Kodak

Ngenuity
9000 Series Scanners

Scanning Setup Guide
for ISIS Applications

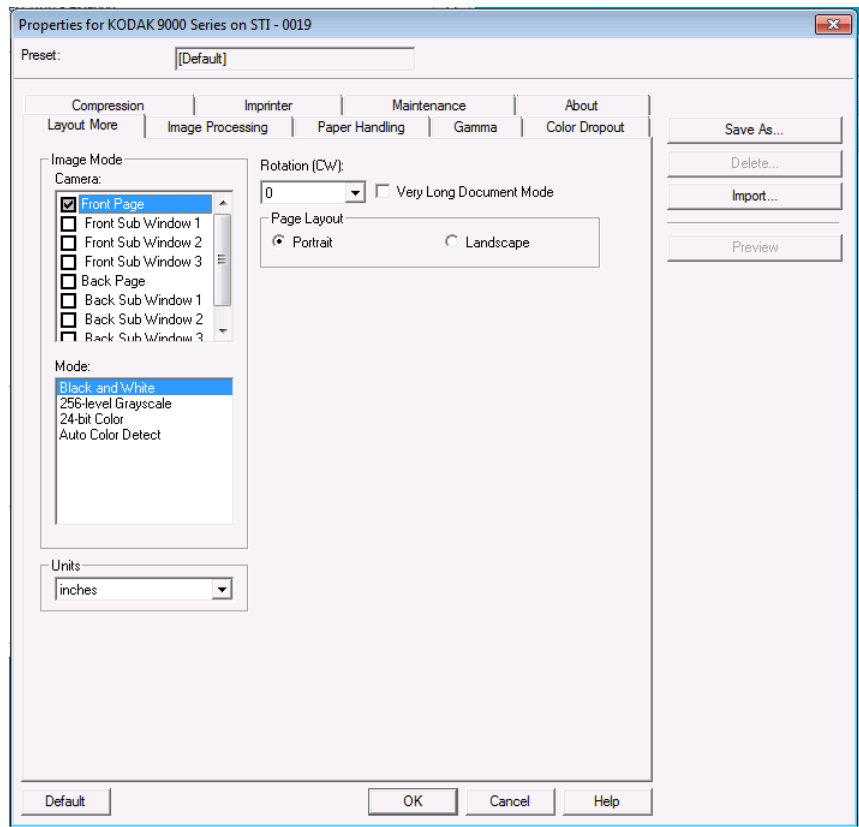# Scanning Setup Guide for the ISIS Driver

This guide describes the default ISIS Driver interface of the *Kodak Ngenuity* 9000 Series Scanners.

NOTE: Your application may change the ISIS Driver user interface to better suit its purpose. If your application provider has customized the ISIS Driver interface, it may not match the default screen configurations as described in this guide.

- To begin using your scanning application, access the ISIS Driver.

Using the Layout More tab

If the Preset feature of the ISIS Driver has not been enabled by your scanning application (sometimes referred to as the "More Settings" interface), your user interface may display 9 tabs.
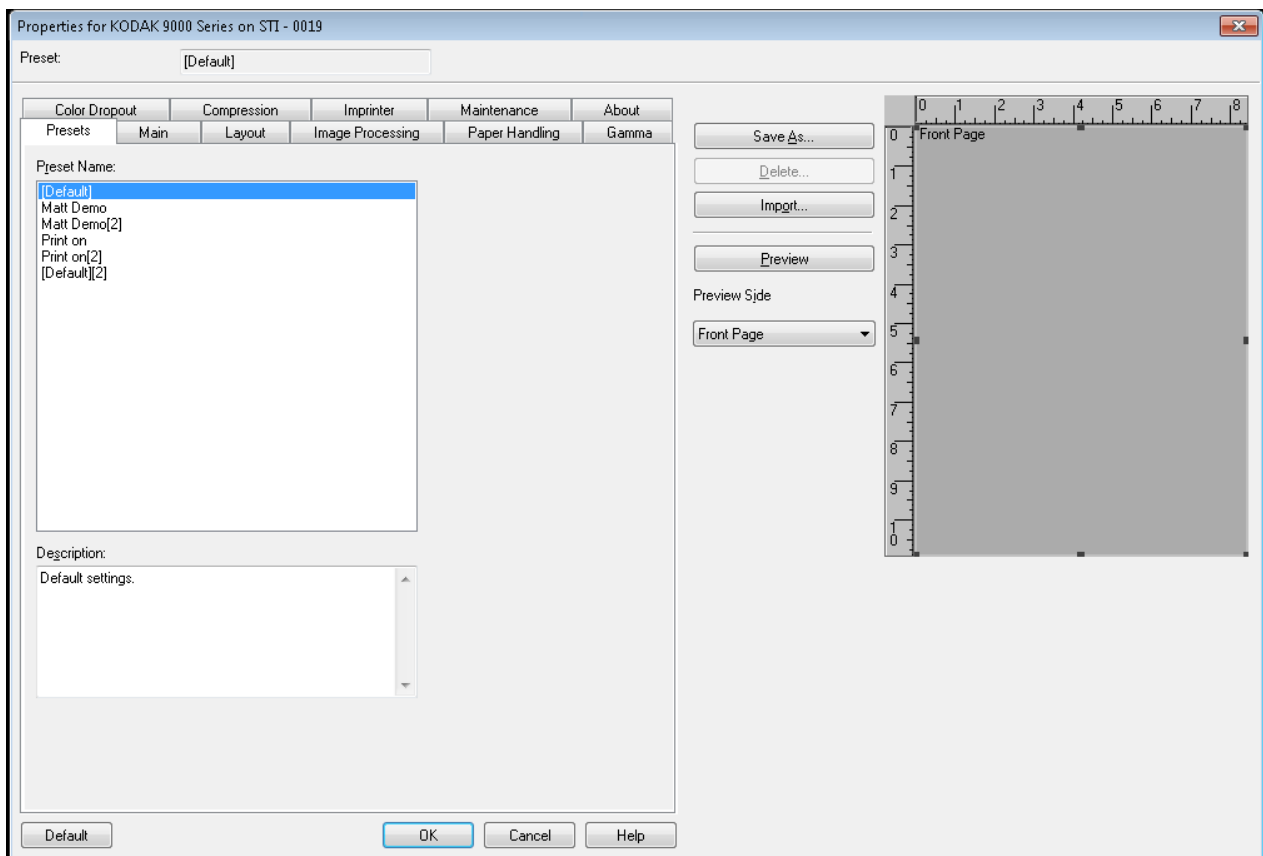

