

Chapter 9

The Scanner Interface

The Scanner Interface application adds copying and scan-to-file capability to your PlotWorks system. You can use the Scanner Interface as a stand-alone application or with the Job Editor.

The Scanner Interface offers a wide variety of image enhancement tools and scanning options, these include:

- Fine-tuning image quality (background, sharpness, darkness, etc.)
- Adjusting image resolution and scanning speeds
- Inverting images (white areas become black, and vice versa)
- Reducing and enlarging the image output size (images are scanned at 100%)
- Setting image offsets
- Saving scanned files as CALS 1, TIFF Group 3, TIFF Group 4, CT1, or PDF files
- Scanning directly to a PlotWorks job file (called a job ticket)
- Scanning to print and file simultaneously
- Viewing images as they are scanned
- Making copies
- Scanning and replacing files
- Creating and maintaining customer and scanning records

Opening the Scanner Interface

The Scanner Interface can be opened directly or from the Job Editor. When the Scanner Interface is opened from the Job Editor, all scanned images are added to the Job Editor Job Grid as well as saved in the designated folder.

Opening the Scanner Interface Directly

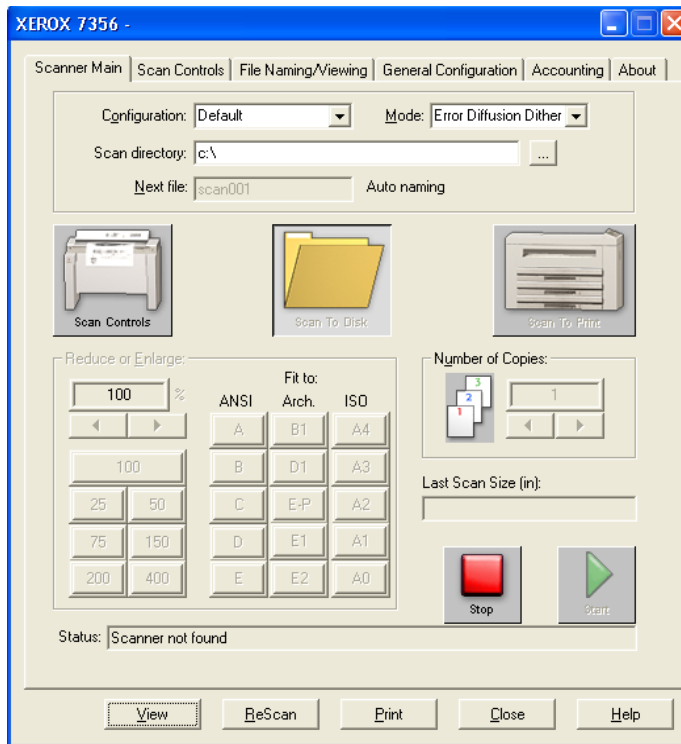
1. Click on the Windows **Start** button, then **Programs**, then **PlotWorks**.
2. Click on the **Scanner Interface**

Opening the Scanner Interface from the Job Editor

Simply click on the **Scan** button from the Job Editor tool bar.

The Scanner Interface Window

*Fig 9.1
The Main
Scanner
Interface
window*



The available fields and settings on the Scan Controls tab differ for individual scanners. Scanner-specific information is provided later in this chapter.

There are five tabs on the Scanner Interface:

- **Scanner Main:** This tab window is used to set up basic scan parameters such as number of copies, size and scan type.
- **Scan Controls:** This tab window is used to select scanner settings for each type scan. Predefined configurations are provided for some image scan types including blueline, dirty blueline, sepia, etc.
- **File Naming/Viewing:** This tab window is used to enable and configure automatic and consecutive file naming, as well as to select an image viewer to use for viewing scanned images.
- **General Configuration:** Use this tab window to select your scanner type, configure its parameters and set image size and offset.

- **About:** Displays legal information and PlotWorks software versions.

The Main tab window

The following fields and buttons appear on the Main Scanner Interface tab window:

- **Title bar:** Displays the scanner type, and either the name of the most recently scanned file or the file currently selected in the Job Editor.
- **Configuration:** Displays the current scanner configuration. You can save scanner settings for later use.
- **Mode:** Select the appropriate scanner mode for your scan type. Modes available depend on the scanner used.
- **Scan directory:** Enter the directory path to save scanned images in.



If the Scanner Interface is launched from the Job Editor, the Scan directory field is unavailable. Scanned images are then saved in the directory specified in the Job Editor's Preferences dialog box.

- **Browse button:** Lets you look for the desired scan directory (this button is only available when you launch the Scanner Interface from Windows Explorer, or its shortcut. If you launch the Scanner Interface from within the Job Editor, the Browse button is not available, and files will be scanned into the default directory.).
- **Next file:** The file name that will be given to the next scan.
- **Scan Controls:** Click this button to display the Scan Controls tab window.
- **Scan to Disk:** Click this button to scan image files to the Job Editor job grid. You can add multiple scanned images to a new or existing job. (This button cannot be disabled.)
- **Scan to Print:** Click this button to send the scanned file to the Queue for processing and printing. The image prints using the most recent parameters set up in the Job Editor.



This option is only available when you access the Scanner Interface from within the Job Editor.

- **Number of Copies:** This field is not available unless the Scanner Interface is opened from within the Job Editor. It is used to enter the desired number of print copies.
 - **Last Scan Size:** Displays the size of the last image scanned.
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- **Reduce or Enlarge:** Reduces or enlarges the scanned image to a percent of its original size. Preset buttons allow you to scale the image from 25% to 400% depending on the scanner). You can also enter the desired percentage in the field above the buttons. To select a size based on a particular paper size, click a pre configured ISO, ANSI, or Architectural size button.



This option is only available when you access the Scanner Interface from the Job Editor.

- **Stop:** Click this button to stop the scanner and eject the image being scanned.
- **Start:** Click this button to start the scanner when Auto scan is not selected.

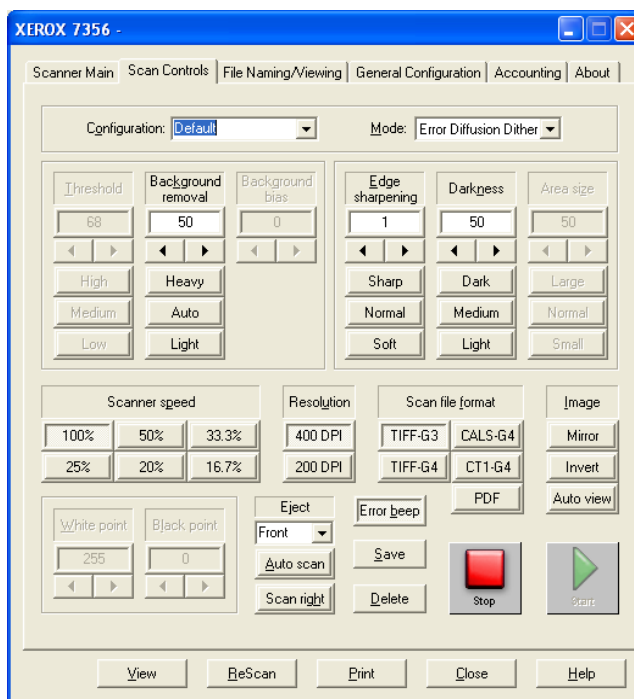


*On some scanners, when the Main Scanner tab window or Scan Controls tab window is active, you can press **Enter** to start the scanning process.*

- **Status:** Displays the status of the Scanner Interface and the scanner.
 - **View:** Click this button to open the Image Viewer and display the current file.
 - **ReScan:** Scans the loaded document and replaces the current file with the new scanned image. Use when testing changes in the configuration settings.
 - **Print:** This button is enabled only when the Scanner Interface is launched from the Job Editor (by clicking the **Scan** button). Use it to send the image just scanned to the Job Editor, where it can be sent to your PlotWorks printer.
 - **Close button:** Exits the Scanner Interface.
 - **Help button:** Opens the Scanner Interface online help file.
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The Scan Controls tabbed window

*Fig 9.2
Scan
Controls
tabbed
window*



The following options are available on the Scan Controls tab window:

- **Configuration:** Is used to view, save, and select a configuration file.
- **Mode:** Select the appropriate scanner mode (available modes depend on the scanner).

Possible modes are:

- **Bilevel (Manual):** This mode works best with line art that has a fairly constant background
- **Bilevel (Adaptive Area):** This mode works best with line art that uses text or other fine lines, with a varying background (such as a faded blue line). Adaptive thresholding allows the Scanner Interface to set different white point (background) values for different areas of the image. The white point is set by determining the difference between the background and the data in a set area. The size of this area is specified in the Area Size setting. This mode does not work well with documents containing large black areas.

- **Ordered Dither:** This mode works best with photographic images. Ordered dithering resolves lines clearly, but can produce a grainy image. Ordered Dither creates larger raster file sizes.
- **Error Diffusion Dither:** This mode works best with photographic images and produces very smooth gradients. However, this mode can diffuse the edges of lines, causing a “fuzzy” look. Error Diffusion Dither creates larger raster file sizes.
- **Bilevel:** This mode works best with line art.
- **Dither/Halftone:** This mode works best with photos or grayscale images.
- **Line:** This mode works best with line art.
- **Photo1:** This mode works best with photographic images.
- **Photo2:** This mode works best with dark prints.
- **Text:** This mode works best with text.
- **Photo:** This mode works best with photographic images.
- **Text and Photo:** This mode works best with photographic images and less than perfect originals.
- Use the preset enhancements buttons (below the Configuration and Mode fields) for common settings, then fine-tune with the arrows. Default settings depend on the scanner selected. These options allow you to fine-tune the appearance of your scans by changing darkness, sharpness and other variables. The specific options that appear depend on your scanner model and the configuration selected. Click **ReScan** to test changes.

