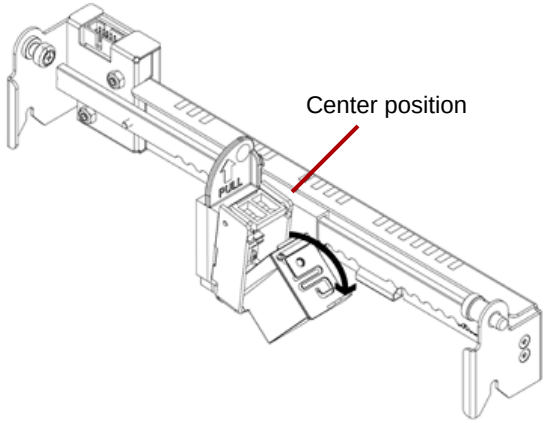


6. Pull the imprinter out of the scanner.
7. Close the back page imprinter door.
8. Turn on the scanner.

Maintenance

Replacing the ink cartridge

1. Turn off the scanner and power down the host PC.
2. Remove the front (or back) imprinter from the scanner. See the sections entitled, “Removing the front imprinter” or “Removing the back imprinter” earlier in this appendix for instructions.
3. Remove the ink cartridge by grasping the ink cartridge holder and pulling the tab on the ink cartridge out from the ink cartridge holder.



Ink cartridge disposal: Consult the Hewlett-Packard website for recycling printing supplies or disposing of the ink cartridges according to local regulations.

4. Remove the protective tape from the new ink cartridge.
5. Move the ink cartridge carriage to the center position.
6. Hold the ink cartridge holder and place the ink cartridge (bottom end first) into the holder and snap it into place.
7. Reinstall the imprinter into the scanner.
8. Turn on the scanner and the PC.
9. Launch the Ngenuity Operator Utility and confirm the imprinter is recognized.

Ink cartridge specifications

Subject	Specification
Ink Cartridge Life	Approximately 4,000,000 characters (standard font) Approximately 2,000,000 characters (bold font)
Nozzles	12
Unusable Documents	Plastic film or coated paper should not be used with the imprinter
Storage Environment	Temperature: 32°F to 104°F (0°C to 40°C); Humidity: 10% to 80% RH
Operating Environment	Temperature: 59°F to 86°F (15°C to 30°C); Humidity: 30% to 80% RH

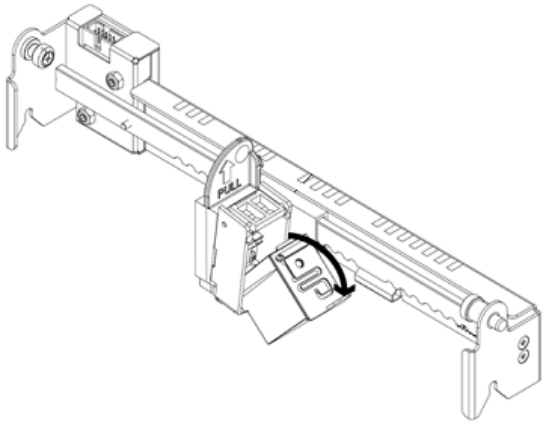
Cleaning the ink cartridge

If the print head of the ink cartridge is dirty or the ink cartridge has not been used for a long period of time, it may not print properly.

To clean the print head using the scanner, press the corresponding Custom Function button (F1 or F2) on the scanner's control panel.

NOTE: You must assign the **Clean Print Head** function to one of the Custom Function buttons (F1 or F2) using the Ngenuity Operator Utility to be able to clean the print head using the scanner. See the section entitled, "Settings button: Custom functions" in Chapter 3.

1. Turn off the scanner.
2. Remove the front (or back) imprinter unit from the scanner. See the sections entitled, "Removing the front imprinter" or "Removing the back imprinter" earlier in this chapter for instructions.
3. Remove the ink cartridge by grasping the ink cartridge holder and pulling the tab on the ink cartridge out from the ink cartridge holder.



4. Dampen a clean, lint-free cloth with water.
5. Hold the cloth in contact with the nozzles on the ink cartridge for a few seconds, then gently wipe the nozzle plate. **Do not wipe the electrical contact area.**
6. If ink remains on the nozzle plate, wipe again with a dry, lint-free cloth.

CAUTION: Do not use the roller cleaning paper to clean the print head. Do not use any material that contains alcohol when cleaning the print head.