If this is the case, the Layout More tab combines some of the features of the Presets tab, Main tab and the Layout tab, which are described later in this guide. Refer to these tabs for descriptions of the features shown in the Layout More tab.

The controls for features not found in the Layout More configuration may be found in other parts of your scanning application. The control for resolution, for example, must be controlled by the scanning application when *Layout More* is used.

Using the ISIS Driver to setup presets

A *preset* is a group of specific image and scanner settings. You can create a customized preset to meet your scanning needs. For example, you could create a preset called "Invoices" that contains all of the image processing selections (Resolution: 200; Color Mode: Black and White; Auto Crop: enabled, etc.) and whenever you want to scan a batch of invoices, you simply select the "Invoices" preset.

Most of the tabs available from the ISIS Driver include common buttons associated with each tab and a preview window on the right side of the screen. Following is a description of these buttons.

Buttons

Save As — displays the Save Preset dialog box allowing you to enter a new preset name and save your settings.

Delete — deletes the selected preset; you will be prompted for a confirmation.

Import — when selected, copies an ISIS Driver preset file (.IDP) into the ISIS Driver Presets folder. Because there is no Export option, if you want to move or copy a preset from one system to another, the preset files should be copied from these locations on the host PC:

- **For Windows Vista / Windows 7:**
  C:\Program Data\ISIS Drivers\Presets\eki9000\Kodak 9000 Series

- **For Windows XP:**
  C:\Documents and Settings\All users\Application Data\ISIS Drivers\ Kodak 9000 Series

Preview — scans a page and displays what the scanned image looks like.

Preview side — allows you to select the side of the scanned image that you want displayed in the Preview window.

Preview window — the image displayed is a sample based on your current preset settings.

Default — when selected, restores the default settings for the selected preset.

OK — saves any settings made to the current preset and closes the main window.

Cancel — closes the main window without saving any changes.

Help — displays help information for the tab currently being displayed.

Creating a new preset

For a description of the options on each of the tabs, see the sections that follow.

1. From the Preset tab, select the preset that most closely represents your scan job.

2. Select the Main tab. From the *Image Mode: Camera* list box, select the side you want to configure.

3. Select the desired electronic image output from the *Mode* list box.

4. Go through each tab and define the desired scanner and image processing settings.

5. If you have an imprinter installed and you want to set up imprinting options, click the **Imprinter** tab and make the desired selections.

6. When you have made all of your selections, click **Save As**.

7. Enter a new preset name in the *Preset Name* field and click **OK**. The newly defined preset will be displayed in the *Preset Name* list box.
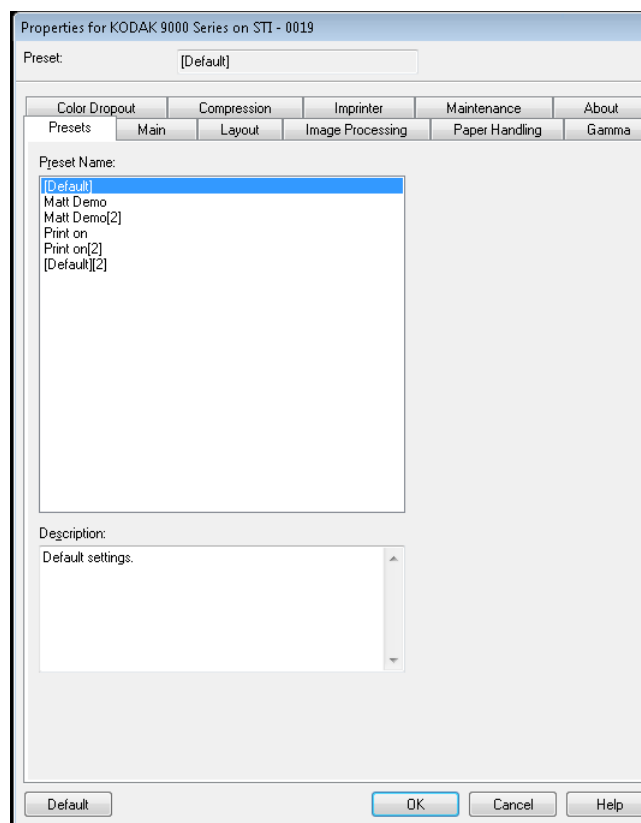
Presets tab

The Presets tab provides the following options.

NOTES:

- The default Preset cannot be changed within the ISIS Driver.

- When a Preset is changed, a new preset is added to the list with a driver-assigned name of the selected preset with a version number incremented in square brackets. For example, "Default" will become "Default [1]". If "Default [1] is changed, without select the **Save As** option, the driver will name the preset "Default [2]".

- A new preset may be created when you first enter the ISIS Driver setup. Select the previous preset name to delete this new preset.

TIP: When creating a new preset, you may have many versions of the preset as you make changes (i.e., Default [1], Default [2], Default [3], etc.). To avoid filling the selection list with many versions of the same preset, always use the **Save As** button to rename unwanted versions before clicking **OK** to exit the ISIS Driver.