Possible enhancements are:

- **Threshold:** Lets you set the point that divides black and white data. Any scanned data that is lighter than the threshold value will display as white. Any scanned data that is darker than the threshold value will display as black. Click the **Low**, **Medium**, or **High** button, or enter a value in the field.
 - **Background removal:** Is used to remove unwanted specks and smears from the image background. Click the **Light**, **Auto**, or **Heavy** button, or enter a value in the field.
 - **Background bias:** If you clicked **Auto** under Background removal, you can set a strength here. The higher the strength, the more specks and smears will be removed from the background.
 - **Edge sharpening:** Lets you sharpen the image to make fine lines clearer. Click the **Soft**, **Normal**, or **Sharp** buttons, or enter a value in the field.
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NOTE: When using Edge Sharpening with the Xerox MAX 200 or 8180 scanners, all color sensitivity values must be set to 0.

- **Darkness:** Lets you set the brightness or darkness of the image. Click the **Light**, **Medium**, or **Dark** button, or enter a value in the field.
- **Area size:** Lets you set the size of the area used for adaptive thresholding. This value is a relative number, with 0 representing the minimum area allowed, and 100 representing the maximum area allowed. Set this option to scan past any dark or light leading edges on the image. Click the **Small**, **Normal**, or **Large** button, or enter a value in the field.
- **Contrast:** This option is only available when you have dither/halftone mode selected and allows you to adjust the contrast between light and dark areas.
- **Auto thresholding:** When selected (down), this option automatically determines the best threshold setting for the image being scanned.
- **Auto exposure (Xerox 7396, 7399 and KIP scanners only):** When selected (down), the software automatically sets the best darkness, white point, and sharpening values as each image is loaded.
- **Image Density:** Use this feature to lighten or darken the scanned image.



On the 8180 scanner, the image density affects the color sensitivity. For example: the lower the image density, the less color the scanner interface detects.

- **Background Suppression:** Removes unwanted background.
 - **Type:**
 - **None:** Background suppression is disabled.
 - **Fixed:** Use when the background is uniform.
 - **Variable:** Use when the background varies from dark to light areas.
 - **Level:** Determines the amount of light or dark to remove from the background.
- **Color Sensitivity (Xerox MAX 200 and 8180 only):** Is used to adjust the final appearance of colors on the original document. The color areas will appear as their relative shades of black. You can adjust the scanner's sensitivity to black, red, blue, yellow, and green. Use the "Others" field for all other colors.

- **White point:** Sets the white point of the image. All data that is lighter than the white point value will appear as white in the image.
- **Black point:** Sets the black point of the image. All data that is darker than the black point will appear as black in the image.

These additional options (also scanner-dependent) are available in the Scan Controls window:

- **Scanner speed:** You can set some scanners to operate at full speed or at a percentage of full speed. It is recommended to scan complex documents at a low speed to avoid overloading the system. This option is not available on some scanners.
- **Scan file format:** You can save scanned images as CALS Group 4, TIFF Group 3, TIFF Group 4, CT1 and PDF raster files.
- **Resolution:** Allows you to select a scanning resolution of 200 or 400 dpi. A higher resolution value produces higher quality prints and larger file sizes. A lower resolution reduces scanning time and file size but produces lower quality images.



If 200 dpi is selected, some scanners will clip up to 1/4" off the leading edge of the image being scanned. If the actual image does not go all the way to the edge of the medium, this is not a problem.

- **Image buttons:**
 - **Mirror image** button: Click this button if you want the image to be scanned as a mirror of itself.
 - **Invert image** button: Click here to invert the colors in your scanned images. This causes the white portions of the document to become black in the scanned image, and vice versa. This option is not available on the Xerox 7396 scanner.
 - **Auto view** button: When you select this option, images display in the Image Viewer as they are scanned.
 - **Auto length** button (Océ 9800 scanner): The Océ scanner normally scans images to standard sizes. However, if you want the image to be scanned to its actual length, click this button.
 - **Auto scan** button: When you click this, the Scanner Interface is put in automatic scan mode. Auto Scan is useful when you have several images with the same general characteristics (they are all dark sepia, for example). Once
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you get the scanner configured correctly for that type of image, click **Auto scan**. All scans will be made at the current settings. (This option is not available for some scanners.)



Please note that due to hardware limitations, when using Auto Scan, digital files cannot be created larger than the original. When Auto Scan is selected, you can only scan in standard, or reduced sizes. If you wish to scan in larger, or non-standard sizes, deselect Auto Scan, and then enter the size manually.

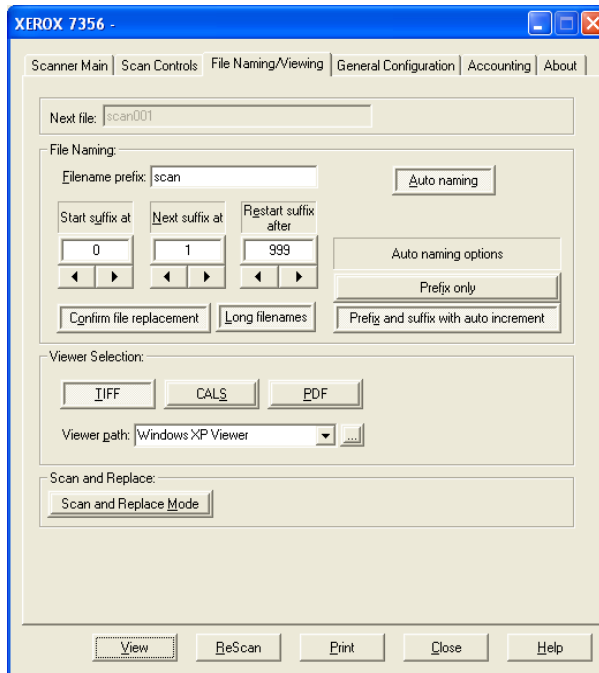
There is no need to click on the Start button because the scanner will start scanning as soon as the document is loaded.

- **Scan right** button (available on the 7356 scanner **only**): By selecting this option, the user inserts the document on the right 36" mark. The image is not center-oriented.
- **Eject** combo box: Allows you to select one of the following auto eject options; Front, Back and None. This option is available on the Xerox 7356 and Vidar scanners only. The Xerox 7396 always ejects from the back.
- **Error beep** button: Click this button to enable an alarm when the software cannot auto detect the document size (not available on the Xerox MAX 200, 8180, Océ, or KIP scanners).
- **Compress in scanner** (Xerox 7336 only): When enabled, file compression takes place in the scanner memory.
- **Save** button: Lets you save the current scanning configuration. (*Note: You can only save your own custom configurations. You cannot change the Default configuration.*)
- **Delete** button: Lets you delete the selected configuration. (*Note: You cannot delete the **Default** configuration, or any of the other preset configurations. You can only delete your own custom configurations*)
- **Stop** button: Stops the scanner and the ejects the image being scanned.
- **Start** button: Starts the scanner if it is not set to autoscan mode.

The File Naming/Viewing tab window

This tab window lets you set up options for naming and saving scanned images. You can also select an image viewer other than the PlotWorks Image Viewer, with which to view scanned images.

*Fig 9.3
File
Naming/
Viewing
tab
window*



The following options are available on the **File Naming/Viewing** tab window:

- **Auto naming** button: Click here to turn on or off automatic file names. Auto naming lets you scan one image after another without having to enter a name for each image. The file name increases by increments of one in the Increment Suffix By box every time a scan is made.
 - **Filename prefix:** This box specifies the prefix of the next scan and the next suffix is appended to the prefix to create the next file name.
 - **Start suffix at:** Enter a starting number (usually 0). This number is added to the end of the first filename (example: Scan00).
 - **Next suffix at:** This specifies which number will be appended and combined with the Filename prefix to create the next file name.
 - **Restart suffix after:** This is the last number used with your chosen prefix (the default is 999) before the autonumbering starts over.
 - **Long filenames** button: Click this to enable or disable long filenames.
 - **Confirm file replacement** button: Click here to be notified when a file is about to be overwritten — this gives you the opportunity to rename the file or change the filename.

- **Viewer Selection** settings let you choose a different image viewer (other than the PlotWorks Image Viewer) with which to view scanned images.
 - **TIFF** button: Click this button to automatically select which viewer to use when viewing TIFF files (Wang is the default).
 - **CALS** button: Click this button to select a viewer for the CALS files (no Wang).
 - **PDF** button: Click this button to select a viewer for PDF files.
 - **Viewer path**: Enter the path (including the drive letter, directory and executable) to the desired viewing application executable or shortcut (for example: C:\Program Files\Myriad\Myriad.exe).

You can also include command line parameters on this line.