Spit pad replacement

The back page imprinter assembly contains a spit pad that is used to absorb any excess ink from the front page imprinter during printing. The spit pad is located underneath the back page assembly's entry tray.

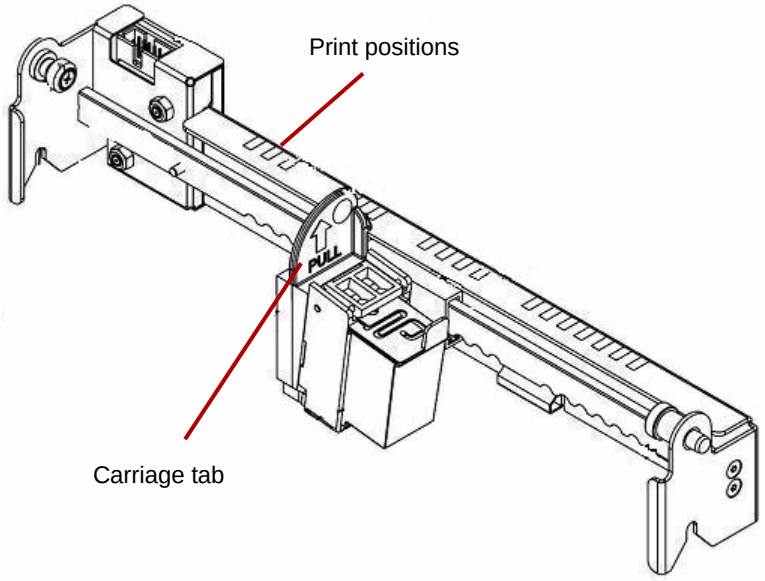
Over time the spit pad will become saturated and will need to be replaced. The life expectancy of the spit pad is expected to last as long or longer than the transport rollers. Contact your Kodak Service Representative for spit pad replacement.

Using the imprinter

Imprinter operation is controlled via the hardware and software.

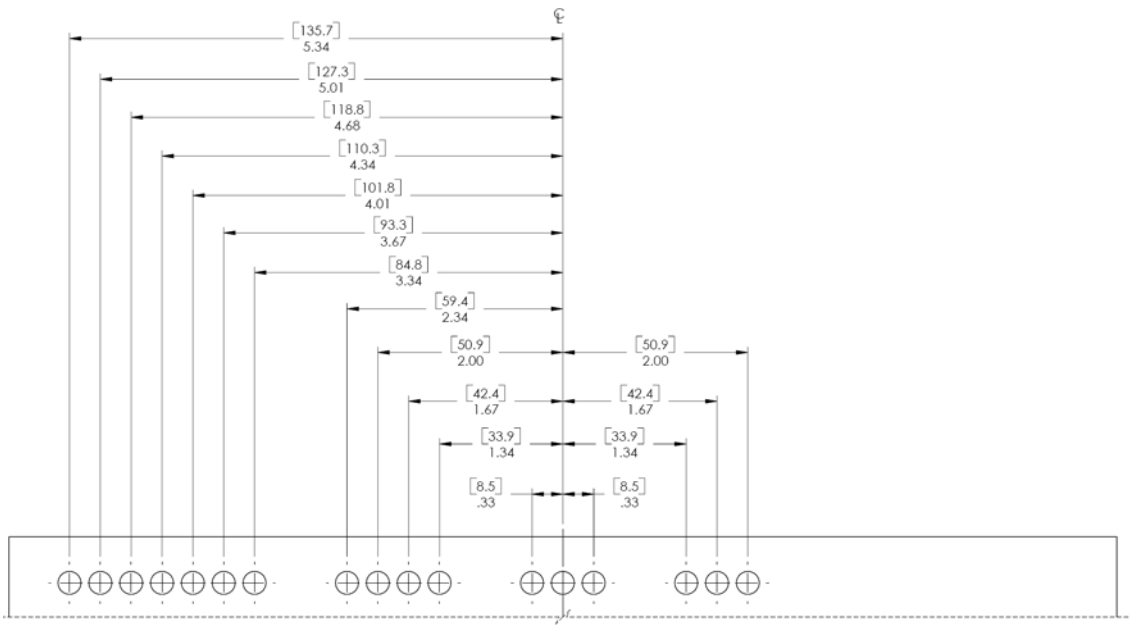
Print position: hardware

To print a string on the scanned document, adjust the position of the print head carriage according to the size of the sheets that you want to scan.