*IMPORTANT:If a changed preset is not saved using the **Save As** button or by clicking **OK**, and another preset is highlighted in the selection box, then any changes made to that preset since the last save will be lost and the new preset will be deleted.*

Preset Name list — lists the available presets. If you want to create a new preset, see the section entitled, "Creating a new preset" later in this guide.

Description — allows you to enter descriptive information regarding the currently selected preset.

Main tab

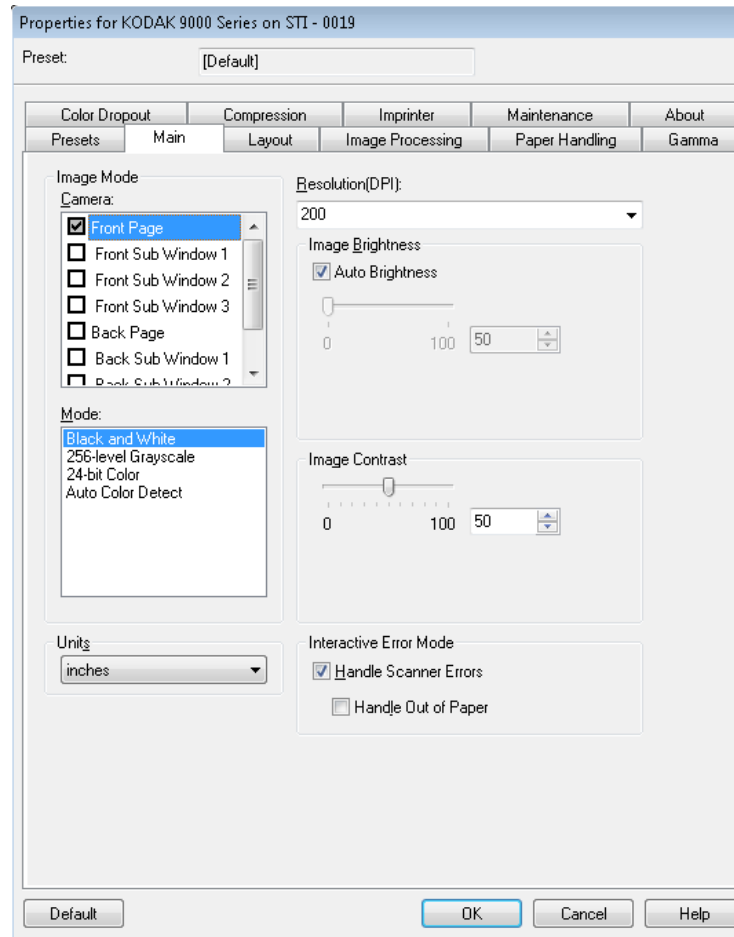The Main tab provides the following options.

Image Mode

Camera — the selections in the Camera box list the available sides (front and back) of an image where you can define individual image processing values. Options include: **Front Page, Front Sub Window 1, Front Sub Window 2, Front Sub Window 3, Back Page, Back Sub Window 1, Back Sub Window 2** and **Back Sub Window 3**. You can define up 8 different output images for each page scanned.

The *Camera* list provides two main functions:

- When the checkbox on the left is checked, the scanner will output that image based on the selections made on each tab.
- When a camera selection is highlighted (and not checked) the options selected on each tab are applied to that highlighted camera selection. However, images will not be outputted with those selections unless the camera selection is also checked.

When making camera selections:

- If just the **Front Page** check box is selected, then only one image of the front of the scanned page is created. No images of the back page are created (simplex scanning).

- If both the **Front Page** and **Back Page** check boxes are selected, then one image for both the front and back are created (duplex scanning).

- If a **Sub Window** is selected, then two (or more) images will be created for that side of the scanned page (multistream). If using Sub Windows, you can scan one page and get up to 8 images of that page (4 for the front page and 4 for the back page).

- When using Sub Windows, the Main window (**Front Page** and **Back Page**) should also be selected. You may decide to use a Sub Window if you need both a color and black and white image of your page. In this case, the Main window would be the color image and the Sub Window would be the black and white image.

  There are limitations on the available options for sub windows. For example, if the Main window is black and white, then all Sub Windows must be black and white. Also you cannot create a normal black and white image and a color dropped-out black and white image because the color drop-out option is only available for the Main window image.

Mode — allows you to select the electronic image output.

- **Black and white**: produces a black and white version of your document.

- **256-level Grayscale**: produces a grayscale version of your document.

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

- **Auto Color Detect**: this mode scans in color, and checks to see if there is enough color that it should be saved as a color image. Otherwise, it is saved as a black and white image. The amount of color information the image must have so it is saved as a color image is set using the **Auto Color Detection** setting on the Image Processing tab.

NOTE: Depending on the *Mode* selected, some options on other tabs may not be available.

Units — select the unit of measurement for the scanner; this includes any size-related options. The Units options are: **Inches** and **Millimeters.**

Resolution — allows you to select the dots per inch (dpi), which is a determinant of a better quality image. The selected resolution may increase scanning time and image size. For example, selecting a scanning resolution of 600 dpi will result in a larger file size and slower scanning speed than scanning at 200 dpi. The options are: 100, 150, 200, 240, 300, 400, 500 and 600 dpi. Higher resolutions will reduce the throughput of the scanner.
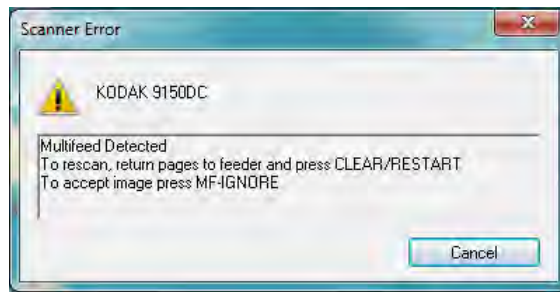
Image Brightness — if **Auto Brightness** is not checked, you can manually adjust the brightness level using the slider bar. This option is for black and white or grayscale images only.