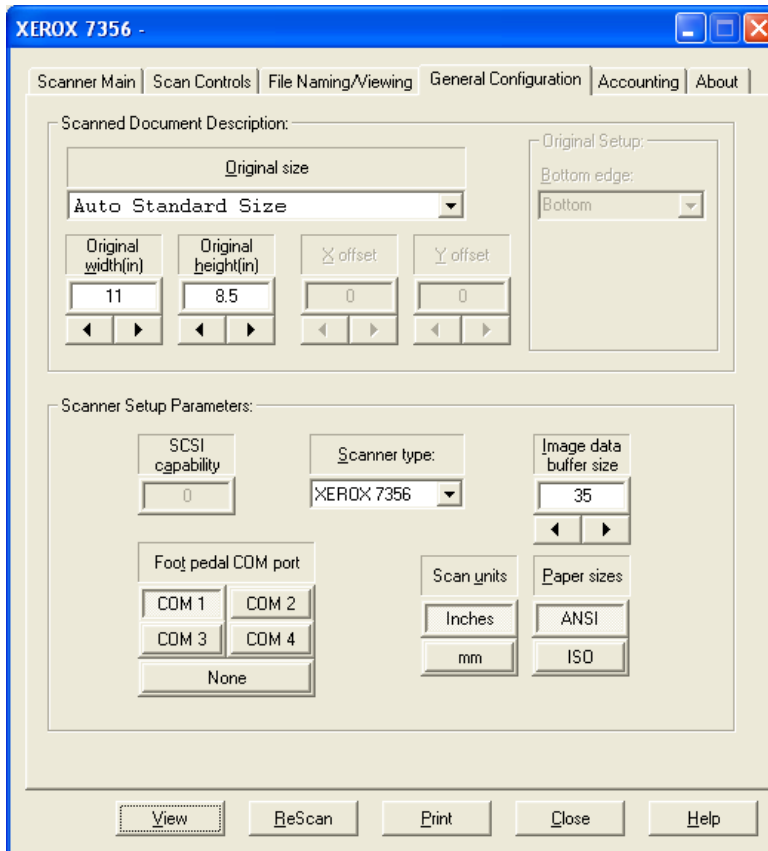


- **Browse** button: Lets you browse the file system for the viewing application's executable or shortcut.
- **Scan and Replace Mode** button: This button is used to replace a CAL or TIFF file saved digitally with a new scanned image.

The General Configuration tab window

This tab window lets you set up basic parameters such as the size of the original document, image offsets, and units of measurement. In addition, you can enable the foot pedal COM port, if supported by your scanner, and set the paper size standards to use (Architectural, ISO, or ANSI)

*Fig 9.4.
General
Configuration
tab
window*

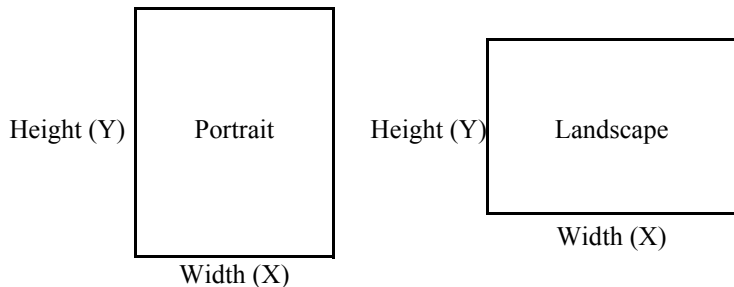


The following options are available in the **General Configuration** tab window:

- **Scanned Document Descriptions:**
 - **Original size:** Select the type of the hard copy document to be scanned (the dimensions associated with each type are displayed alongside the specified type). To specify a nonstandard size, select USER and enter the document's width and height in the Width and Height fields. The Scanner Interface also offers several automatic size detection options.
 - **Original width:** The width of the original document in current units of measure. When you select a standard size in the Size field, this field automatically displays the correct width. If you select USER or Auto Height in the Size field, you must enter a correct width value. (*Note: for*

the XES MAX 200 or 8180, you cannot specify a width larger than the actual document width.)

- **Original height:** The height of the original document in current units of measure. When you select a standard size in the Size field, this field automatically displays the correct height. If you select USER in the Size field, you must enter a correct height value.
- **Document offsets:** You can offset your scanned image from the edge of the page. You can also set a negative* 'Y' or 'X' offset value to remove large borders from your image. (*Only with KIP scanners)
 - **X offset:** Enter an X offset distance (inches or mm) in this box. The X axis is always the lead/trail edge of the image. The X offset limit is "X + document width" not to exceed 36 inches.
 - **Y offset:** Enter a Y offset distance (inches or mm) in this box. The Y axis is always the height of the image. The Y offset can be from 0 inches to 10 inches.



- **Original Setup** group box:
 - **Bottom Edge:** When the Scanner Interface is opened through the Job Editor, users can use the Bottom Edge pull-down list to set the bottom edge for the page being scanned. Users can select from: Bottom, Left, Right, or Top.
 - **Scanner Setup Parameters:**
 - **SCSI capability:** (7356 Scanner only) When the Scanner is set to Auto Scan, this field displays diagnostic information. If you are experiencing scanning problems, Technical Support might ask you for the values in this field to help them resolve the problem. In general, you can ignore this field.
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- **Scanner type:** Allows you to select the type of scanner you are using. It is not currently possible to run more than one Scanner Interface at a time.
- **Image data buffer size:** You can adjust the data buffer size for the scanner by allocating a certain amount of system memory to the scanner. The amount of memory allocated affects the height of the scans that can be held in the buffer while scanning. Too little memory will slow down the system and your image might not scan fully.
- **Foot pedal COM port:** The optional scanner foot pedal lets you scan documents at the scanner, without having to send a command from the Control Station. Click the appropriate button to select a COM port for the 7336 foot pedal.
- **Scan units:** Select the units of measure to use when scanning – inches or millimeters.
- **Paper sizes:** Select the paper size to use – ANSI or ISO.

Accounting tab window

If required for accounting purposes, all applicable customer/client information can be entered, thus maintaining a tracking system.

Fig 9.5
Account-
ing tab
window

The following fields appear in the **Accounting** tab window when the Same As Company function is enabled:

- **Company/Project/Account:** This is the field where the Company/Project/Account information is displayed.
- The Hierarchical Tree Window displays the layout of accounting information.
- **New Account:** This button will create a new account in the Hierarchical Tree window.
- Standard information fields such as; **Contact** (name), **Address** and **Address** (in case of two addresses), **City**, **State/Province**, **Zip code/Postal Code**, **Phone**, and **Comment** (field for client/job-related explanations).

- **Same As Company:** When enabled, this button displays current company information in the standard information fields, meaning that the project has the same contact, address, city/state, zip/postal code, and phone as the company. When disabled, information can be entered into the standard information fields.
 - **Billable** button determines whether the job is billable.
 - **Show On Start Up:** When operating the scanner interface, Accounts panel will appear.
 - **Disable ARU:** Selecting this button will disable the Advanced Reporting Utility (*See "Advanced Reporting Utility (ARU)" on page 10-1 for more information.*).
 - **Timeout:** Determines the time period (in minutes) after which the scanner device will go into sleep mode. If you set it to "0", then the device won't go into sleep mode.
 - **Compact Database:** Selecting this button will take the current data and condense the database.
 - **Save, Cancel and Delete:** The Save button will save all data entered in the tab window to the database. The Cancel button returns the Accounting tab window to the previous settings. The Delete button clears all data from the tab window.
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Setting Up the Scanner Interface



*When the Main Scanner tab window or Scan Controls tab window is active, you can press **Enter** to start the scanning process.*

There are a few steps required to set up your scanner parameters before you begin scanning images. This section takes you through the process.

(Note: Once a file is scanned, you cannot change the darkness, cleanliness, or size of the image. You can use third-party applications to perform these tasks. You can scale the size of your print output in the Job Editor. See "Setting the Image Data Buffer Size" on page Chapter 9-23.)

Set Basic Scanning Parameters

To begin:

1. Open the Scanner Interface for your scanner, if it is not already open.
2. Click the **General Configurations** tab.
3. Under Setup Parameters select the units of measure for scanned images — **Inches** or **mm**.
4. Click the desired Paper size unit: **ANSI** or **ISO**.
5. If you are using a foot pedal, click the appropriate **COM** port button (or **None** if there is no foot pedal attached). These buttons are disabled if your scanner does not support a foot pedal.

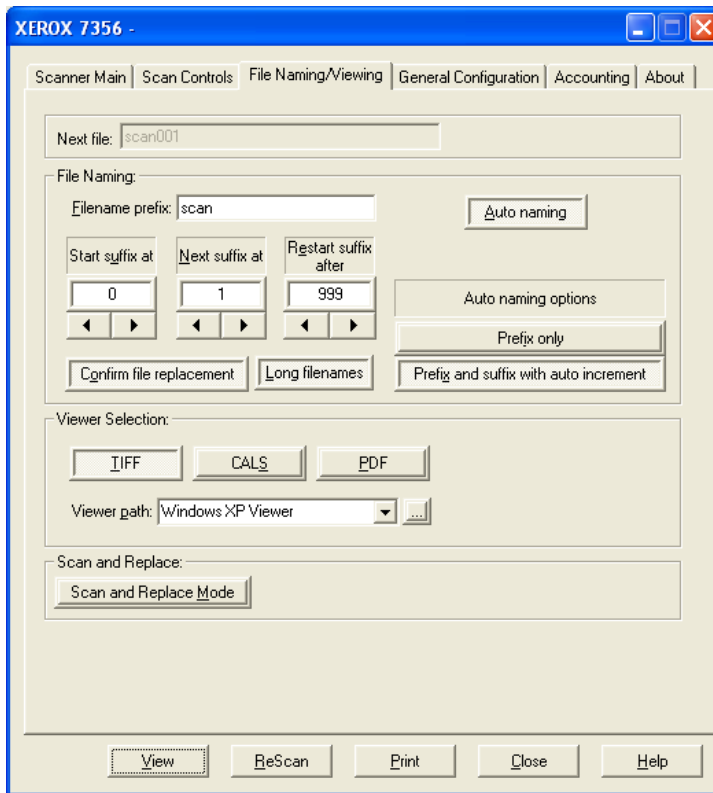
Set Up File Naming

The Scanner Interface lets you set up both an automatic naming system and a custom naming system for your scanned files. To use autonaming as it existed in previous versions of PlotWorks, be sure to click the **Prefix and Suffix with auto increment** button, then specify a prefix name and the Scanner Interface will number each scanned file sequentially.