- Move the carriage to align the carriage tab with one of the marks that appears in the scale on the imprinter. For the print string to appear on the right side of the page, move the carriage to the right side of the scale. For the imprint to appear on the left side of the page, move the carriage to the left side of the scale.

NOTE: If the carriage is not properly aligned with one of the marks on the scale, the imprinter will not print on the document. The following chart shows the position of the imprint in reference to the document sheet being scanned.



Make sure the document being scanned is the correct size for the printing position or the imprinter will not print on the document.

Print position: software

To set up the software for imprinting, access the Advanced Properties screen which is accessible within Virtual ReScan® (VRS) Interactive Viewer.

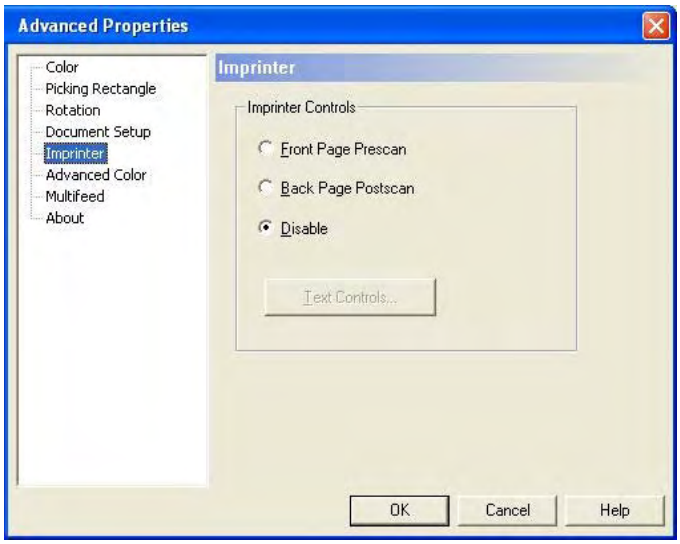
Scanning applications that use the VRS-based driver will display the VRS icon in the Windows Taskbar on the host PC as soon as the scan source is selected.

NOTE: For instructions on how to select the scan source (scanner), see Chapter 3, “Control Panel and Ngenuity Operator Utility”.

1. Right-click on the VRS icon located in the Taskbar to launch the Interactive Viewer.
2. Click **Preview**.



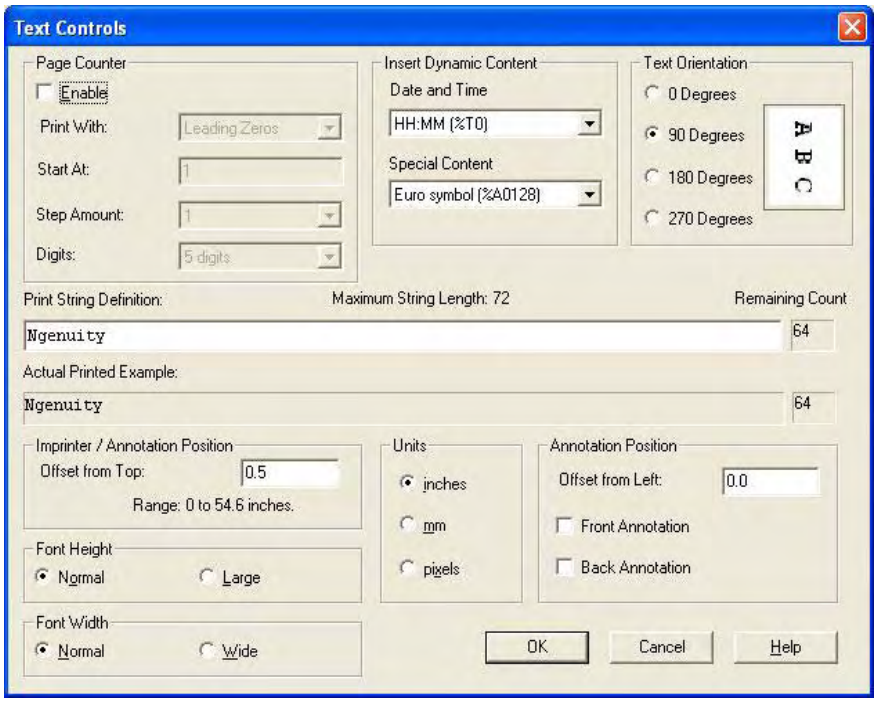
3. Within the Interactive Viewer, access the Advanced Properties screen by clicking the Scanner Driver Settings icon (tools image).
4. In the Advanced Properties screen, click on the Imprinter menu item to display the Imprinter controls.