Auto Brightness — when checked, allows the scanner to dynamically evaluate each document to determine the optimal threshold value to produce the highest quality image. This allows scanning of mixed document sets with varying quality (i.e., faint text, shaded backgrounds, color backgrounds) to be scanned using a single setting thus reducing the need for document sorting. When using Auto Brightness, only *Image Contrast* can be adjusted.

Image Contrast: adjusts how much of the faint detail you want to see in the output image. The higher the contrast value, the more faint lines will be shown in the image. The lower the contrast value, the clearer (or less detailed) the output image will be. If contrast is set too high, you may get lines or black areas in your output image that you do not want. If the contrast is set too low, some letters or lines may not show in the output image. Select a contrast value from 0 to 100. The default is 50.

Interactive Error Mode

- **Handle Scanner Errors**: when this option is checked, an interactive dialog box will be displayed when an error is encountered. If the error can be cleared (i.e., clearing a paper jam and pressing the Clear/ Restart button), this dialog box will close and the scanner will start scanning again. This option is performed by the driver. The scanning application is unaware of these errors and continues to scan as if no error happened, resulting in no interaction with the PC and the batch scan continuing without interruption.
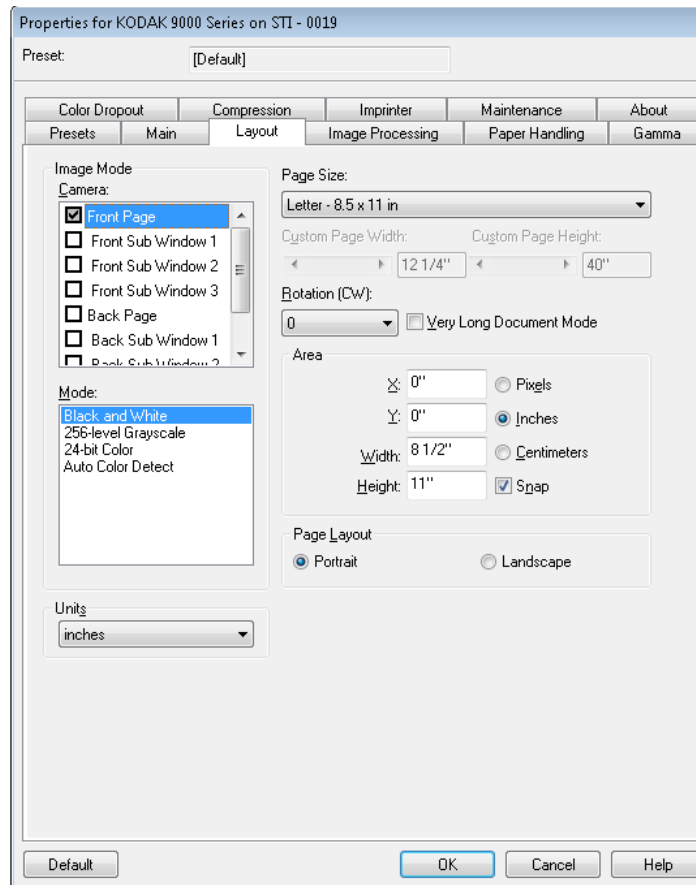

- **Handle Out of Paper:** when this option is enabled, the Out of Paper dialog box will be displayed when the feeder is empty. Add more documents to the feeder and continue to scan without any interaction with the scanning application or the PC.

Layout tab

The Layout tab provides these options.

NOTE: For descriptions about *Image Mode, Mode* and *Units*, see the "Main tab".

Page Size — the default page size is set when a scanner is first selected. You can choose a different page size using the drop-down list. If you select **Custom**, the *Custom Page Width* and *Custom Page Height* fields will be available where you can enter the desired page size.

NOTE: It is recommended that you use the Auto crop option (on the Image Processing tab) and set the page size to **Scanner Maximum**.

Rotation (CW: *clockwise*) — allows you to rotate the scanned image **0**, **90**, **180** or **270** degrees clockwise. 0 is the default. For example, if scanning in landscape mode with the right edge of the pages as the lead edge, you should set the rotation to **90**.

Very Long Document Mode — 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. Sub Windows are not available in Very Long Document mode.

NOTE: Very Long Document mode is often referred to as *image segmentation*. Image segmentation splits a long document into specific size image segments which results in several images. For example, if the paper size is set to **Letter** (8.5 x 11 inches) in Portrait mode, and a 100-inch long oil well log is scanned, the result would be 10 images. 9 images would be 11 inches long and the 10th image would be 1-inch long.
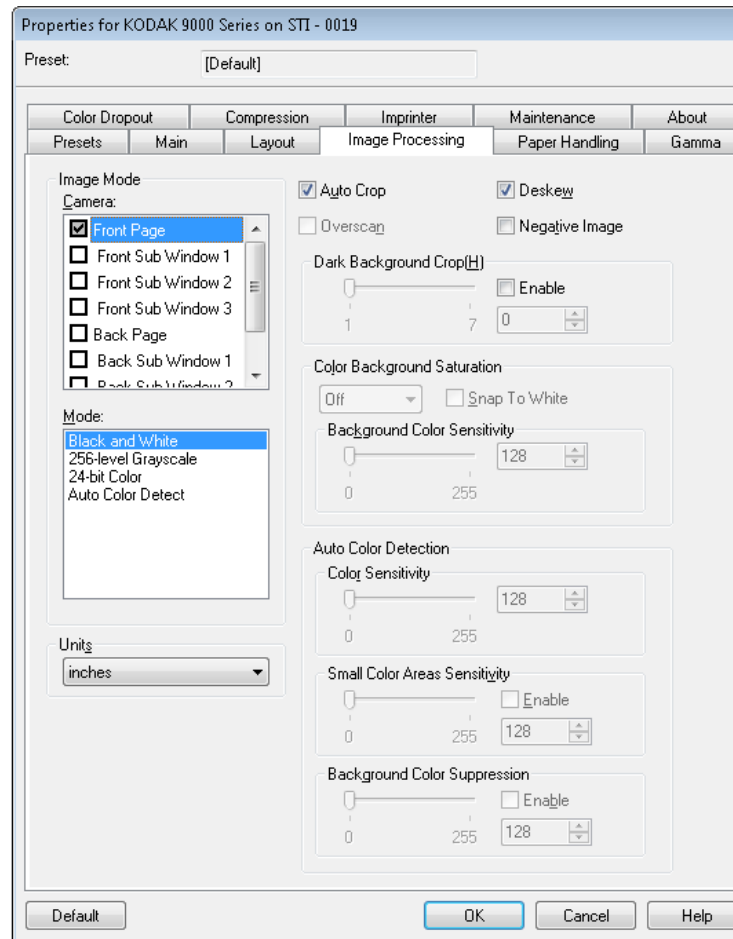
Area