To set up automatic file naming:

1. Click the **File Naming/Viewing** tab.
 2. Click the **Auto naming** button.
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*Fig 9.6
The File
Naming /
Viewing
tab
window*



3. Click **Prefix and suffix with auto increment**.
4. Enter a prefix (usually a descriptive name) in the **Filename prefix** field. If you want to use long filenames, click the **Long filenames** button.



Long filenames should be used with caution when scanning for archives or for use with other applications. Long filenames are not compatible with DOS and DOS applications.

5. Enter a starting number in **Start suffix at:** (usually 0). This number is added to the end of the first filename: Scan00.
6. Enter a **Next suffix at:** (usually 1). This number is added to the name of the next scanned file, thus providing a sequential numbering system: Scan00, Scan01, etc.
7. Enter a **Restart suffix after** number. This will be the last number used with your chosen prefix (the default is 999) before autonumbering starts over.



*If you continue scanning after reaching the Restart suffix number, the Scanner Interface starts over again with the starting number, and overwrites any files in the working directory with the same name. Click the **Confirm file replacement** button to see a confirmation prompt before overwriting files.*

8. Click the **Scanner Main** tab.
9. In the **Scan Directory** field, enter the path to the directory in which to save your scanned images. Use the **Browse** button to look for the directory, if desired.



If the Scanner Interface was launched from the Job Editor, this field is unavailable—the working directory is determined by the location of the current PLP file. This value cannot be changed. EXAMPLE: PLP is saved in directory C:\Scans; the working directory will be C:\Scans. If the PLP is untitled, the working directory will reflect the PlotWorks install directory.

To set up custom file naming:

1. Click the **File Naming/Viewing** tab.
2. Click the **Auto Naming** button.
3. Click **Prefix only**. The **Next file** text box becomes available. However, the **Start suffix at**, **Next suffix at**, and **Restart suffix after** fields become unavailable.
4. Type a name or prefix in the **Filename prefix** text box. This name will also appear in the **Next file** text box.
5. When you type in your custom prefix, the next number is reset to the start number.
6. Click the **Scanner Main** tab.
7. In the **Scan Directory** field, enter the path to the directory in which to save your scanned images. Use the **Browse** button to look for the directory, if desired.
8. After the image is scanned, the **Next file** text box is replaced with the scan prefix only, and you can name the next file.

If you do not want to use the automatic file naming system, you can name files manually as they are scanned.

To name files manually:

1. Click the **File Naming/Viewing** tab.
 2. Click the **Auto naming** button (so that it is in the up position). This turns off automatic naming.
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3. Before scanning a document, enter a file name in the **Next File** field on the Scanner Main tab window. This name applies to the next image when it is scanned.
4. Repeat step 3 before each new scan.

Image File Formats

You can save your scanned images in CALS Group 4, TIFF Group 3, TIFF Group 4, CT1, and PDF raster files formats.

To choose a format:

1. Click the **Scan Controls** tab. (See Fig 9.2).
2. In the **Scan file format** field, click the desired format button.

Set the Scanning Resolution

To set the resolution of a scanned image:

1. Click the **Scan Controls** tab. (See Fig 9.2).
2. Click a preset resolution (200 or 400 dpi) button in the **Resolution** field. A higher resolution value produces higher quality prints, which results in larger files and longer scanning times. A lower resolution reduces scanning time and file size.

Set the Scanning Speed

You can set your scanner to operate at full speed or at a percentage of its full speed. We recommend scanning complex documents at a lower speed to avoid overloading the system.



This option is not available for some scanners.

To set the scanner speed:

1. Click the **Scan Controls** tab. (See Fig 9.2).
2. Select a speed in the **Scanner speed** box.

Choose a Document Ejection Option

You can determine where scanned documents exit from the scanner.



This option is available for the Xerox 7356 and Vidar scanners only. The Xerox 7396 and 7399 always eject from the back.

To choose a document ejection option:

1. Click the **Scan Controls** tab. (See Fig 9.2).
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2. Select which ejection from the scanner is desired; Front, Back, or None from the **Eject** combo box. Use this option if you plan to rescan. The image does not fully leave the scanner until the next image is loaded. Use this option if you plan to scan multiple images consecutively.

Right Edge Scanning

If scanning a nonstandard size document, select the Right Edge Scanning option to have the software automatically detect the document width.

When Right Edge Scanning is selected, load documents to be lined up along the right edge of the scanner. Documents must be at least 16.5 inches (420 mm) wide to use this option.

1. Click the **Scan Controls** tab.
2. Click the **Scan right** button (below the **Eject** combo box).

Reduce or Enlarge an Image

To scale the image to a percent of the original document size:

1. Click the **Scanner Main** tab.
2. Click a button to set a reduction or enlargement value between 25 and 400 percent of the original document size, or enter a percentage in the value field.

This option is not available for all scanners.

Invert Images

The Scanner Interface allows you to invert the colors in your scanned images. This causes the white portions of the document to become black in the scanned image, and vice versa.

To invert a scan:

1. Click the **Scan Controls** tab.
2. Click the **Invert** button (below the **Image** label for most scanners).

Mirror Image

To mirror an image:

1. Click the **Scan Controls** tab.
2. Click the **Mirror** button (below the **Image** label for most scanners).

Set the Document Size

Before scanning a document, you must enter its size into the Scanner Interface. Or, you can set the Scanner Interface to detect the document size automatically.

To select a standard document size:

1. Click the **General Configuration** tab.
2. In the **Original Size** pull-down field, select one of the following options:
 - Select the actual document size, or:
 - Select **AUTO STANDARD SIZE** to have the software automatically detect the closest (higher) standard size.

To select a nonstandard document size:

In the **Size** field, select one of the following options (some of these settings might not be available, depending on the scanner you are using):

- Select **USER SIZE**, then enter the document's width and height values in the Width and Height fields.
- Select **AUTO SIZE** to have the scanner automatically detect the actual width and height. Only available on the Xerox 7356, Vidar Flash and Vidar Flash+ scanners.
- Select **AUTO STANDARD SIZE** to have the software automatically detect the closest (higher) standard size.
- Select **AUTO STANDARD WIDTH** to have the software automatically detect the closest (higher) standard width. PlotWorks detects the actual height of the document, even if it is not a standard size. When this option is selected, a length must be specified.
- Select **AUTO HEIGHT** to have the software automatically detect the height of the document. The user sets the actual width of the document.
- **AUTO SIZE 9" SERIES** (Xerox 7336 only). Automatically detects the image size when it is scanned and selects the appropriate Architectural size.
- **AUTO SIZE 8.5" SERIES** (Xerox 7336 only). Automatically detects the image size when it is scanned and selects the appropriate ANSI size.

Set the Document Offset

You can offset your scanned image from the edge of the page.



Only KIP scanners support negative offsets.

- To set the offset:
 1. Click the **General Configuration** tab. (See)
 2. Enter an **X offset** distance (inches or mm) in the X offset box.
The X offset limit is "X + document width" not to exceed 36 inches.
 3. Enter a **Y offset** distance (inches or mm) in the Y offset box.
-

The Y offset can be from 0 inches to 10 inches.



For the Xerox 7356, and Vidar scanners, the offset is from the right edge of the scanner, not the right edge of the paper. Refer to the operator manual for your scanner.

Setting the Image Data Buffer Size

You can adjust the data buffer size for the scanner by allocating a certain amount of system memory to the scanner. The amount of memory allocated affects the height of the scans that can be held in the buffer while scanning. Too little memory will slow down the system and your image might not scan fully. The Scanner Interface will not allow you to allocate more memory than is available in your system. If you try to set the amount of memory too high, this generates an error message.

Another drain on memory is enlarging or reducing documents while scanning them. If you are planning to resize a document, scan it at 100% and then use the Job Editor to scale it. This is a much faster, more efficient way to size images before printing.



See "Image Data Buffer Size Guidelines for the Scanner Interface" on page Appendix A-5 for more information..