5. Enable the imprinter you want to use: **Front Page Prescan** or **Back Page Postscan**.
6. Click **Text Controls**.

NOTE: When VRS is not installed, imprinter controls can be found in your Direct ISIS and TWAIN settings.

The following options can be set via the Text Controls dialog box:



Enable — click this checkbox to enable the Page Counters.

- **Print Width** — select to append zeros or spaces in front of the page count or spaces at the end of the page count to retain a fixed length for all digits that will appear in the text string. The default is leading zeros.

  For example, if the current counter value is **472**, then the text string for an 8-digit counter appears as follows:

  With leading zeros: 00000472

  With leading spaces: 472

  With trailing spaces: 472

- **Start At** — when you start a new batch, this option allows you to set the document count for the next document that will be scanned.

- **Step Amount** — select a value from the drop-down list to determine how the automatic imprinter/annotation counter is incremented on each page. The counter should be set based on the documents being scanned, how the batches are organized, and specific user needs. Increment amounts of 0, 1 (default), and 2 are available.

  NOTE: When the counter value exceeds the number of digits selected, the counter value resets to 0, depending on the increment amount.

- **Digits** — select a value from the drop-down list to specify the page counter length, which should take into consideration any leading zeros or leading or trailing spaces appended to the page count in the *Print With* drop-down list. You can specify from **1** to **9**; the default is 5.

Insert Dynamic Content — allows you to select a pre-formatted date and time or special content code to be inserted into the text string. The code is replaced by actual data when a document is scanned.

NOTE: *Counter digit* and *Dynamic content* information becomes part of the imprinting or annotation string in the "Print String Definition" text box and *Actual Printed Example* field.

- **Date and Time**: select date and time format codes to include in the text string from the *Date* and *Time* drop-down list. These codes are replaced with actual dates and times by the scanner when the document is scanned. The date and time format choices as well as the pre-formatted date and time code are shown in the table below.

Date & Time format	Date & Time code	Example	Date & Time format	Date & Time code	Example
HH:MM	%T0	03:15	MM/DD/YYYY	%D3	07/05/2009
HH:MM:SS	%T1	03:15:23	DD/MM/YY	%D4	05/07/09
HH:MM AM/PM	%T2	03:15 PM	DD/MM/YYYY	%D5	05/07/2009
HH:MM:SS AM/PM	%T3	03:15:23 PM	DD	%D6	05
YY/MM/DD	%D0	09/07/05	MM	%D7	07
YYYY/MM/DD	%D1	2009/07/05	YY	%D8	09
MM/DD/YY	%D2	07/05/09	YYYY	%D9	2009

NOTE: The scanner's time and date is copied from the host PC's settings when the connection to the scanner is established.

- **Special Content** — select special content format codes to include in the text string from the drop-down list. These codes are replaced with actual symbols or text by the scanner when the document is scanned. The special content format choices and pre-formatted special content code are shown in the table below.

Special Content	Code	Example
Euro Symbol	%A0128	€
Yen Symbol	%A0165	¥
Scanner ID	%S0	12345678

Text Orientation — select the orientation (rotation) for the imprinted and/or annotated text string. A preview of how the text will be oriented at **0** (default), **90**, **180** and **270** degrees will be displayed to the right of the selected orientation.

Print String Definition, Maximum String Length and Remaining Count — use the *Print String Definition* text box to set up and/or modify the text string that you want imprinted or annotated on a document. You can provide information for the text string by typing a text string in the text box or inserting pre-formatted information from the *Page Counter* and *Insert Dynamic Content* drop-down lists. You cannot insert text using the cut and paste function.

You can see how the text string will appear as imprinted or annotated text in the *Actual Printed Example* field.

Exceeding the maximum string length of 72 results in the string being truncated to the maximum length. Because the imprinter/annotation string is made up of text, a page counter, and dynamic content, consider their combined length and the character placeholders remaining (shown in the *Remaining Count* box) when setting the string length.

Actual Printed Example — the text displayed under *Actual Printed Example* shows how the current imprinting or annotation text will look with any optional date and time stamp, special content, or page counter expanded. When a date and time format is specified, the current date and time are applied.