- **Snap** — enable this option to control the dimensions of the preview area to fixed 1/8-inch increments. This option is not available in **Pixels** mode.

- **X**: the distance from the left end of the scanner to the left-edge of the scanning area.
- **Y:** the position from the top end of the document to the top end of the scanning area.
- **Width**: the width of the scanning area.
- **Height:** the height of the scanning area.

Page Layout

- **Portrait**: displays the image orientation in the shape of a conventional portrait, where height is greater than width. If you want to feed your pages with the top of the pages going into the feeder first, then select **Portrait**.

- **Landscape:** displays the image orientation in the shape of a conventional landscape painting, where width is greater than height. If you want to feed your pages with the left or right edges of the pages going into the feeder first, then select **Landscape**.

Image Processing tab

The Image Processing tab provides the following options.

Auto Crop — dynamically adjusts the cropping window for different document sizes based on the edges of the image. Use this option for batches of mixed-sized documents. If you use this option, set your *Page Size* to **Scanner Maximum**.

Overscan — adds a percentage of border before and after the edge of the image. Overscan is used in applications where automatic feeding of highly skewed documents is likely. Overscan reduces the possibility of corner clipping on skewed images.

Deskew — the scanner will automatically find each document (regardless of size) and will straighten any document that may have been fed crooked.

Negative Image — allows you to request a negative image, where black pixels are turned to white and white pixels are turned to black (like a photographic negative). This is useful if the scanned material has a dark background and white text. This option is not available when scanning in color.

Dark Background (Crop) — in addition to auto crop and deskew, this option could be considered as an alternative for dark documents. The default setting should satisfy most of these exception cases.

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

- **OFF**: no background saturation will be performed.
- **White**: smooths the predominant background color to white.
- **Black**: smooths the predominant background color to black.
- **Automatic**: smooths the predominant color.
- **Snap to White**: identifies the predominant color and substitutes the color with white.

Background Color Sensitivity: allows you to adjust the extent at which the background(s) is determined. The values range from **Low (0)** to **High (255)**. The default is 0.
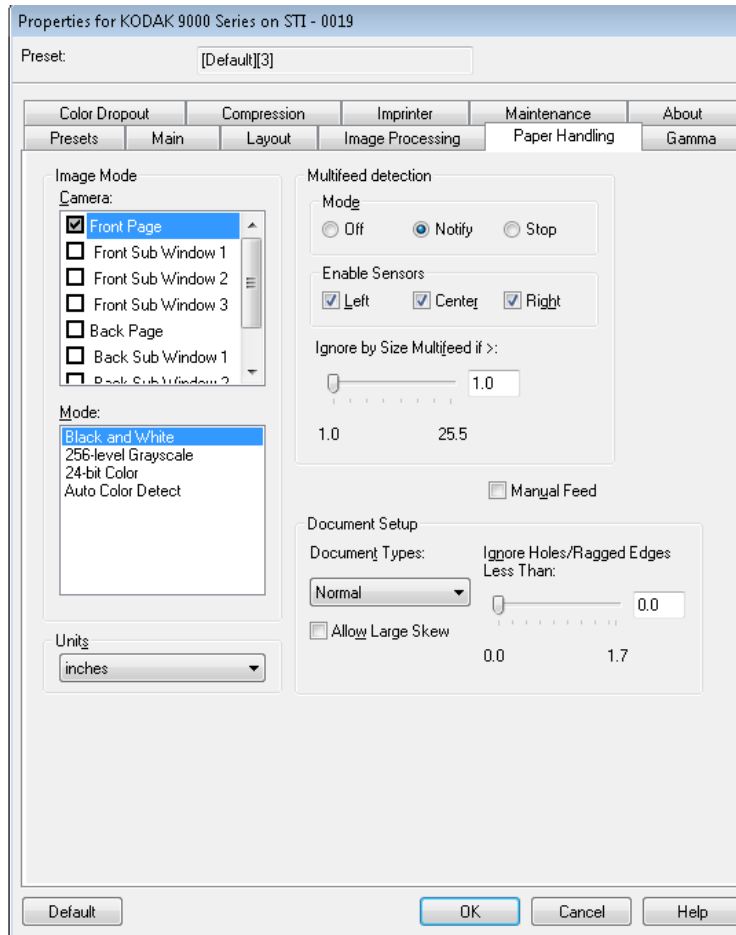
NOTE: This option is not available if **OFF** is selected.

Auto Color Detection — allows you to make color sensitivity settings to help determine the amount of color that needs to be on a document to be saved as a color or black and white image.