1. Click the **General Configuration** tab.
 2. In the **Scanner Setup Parameters** box, enter the amount of memory to use in the **Image data buffer size** field (the default is 35 MB).
-



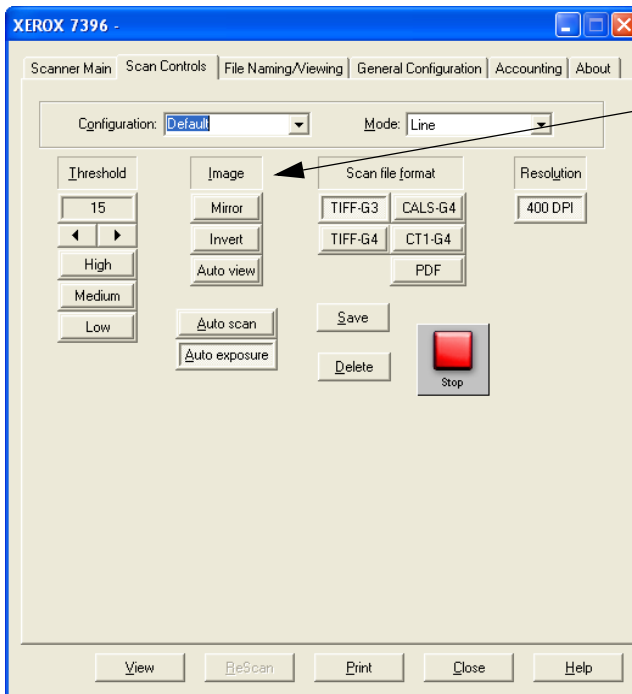
If the system is printing and scanning at the same time and too much memory is allocated to the scanner interface, the printing speed and/or the operation of Windows NT could be affected.

Enhancing Images

Each scanner can operate in several different modes, depending on the type of document being scanned. Select the mode you want in the **Mode** field on the Scan Controls tab window.

Beneath the Mode field there are a variety of buttons and fields that allow you to fine-tune the scanned image. The buttons that are active depend on the scanner you are using and the mode you have selected.

*Fig 9.7
The Scan
Controls
tab
window*



The enhancement buttons are located beneath the **Configuration** and **Mode** fields.



*When the Main Scanner tab window or Scan Controls tab window is active, you can start the scanning process by clicking **Enter**.*

Remove Background Automatically

Even when you are not scanning in Automatic mode, you can set up the Scanner Interface to determine the best Background Removal value automatically.

Removing unwanted background specks reduces the file size and allows the image to compress more efficiently.

To set up Automatic Background Removal:

1. Click the **Scan Controls** tab.
2. Click the **Auto** button under **Background Removal** (just below the **Configuration:** field).

If available and active, you can set the strength of the background removal by using the arrows in the Background bias field. The higher the strength, the more specks and smears will be removed from the background.

Working with Standard Configurations

The Scanner Interface allows the saving of custom scanner settings for later use. Several scanner configurations can be saved under different names, and users will have access to them at any time when scanning similar documents is required. For example, one configuration for scanning line drawings can be created and a different one created for scanning photos or old sepia prints.

To save your current scanner settings:

1. Click the **Scan Controls** tab (if not already displayed).
2. Enter a name for your custom configuration in the **Configuration:** field.
3. Click the **Save** button. The configuration is added to the list.

To open a saved scanner configuration:

- Select the configuration from the **Configuration:** drop-down list.

To delete a custom scanner configuration:

1. Click the **Scan Controls** tab (if not already displayed).
 2. Select the configuration you want to delete from the **Configuration:** drop-down list. *You cannot delete the default configuration.*
 3. Click the **Delete** button.
-

Scanning, Copying and Viewing

Scan Documents Automatically

The system can be set up to scan files automatically as they are loaded into the scanner. The files are scanned according to current scanner configuration. Auto Standard Size will be selected automatically if your scanner does not support user-defined sizes in this mode. If accessing the scanner through the Job Editor, they are added to the job ticket automatically.

To set up Automatic Scanning:

1. Make sure the scanning configurations are set correctly for the images to be scanned. See "Setting Up the Scanner Interface" on page Chapter 9-17.
2. Click the **Auto Scan** button (on the lower half of the Scan Controls tab window).



Due to hardware limitations, when using Auto Scan, digital files cannot be created larger than the original. When Auto Scan is selected, you can only scan in standard, or reduced sizes. If you wish to scan in larger, or non-standard sizes, deselect Auto Scan, and then enter the size manually.

3. When a print is positioned on the scanner, Auto Scan takes over and starts scanning, one print after another.
4. You can make this process even more efficient by enabling the Auto Name feature. See "Set Up File Naming" on page Chapter 9-17 for more information.

Scan Images into a Job Ticket

The Scanner Interface allows the addition of image files to a job ticket as soon as they are scanned. Multiple scanned images can be added to a single job, and even combine scanned files with plot files and DWG files in the same job ticket.

To scan to a job ticket:

1. Open or create a job ticket using the Job Editor.
 2. In the job ticket, select the row just above the spot where you want to add a scanned image.
 3. Click the **Scanner Interface** icon to activate it. (If the Scanner Interface is not running, click the **Scan** button on the Job Editor toolbar.)
 4. Load a document into the scanner.
 5. Click the **Scan** button. The file is added to the job ticket.
-

Scan-to-Print (Copy)

PlotWorks allows the scanner and printer to be used as a copy system. These steps do not apply when using Scan-to-Print with the direct copying method available on some scanners.

To copy a job:



1. Set the destination in the Job Editor to a Job Queue. Set up any other parameters and preferences as desired.
2. Click the **Scan** button on the Job Editor toolbar.
3. Load the selected document into the scanner.
4. In the Scanner Interface, click the **Scan to Print** button.
5. Click **Start** (unless Auto Scan is enabled). PlotWorks scans the image and sends it to the Queue automatically for printing. The file enters the Queue with a priority of “Copy.”



The Copy function sends a single image to the Queue. If there are other images in the job ticket, PlotWorks will not send them to the Queue when the Copy command is in use.

Rescan a Document

Rescan gives the opportunity to “tweak” the scan configurations and test them before doing the final scan. This is useful if Auto Scan of multiple prints is being set up.

- To rescan the current image (listed in the title bar of the Scanner Interface), click **ReScan**.
- To rescan an image listed in a job ticket, select the image in the job ticket, then click **ReScan** in the Scanner Interface. The newly scanned image replaces the selected file.

Scanning a Document to Replace a Saved Digital Document

Occasionally you will want to replace a CAL or TIFF file, saved digitally, with a new scanned image.

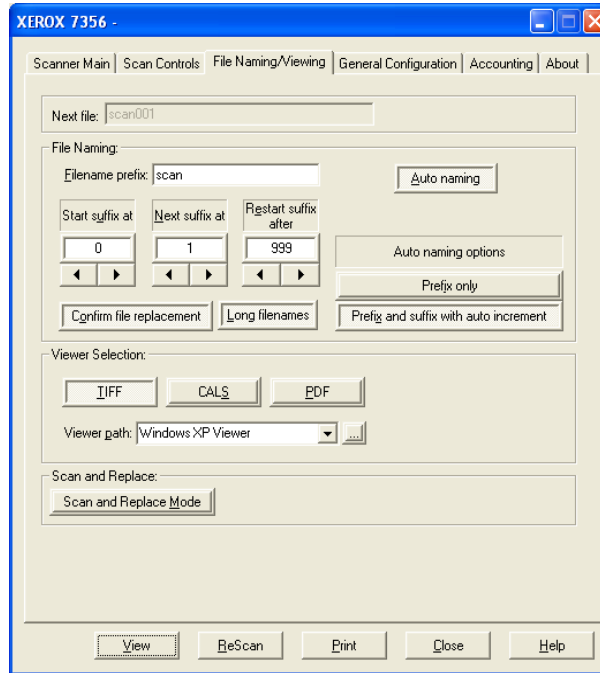


To use the Scan and Replace feature, the Scanner Interface must be opened using the Scanner Interface shortcut. This feature will not work if the Scanner Interface is opened from within PlotWorks

To Scan and Replace a TIFF file:

1. Click on the **File Naming/Viewing** tab to display the File Naming/Viewing tab window.

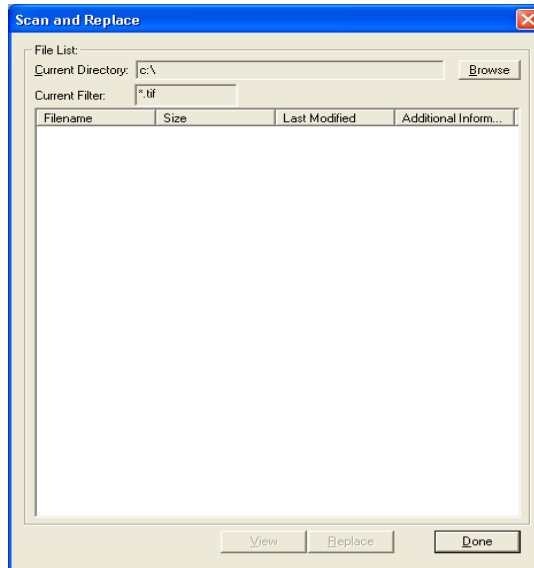
*Fig 9.8
File
Naming/
Viewing
tab
window*



2. Click on the **Scan and Replace Mode** button. This opens the Scan and Replace dialog box.

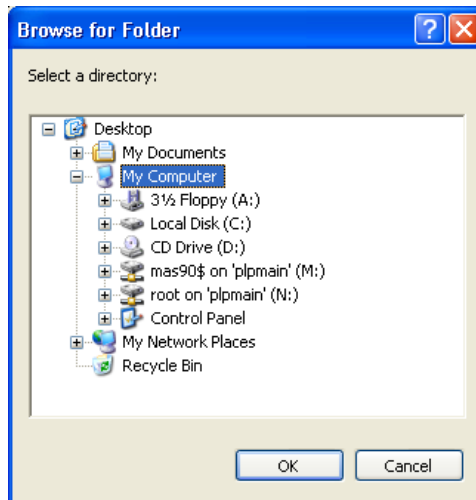
Note that when the Scan and Replace Mode button is selected the scanner is placed in the Scan and Replace mode, therefore the **Start**, **ReScan**, and **Auto scan** buttons, the **Next File** text box, and the **File Naming** options, become unavailable on the Scanner Interface.