Imprinter/Annotation Position — the Imprinter / Annotation Position settings are all offsets from the top in this frame. The same **Offset from the top** value applies to both the physical imprinter and the electronic annotation.

- **Offset from Top** — specify the distance of the imprinter string from the top of each page. The default and minimum value is 0.5; the maximum value is 25.5 inches. You must enter whole numbers for pixels and millimeters, but you can enter decimal numbers in 0.1-inch increments for inches.

  NOTE: The horizontal location for imprinting must be manually set inside the scanner.

To specify the position of imprinted text on a document, perform the following:

1. In the *Units* group, select a unit of measurement for the offset.
2. In the *Offset from Top* text box, specify the distance from the top edge of a page the imprint string should appear.
3. Click **OK**.

NOTE: Because text is printed down the length of the document as it is fed through the scanner, be sure to select an offset measurement that allows the complete text string to print on the document.

Units — use the options in the *Units* group to specify text positioning values in inches, millimeters, or pixels (dpi dependent). The default unit of measurement is inches.

Annotation Position — allows you to specify the horizontal location for annotating.

- **Offset from Left:** specify the distance of an annotation string from the left edge of a page. The minimum value is 0 (default) and the maximum value is dependent on the resulting image size. You must enter whole numbers for pixels and millimeters, but you can enter decimal numbers in 0.1-inch increments for inches. This option is only available if **Front** and/or **Back Annotation** is selected.
- **Front Annotation/Back Annotation**: annotation can be performed on the front, back, or both sides of a document and is enabled using the **Front Annotation** and **Back Annotation** check boxes.

  To specify the position of annotation text on a document:

  1. In the *Units* group, select a unit of measurement for the offset.
  2. In the *Offset from Top* text box, specify the distance from the top edge of the page the annotation string should appear. (This value also controls the mechanical imprinter text offset.)
  3. Select where you want the annotation: **Front**, **Back** or **Front and Back**.
  4. In the *Offset from Left* text box, specify the distance from the left edge of the page the annotation string should appear.
  5. Click **OK** when finished.

  NOTE: Because this measurement affects where the annotation is added to the actual image, be sure to select an offset measurement that remains within the length and width of the image.

Font Height and **Font Width** — select whether you want imprinted text to print normally or in larger and/or wider characters on a document. Selecting **Large** prints taller characters; selecting **Wide** prints wider characters. The default print size is **Normal**.

The font size selections only control the imprinted text; the font used for annotation is fixed and cannot be changed.

NOTE: Selecting **Large** or **Wide** may change the length of text strings, causing the text to print off the end of the document. By default, the scanner prints standard, Latin font characters.

Appendix C Glossary

Control panel — interface located on the front of the scanner that is used to perform basic scanning functions and to signal scanner status through the use of LEDs, pictograms and text.

DPI (dots per inch) — a measurement of the ability of a scanner to reproduce small objects. The higher the dpi, the smaller the object the scanner can reproduce. Also known as *resolution*.

Host PC — computer used to communicate with the scanner in order to scan documents.

LED (Light Emitting Diode) — type of light source used in the scanner, both for image capture while scanning and illuminating indicators found on the control panel.

Multifeed (**MF**) — occurs when more than one document is fed through the feeder at one time.

Optics — refers to the following scanner components: imaging guides, camera glass covers and sensors. This term does not include LEDs.

Paper jam — refers to a single document that fails to pass through the scanner transport and exit into the exit tray.

Scan source — the scanner selected for use through the scanning application on the host PC.

Ngenuity Operator Utility (NOU) — the software that resides on the host PC. It provides and monitors scanner connectivity, scanner status and alerts. Allows you to set some of the scanner's configuration parameters.

SharpShooter — the technology found in the scanner cameras.

Straight pass-through — alternative transport path that allows scanning of thick card stock, ID cards, etc. Documents enter the transport from the feeder table and exit out the back of the scanner.

USB (Universal Serial Bus) — a data transmission system that operates between the scanner and the host computer system.

VRS (VirtualReScan) — VRS is an electronic check-point for scanned images. As images pass through the scanner, VRS performs a multi-point inspection of each document. VRS automatically checks and adjusts for alignment (skew), brightness, contrast and image clarity.

VRS Interactive Viewer — VRS-enabled control window where you can access advanced features of the scanner.

Kodak

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