- **Color Sensitivity** — select a value from 0 to 255 (0 = the lowest amount of color; 255 = the highest amount of color) that needs to be on a document to be saved as a color or black and white image.
- **Small Color Areas Sensitivity** — click **Enable** to select a value from 0 to 255 (0 = the lowest amount of color; 255 = the highest amount of color). Use this option to detect small amounts of color on a document that would otherwise be detected as black and white. This option enhances the sensitivity for color detection.
- **Background Color Suppression** — click **Enable** to select a value from 0 to 255 (0 = the lowest amount of color; 255 = the highest amount of color). This option allows black printing on colored paper to be saved as black and white (the background color is ignored). Normally a colored sheet of paper would be detected as color and saved as a color image.

Paper Handling tab

The Paper Handling tab provides the following options.

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

- **Mode**: select how you want the scanner to handle the multifeed when detected.

  - **Off**: no multifeed detection will be performed. Scanning continues when a multifeed is detected and all scanned images are retained.

  - **Notify:** the scanner responds to a multifeed by sounding an audible alarm and the Multifeed LED on the scanner momentarily lights. Scanning continues, the multifeed is ignored and the image of the multifed document is retained.

  - **Stop**: when a multifeed is detected, the scanner will sound an audible alarm, the Multifeed LED on the scanner will light and the scanner's transport will stop. You can delete or keep the multifed image. If **Interactive Error Handling** is checked on the Main tab, a window will be displayed with options for keeping or disregarding the multifeed images.

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 sensors are disabled, the **Enable Sensors** option is unavailable and the *Multifeed Detection: Mode* option is automatically set to **Off.**

Ignore by Size: Multifeed if >: 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 is 1.0 inch (25 mm).

Manual Feed — select this option to feed exception documents that cannot be fed in ADF mode (e.g., multiple forms). When this option is selected, you must feed documents manually into the scanner one at a time.
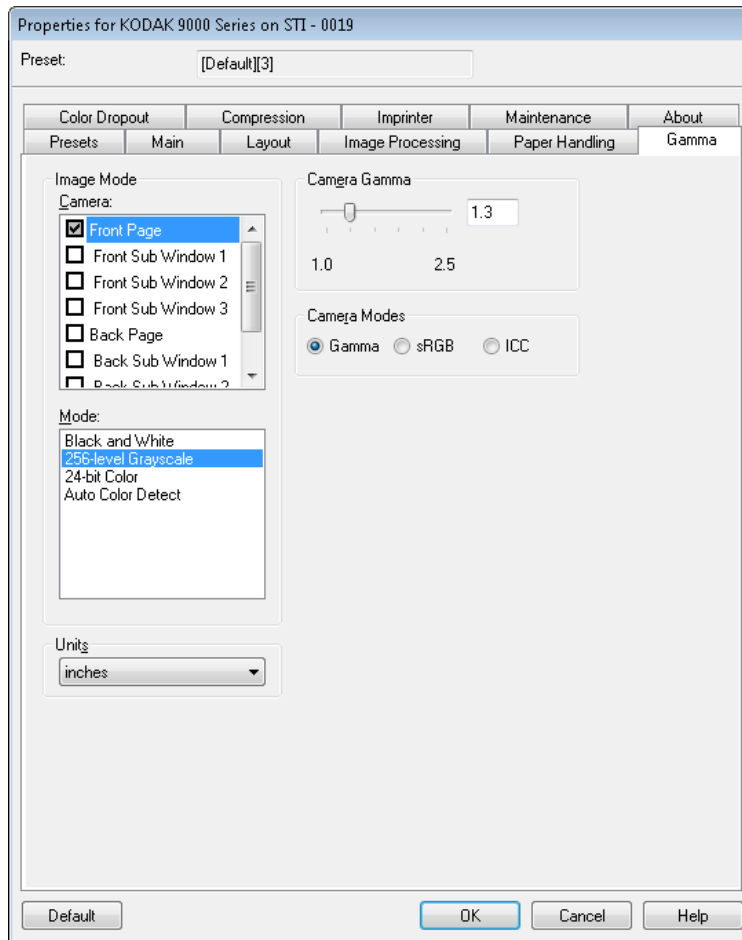
Document Setup

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

- **Ignore Holes/Ragged Edges Less Than**: documents that have holes or ragged edges (i.e., pages that may have been ripped out of a spiral notebook) may trigger a false multifeed when they are scanned. To avoid this, you can use the slider to set a distance from the document edge to ignore, thus preventing a false mutlifeed.

Gamma tab

The Gamma tab provides the following options.

Camera Gamma — when the *Camera Modes:* **Gamma** is selected, you can use the slider 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.

Camera Modes — if the color on your images is not as expected, you can use the following options to make color adjustments to meet your scanning needs.

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

- **Gamma** (default) — 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 of 1.3.