*Fig 9.9
The Scan
and
Replace
window*



3. Click on the **Browse** button. This opens the Browse for Folder dialog box.

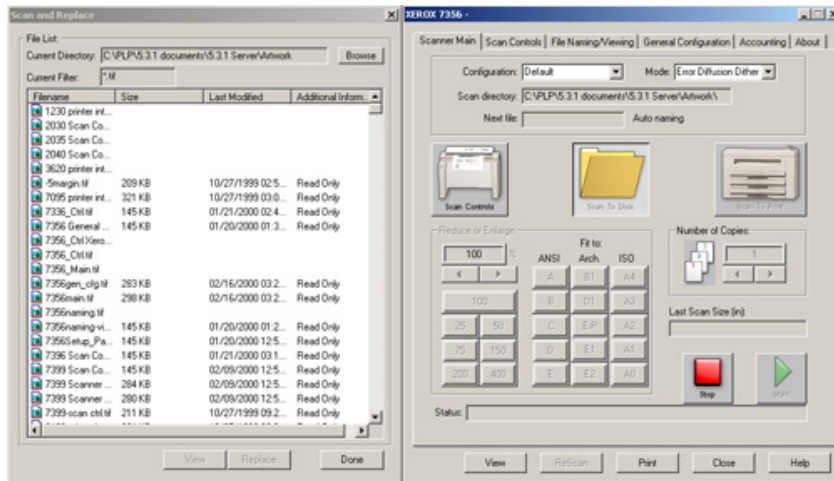
*Fig 9.10
Browse for
Folder
dialog box*



4. Select the folder that contains the file you want to replace.
5. Click on the **OK** button.
 - The Browse for Folder dialog disappears.

- The **Current Directory** read-only field displays the folder and path selected in Step 5.
 - The Scan and Replace window now lists all TIFF files contained in the folder.
6. Click on the Scanner Interface **Main** tab window to display the Main tab window.
 7. Arrange the Scanner Interface **Main** tab window and the **Scan and Replace** window so that you can see them both on your monitor as illustrated below.

*Fig 9.11
The Scan
and
Replace
window
arranged
next to the
Scanner
Main tab
window so
that both
are easily
viewed*



8. Highlight the file you want to replace in the Scan and Replace window. This activates the View and Replace buttons on the Scan and Replace window.
9. Click on the **View** button. This opens the image file in the viewer. Confirm that you have selected the correct file to replace.
10. Close the Image Viewer window.
11. Load the document that needs scanning on the scanner to prepare for scanning.



*Note: The MAX 200 and 8180 scanners do not notify PlotWorks that a document is inserted, therefore if a document is not loaded in the scanner when the **Replace** button is clicked, the original file is deleted.*

12. Click on the **Replace** button.
 - The scanner will begin scanning the document.
 - The Main tab window will display an animated page that moves between the Scan Controls and Compressing buttons. This indicates that a scan is

in progress. When this animation stops your scan is complete and the original file is replaced with the one just scanned.

13. Click on the **View** button on the Scan and Replace window again. This opens the image file in the viewer. Confirm that the original file is replaced.
14. Click on the **Done** button. This closes the Scan and Replace window.

Send the Current File to the Printer

Sends the current file to the printer when the Scanner Interface is used with the Job Editor.

To send the current file to the printer:

1. Open the **Scanner Interface** from within Job Editor.
2. Set the destination in Job Editor to the Job Queue. Set up any other parameters and preferences as desired.
3. In the Main Scanner Interface tab window, click **Scan to Print**. The image is sent to the Queue for processing and printing.

View a Scanned Image

Use the Image Viewer to see files as they are scanned. There are two ways to access the Viewer from the Scanner Interface:

Automatic Viewing:

- To open the Image Viewer automatically as each image is scanned, click the **Auto View** button on the Scan Controls tab window.

Manual Viewing:

- To view the current file (listed in the title bar), click the **View** button on the bottom of the tab window.



See “Viewing Image Files” on page 5-1 for more information.

Change Viewing Applications

You can select what image viewing application to use for viewing scanned images. There are two preset default viewers. A Viewer Path field is also provided to select a different third party viewer.

To select a viewer for each file type:

1. Click on the **File Naming/Viewing** tab.
 2. Click on the **TIFF** button.
-

3. From the Viewer Path drop down list, select the viewer to use when scanning to TIFF format. The Wang/Kodak Imaging Viewer is the default when using Windows NT and the Windows XP Viewer when using Windows XP. If a different viewer is desired, enter its path (including the drive letter, directory and executable file name) for example: C:\Program Files\Myriad\Myriad.exe. Command line parameters for this line can also be included. You can also click on the **Browse** button and select the application's executable file or shortcut.



When an image is scanned with Auto View enabled, the selected viewer will open and display the scan.

Similarly select a viewer for CALS and PDF files.

Scanner-Specific Options

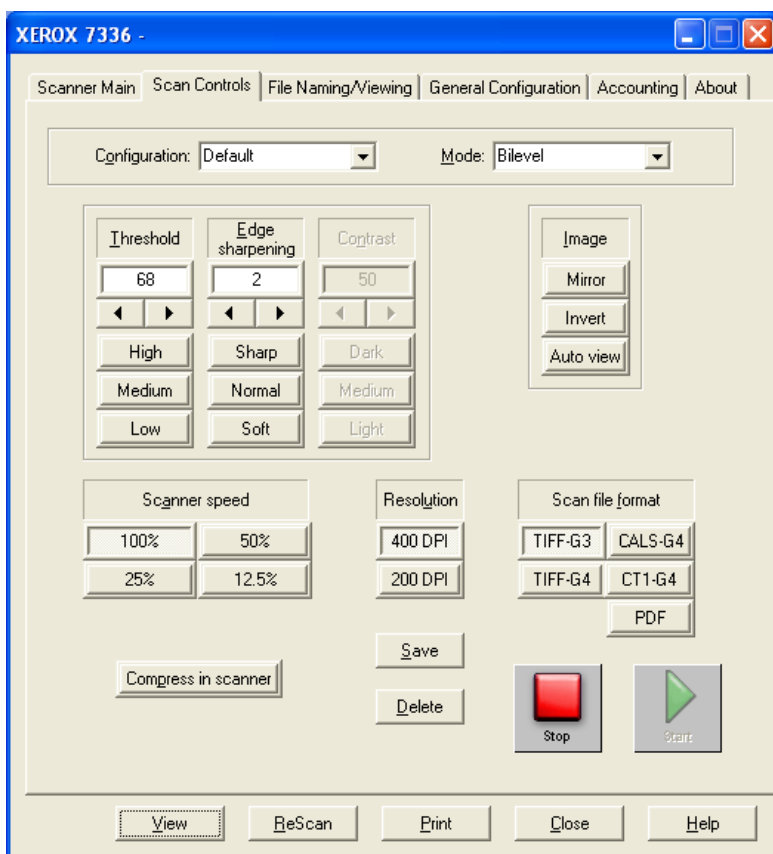
This section provides scanner specific information.

Xerox 7336 Scanner Interface

This section details only the features and settings specific to this scanner. Any features, options, or menus not mentioned are considered to be standard for all scanners. Their descriptions and instructions for use are found in *Chapter 9- The Scanner Interface*.

7336 Scan Controls tab

Fig 9.12
7336 Scan
Controls



The following options are available for the 7336 scanner:

- **Mode:** Lets you select the appropriate scanner mode:
 - **Bilevel:** This mode works best with line art.

- **Dither/Halftone:** This mode works best with photo or grayscale images.

The following enhancement buttons are available for the 7336 scanner. The active buttons depend on the mode you have selected.

- **Edge sharpening:** Lets you sharpen the image to make fine lines clearer. Click the **Soft**, **Medium**, or **Sharp** buttons, or enter a value in the field.
- **Threshold:** Lets you set the point that divides black and white data. Any scanned data that is lighter than the threshold value will display as white. Any scanned data that is darker than the threshold value will display as black. Click the **Low**, **Normal**, or **High** button, or enter a value in the field.
- **Contrast:** This option is only available when you have dither/halftone mode selected and allows you to adjust the contrast between light and dark areas.

7336 General Configuration Options

The 7336 General Configuration dialog box is standard with the exception of the ability to use a foot pedal. The optional scanner foot pedal lets you scan documents at the scanner, without having to send a command from the Control Station.



*When the Main Scanner dialog box or Scan Controls dialog box is active, you can press **Enter** to start the scanning process.*

To set up a foot pedal:

1. Connect the foot pedal to a COM port on your scanning control station.
2. In the Scanner Interface, click the **General Configurations** tab.
3. In the **Foot pedal COM port** box, click the button corresponding to the COM port to which the pedal is connected.