- **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 the scanner's image processor 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.
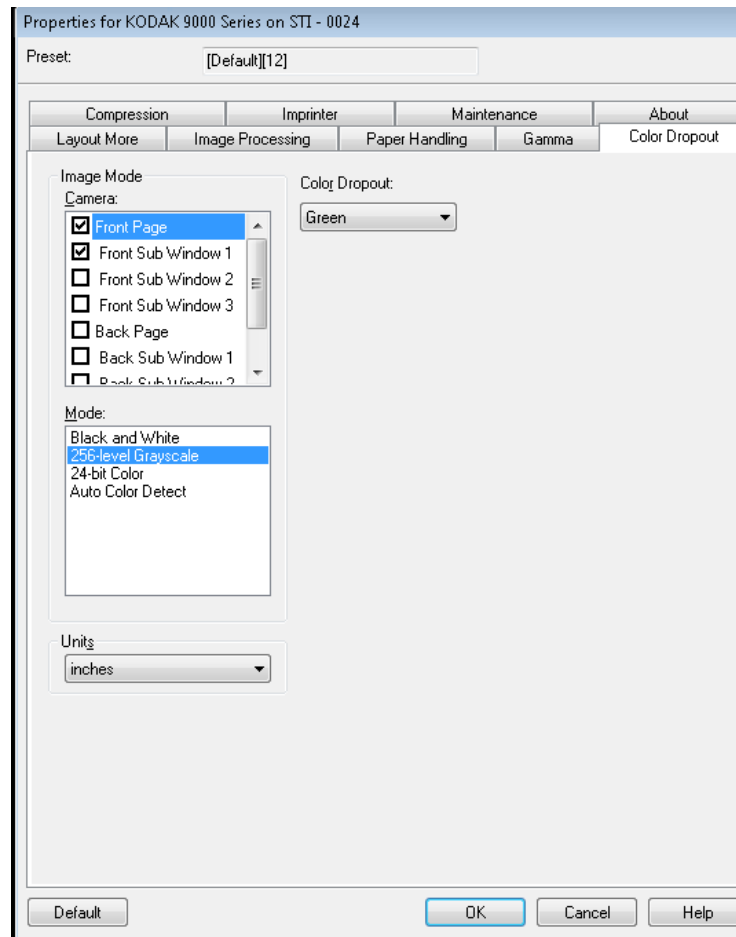
NOTE: Do not use other post-processing color adjustments in combination with this option enabled.

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 Automatic Color Detection (images may be converted to black and white)
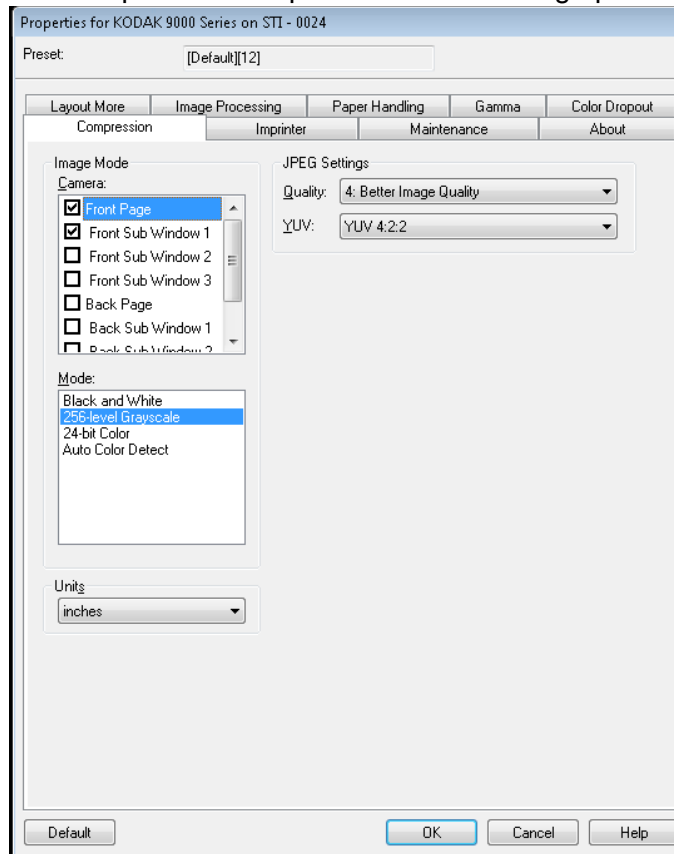
Color Dropout tab

Color Dropout 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).

Select the desired dropout color you want to eliminate from the front/back side. Selections are: **None**, **Red**, **Green** or **Blue**.

Compression tab

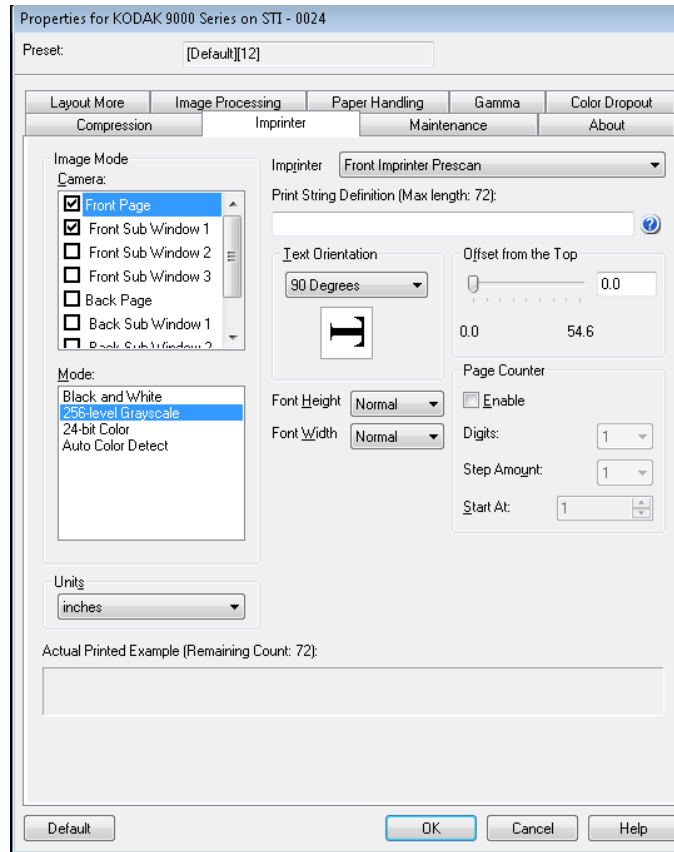The Compression tab provides the following options.

JPEG settings

- **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** option is available.

  - **YUV** is a type of color space used in JPEG compression. The 4-2-2 selection (default) uses downsampling 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 larger files.

Imprinter tab

If you have the optional front/back imprinter installed, you will need to setup your imprinting options using the Imprinter tab.

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

Imprinter — select which imprinter side you want to select by highlighting the **Front Page** and/or **Back Page** selections in the *Image Mode / Camera* setting. This determines which imprinter(s) will be enabled in the *Imprinter* selection drop-down list. Both imprinters can run independently at the same time.
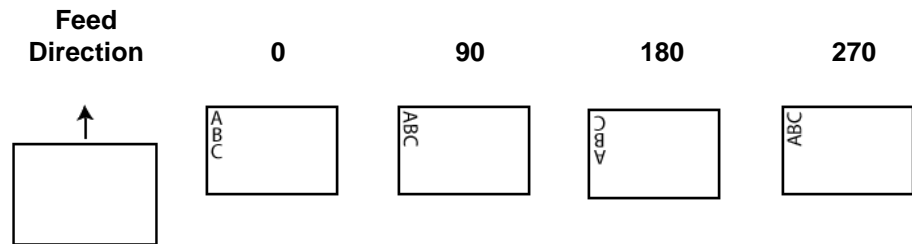
Print String Definition — allows you to specify custom text to be included in your print string. A maximum of 72 characters is allowed.

- **Date**: the following formats are available:

YY/MM/DD	DD/MM/YYYY
YYYY/MM/DD	DD
MMDDYY	MM
MM/DD/YYYY	YY
DDMMYY	YYYY

- **Time**: the following formats are available:
  HH:MM
  HH:MM:SS
  HH:MM AM/PM
  HH:MM:SS AM/PM
- **Page counter:** this is the document count for the scan session. This value is incremented sequentially by the scanner.
- **Scanner ID:** this is the scanner identification number.
- **Special symbols**: **Euro** and **Yen**.

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

Offset from the Top — select a value to determine how far the printed information will appear from the leading edge of the document.

NOTE: The horizontal print position is determined by the location of the print cartridge within the scanner. See the User's Guide for setting print positions.

- **Font Height** — you can select **Normal** or **Large**.
- **Font Width**: available character styles: **Normal** (regular typeface) and **Wide** (bold typeface).
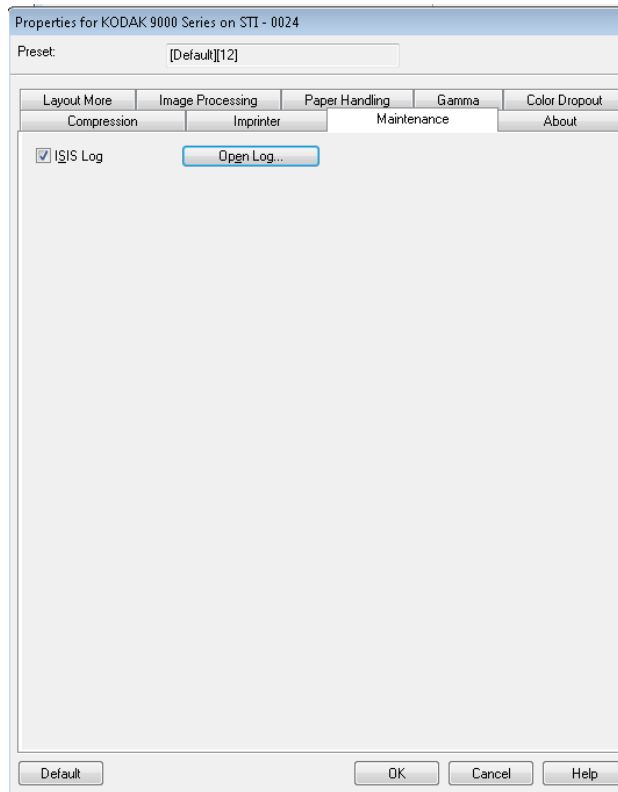
Page Counter — click the **Enable** check box to enable to Page Counters.

- **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. You can specify from 1 to 9; default is 1.
- **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 from 1 to 9.
- **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. Enter a value from 1-99999999.

Actual Printed Example — shows a sample of what the print string will look like.
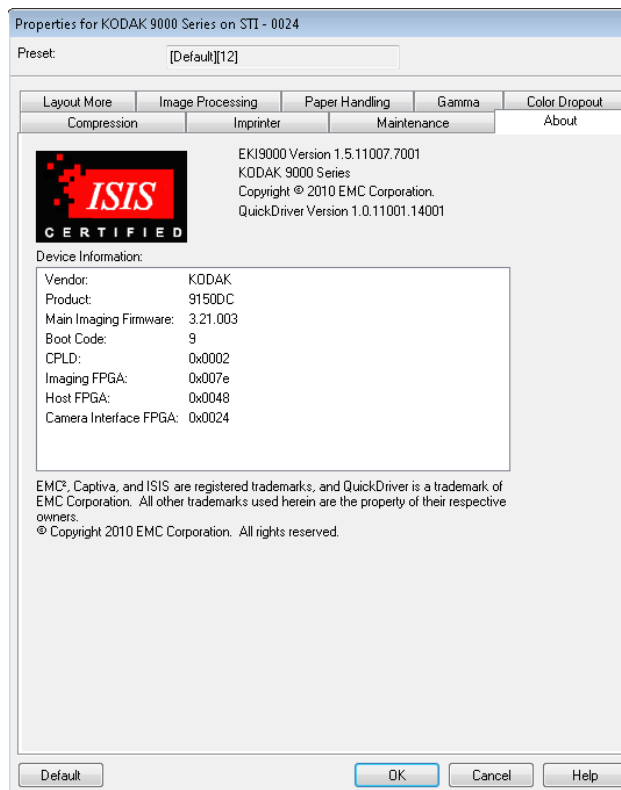
Maintenance tab

The Maintenance tab allows you to open the ISIS Driver log.

About tab

The About tab displays the scanner's version information and copyright information as well as the ISIS Driver version information.

Kodak