To scan using the foot pedal:

1. Load the document into the scanner.
2. With your foot, press the foot pedal. The document is scanned and saved as if you had clicked on the **Scan** button.

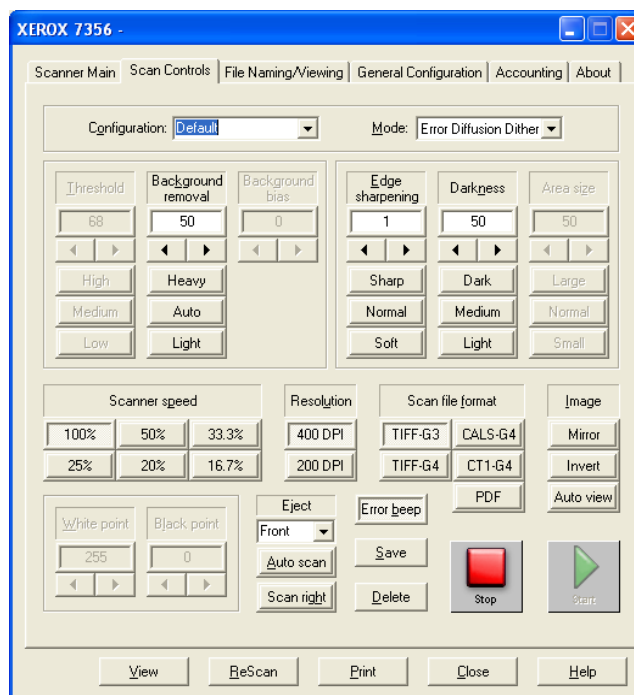


*If you need to remove the foot pedal for some reason, remember to set the COM port to **None**.*

Xerox 7356 Scanner Interface

This section details only the features and settings specific to this scanner. Any features, options, or menus not mentioned are considered to be standard for all scanners. Their descriptions and instructions for use are found in *Chapter 9- The Scanner Interface*.

Fig 9.13
7356 Scan
Controls



*When the Main Scanner dialog box or Scan Controls dialog box is active, you can press **Enter** to start the scanning process.*

The following modes are available in the 7356 scanner's controls:

- **Mode:** Lets you select the appropriate scanner mode:
 - **Bilevel (Manual):** This mode works best with line art that has a fairly constant background
 - **Bilevel (Adaptive Area):** This mode works best with line art that uses text or other fine lines and has a varying background (such as a faded blue line). Adaptive thresholding allows the Scanner Interface to set different white point (background) values for different areas of the

image. The white point is set by determining the difference between the background and the data in a set area. The size of this area is specified in the Area Size setting. This mode does not work well with documents containing large black areas.

- **Ordered Dither:** This mode works best with photographic images. Ordered dithering resolves lines very clearly, but it can produce a somewhat grainy image. Ordered Dither creates larger raster file sizes.
- **Error Diffusion Dither:** This mode works best with photographic images and produces very smooth gradients. However, this mode can diffuse the edges of lines, causing a “fuzzy” look. Error Diffusion Dither creates larger raster file sizes.

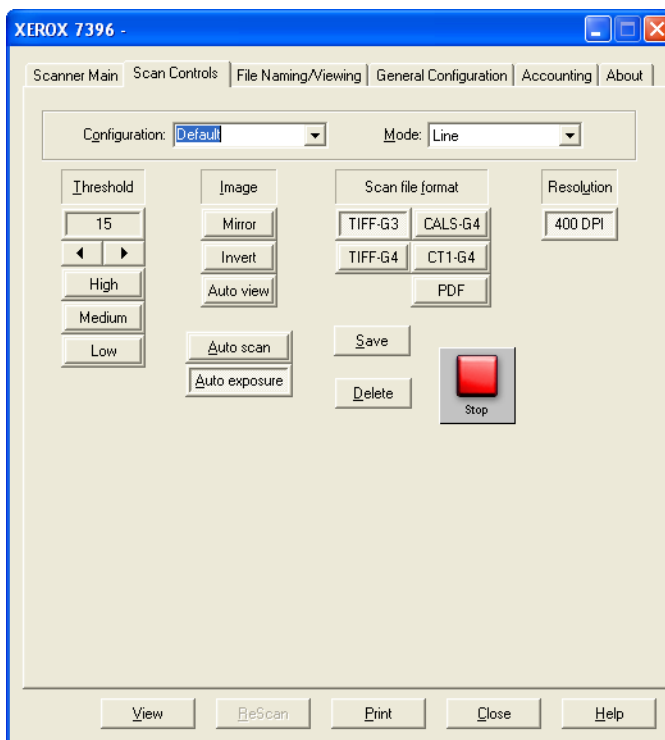
The following enhancement buttons are available for the Xerox 7356 scanners. The active buttons depend on the mode you have selected.

- **Eject:** Determines which direction a scanned document can be removed from the scanner. The scanned document can be selected to withdraw from the Front of the scanner, Back of the scanner or None. If None, the document is scanned for a desired area and then must be removed manually.
 - **Threshold:** Lets you set the point that divides black (0) and white (100) data. Any scanned data that is lighter than the threshold value will display as white. Any scanned data that is darker than the threshold value will display as black. Click the **Low**, **Medium**, or **High** button, or enter a value in the field. Any scanned data that is lighter than the threshold value will display as white.
 - **Darkness:** Lets you set the brightness or darkness of the image. Click the **Light**, **Medium**, or **Dark** button, or enter a value in the field.
 - **Area size:** Lets you set the size of the area used for adaptive thresholding. This value is a relative number, with 0 representing the minimum area allowed, and 100 representing the maximum area allowed. Set this option to scan past any dark or light leading edges on the image. Use the buttons for preset values (Small, Normal, or Large) or enter a value in the field.
 - **Background removal:** Lets you remove unwanted specks and smears from the image background. Click the **Light**, **Auto**, or **Heavy** button, or enter a value in the field.
 - **Background bias:** If Auto under Background removal is clicked, you can set the strength here. The higher the strength, the more specks and smears will be removed from the background.
 - **Edge sharpening:** Lets you sharpen the image. Click the **Soft**, **Normal**, or **Sharp** buttons, or enter a value in the field.
-

Xerox 7396 Scanner Interface

This section details only the features and settings specific to this scanner. Any features, options, or menus not mentioned are considered to be standard for all scanners. These are described in *Chapter 9- The Scanner Interface*.

Fig 9.14
7396 Scan
Controls



The following **Scan Controls** options are available for the 7396 scanner:

- **Mode:** Lets you select the appropriate scanner mode:
 - **Line:** This mode works best with line art.
 - **Photo1:** This mode works best with photographic images.
 - **Photo2:** This mode works best with dark prints.

The following enhancement buttons are available for all modes:

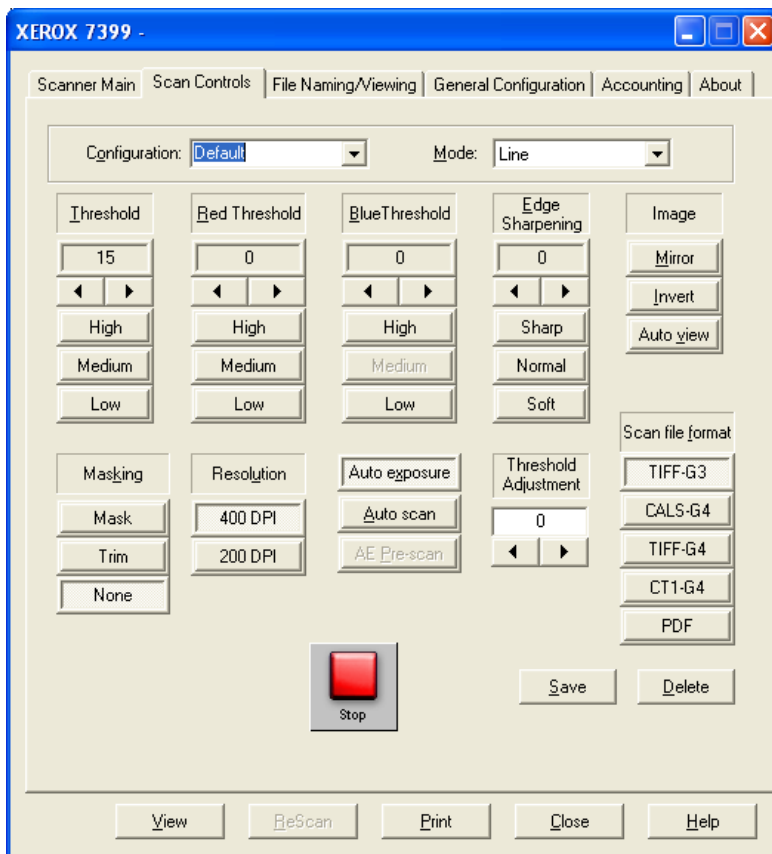
- **Threshold:** Lets you set the point that divides black (0) and white (100) data. Any scanned data that is lighter than the threshold value will display as white. Any scanned data that is darker than the threshold value will display as black.

- **Auto exposure:** When selected (down) lets the software automatically set the best darkness, white point, and sharpening values as each image is loaded.
- **Threshold:** Lets you set the point that divides black and white data. Any scanned data that is lighter than the threshold value will display as white. Any scanned data that is darker than the threshold value will display as black. Click the **Low**, **Medium**, or **High** button, or enter a value in the field.
- **Auto exposure:** When selected (down) lets the software automatically determine the amount of background removal, allowing the image to compress more efficiently.

Xerox 7399 Scanner Interface

This section details only the features and settings specific to this scanner. Any features, options or menus not mentioned are considered standard for all scanners.

Fig 9.15
7399 Scan
Controls



The following modes are found in the 7399 scanner. Under **Scan Controls**:

- **Mode:** Lets you select the appropriate scanner mode.
 - **Line:** This mode works best with line art.
 - **Text/Photo:** This mode works best with a combination of line and photographic images or less than perfect originals.
 - **Photo:** This mode works best with photographic images.

The following enhancement buttons are available for the 7399 scanner. The active buttons depend on the mode you have selected.

- **Threshold:** Lets you set the point that divides black (0) and white (100) data. Any scanned data that is lighter than the threshold value will display as white. Any scanned data that is darker than the threshold value will display as black. Select the **Low**, **Medium**, or **High** button, or use the arrows to set a value.
 - **Threshold Adjustment** (*Only available when Auto Exposure is selected*): This selection adds or subtracts the value listed in the box from the threshold value that the scanner detects.
 - **Red Threshold:** Lets you set the point that divides red (0) and white (100) data. Any scanned data that is lighter than the threshold value will display as white. Any scanned data that is darker than the threshold value will display as red. Select the **Low** (Level 3), **Medium** (Level 2), or **High** (Level 1) button, or use the arrows to set a value. When Level 1 is selected, a weak red image is not copied; but when Level 3 is selected, the red image is copied.
 - **Blue Threshold:** Lets you set the point that divides blue (0) and white (100) data. Any scanned data that is lighter than the threshold value will display as white. Any scanned data that is darker than the threshold value will display as blue. Select the **Low** (Level 1), or **High** (Level 2) button, or use the arrows to set a value. When Level 1 is selected, a weak blue image is not copied; but when Level 2 is selected, the blue image is copied.
 - **Edge sharpening:** Lets you sharpen the image to make fine lines clearer. Select the **Soft**, **Normal**, and **Sharp** buttons, or enter a value in the field. Soft (minimum) option blurs the lines. Sharp (maximum) makes lines crisper and thinner. Values range from 4 to 1.
 - **400 DPI (Resolution):** Lets you select a higher resolution for scanning. The higher resolution value produces a higher quality print, but increases the scanning time and creates a larger file.
 - **200 DPI (Resolution):** Lets you select a lower resolution for scanning. A lower resolution reduces scanning time and file size, but the document will be of lower quality.
 - **Masking:** Lets you modify an image on a document that is marked with a specified pen. There are three buttons to control Masking:
 - **Mask:** When an image is enclosed by a circle made by a specified pen, the image is not copied.
 - **Trim:** Only the image is copied when enclosed by a circle made by a specified pen.
 - **None:** When this is selected, masking is not used.
-

- **Auto exposure:** When selected (down), lets the software automatically determine the amount of background removal, allowing the image to compress more efficiently.
- **AE Pre-scan:** This button activates the scanner's prescan function. When the button is pressed, the scanner scans in a small portion of the document, records the data, and returns the document to the starting position. When the document completes scanning, the prescan is compared to the background of the image to calculate the correct background removal.

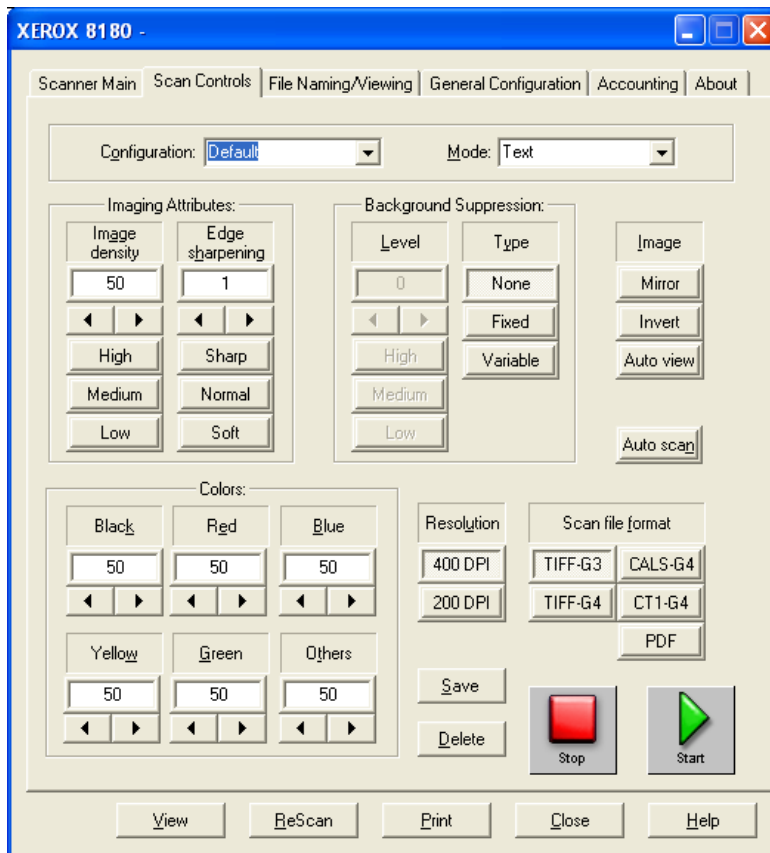
Xerox MAX 200 and 8180 Scanner Interfaces



When the Main Scanner tab window or Scan Controls tab window is active, you can press **Enter** to start the scanning process.

This section pertains to the Xerox MAX 200 and 8180 scanners only. Features, options, or menus not mentioned here are considered standard for all scanners and are explained earlier in this chapter.

Fig 9.16
8180 Scan
Controls



The Xerox MAX 200 and 8180 operate in the following modes:

- **Text:** This mode works best with line art.
- **Photo:** This mode works best with photographic images.

- **Text and Photo:** This mode works best with a combination of line and photographic images or less than perfect originals.

The Xerox MAX 200 has the following additional modes:

- **Picture:** This mode works best with originals that are halftones, or pictures made up of dot matrix, like a newspaper 'picture'.
- **Low Contrast:** This mode works best with originals that have a low line contrast such as pencil drawings on vellum/tracing paper.
- **Dark:** This mode works best with original drawings that have a dark background such as sepias or blueprints.

The following enhancement buttons are available for the Xerox MAX 200 and 8180 scanners.

- **Image Density:** Use this feature to lighten or darken the output image. Click the **Low**, **Medium**, or **High** button, or enter a value in the field.
- **Edge sharpening:** Lets you sharpen the image to make fine lines clearer. Click the **Soft**, **Normal**, or **Sharp** buttons, or enter a value in the field. Minimum (Soft) sharpness softens lines. Maximum (Sharp) makes lines crisper and thinner.
- **Background Suppression:** Removes unwanted background, allowing the image to compress more efficiently.
 - **Type:**
 - **None:** Background suppression is disabled.
 - **Fixed:** Use when the background is uniform.
 - **Variable:** Use when the background varies from dark to light areas.
 - **Level:** Determines the amount of light or dark to remove from the background.



Use Background Suppression with caution as it can remove light lines or images.



*When setting up a Xerox MAX 200 or 8180 printer/scanner combination, you must go into the Windows **Control Panel** > **Settings** > **Devices** to disable both SCSI Scan and SCSI Print. SCSI Scan is usually disabled by default, but make sure that both functions are disabled.*

- **Auto scan:** This button is used to scan loaded files automatically, using your current scanner configuration.
-



Please note that due to hardware limitations, when using Auto Scan, digital files cannot be created larger than the original. When Auto Scan is selected, you can only scan in standard, or reduced sizes. If you wish to scan in larger, or non-standard sizes, deselect Auto Scan, and then enter the size manually.

Xerox MAX 200 and 8180 Scan Control options:

- **Colors:** Lets you adjust the final appearance of colors on the original document. The color areas will appear as their relative shades of black. You can adjust the scanner's sensitivity to black, red, blue, yellow, and green. Use the "Others" setting for all other colors. See "Highlight Color Printing" on page 8-47 for more information.

Océ 9800 TWAIN Scanner

Océ 9800 Scanner support is based on TWAIN technology. You can scan documents directly into the PlotWorks Job Editor, and to a selected directory in one step. Scanned documents can be saved as TIFF, CALS, or PDF files.

Configure TWAIN Scanning options

Select the TWAIN Source

Before you can use the Océ 9800 Scanner you need to select it as a TWAIN source.

1. Open the **Job Editor** if it is not already open.
2. Click on the **File** menu.
3. Select **Twain** from the File menu. The Twain sub menu opens.
4. Click on **Select Source**. The Select Source dialog box displays.
5. Click on **9800 Scanner 1.3** if it is not already selected.
6. Click on the **Select** button. The Select Source dialog box disappears.

The Job Editor now knows that the Océ 9800 Scanner is the device to use for scanning.

Select TWAIN scanning options

To do so:

1. Click on the Job Editor **Setup** menu.
2. Select **Twain Options**. The Twain Scanning Options dialog box appears. This dialog box is used to select file-naming options for scanned images, and set other TWAIN scanning options.
3. Select **Scan button launches TWAIN interface**.
4. Enter values for options provided in this dialog box. For more information on options provided refer to "Twain Scanning Options" on page 4-88.
5. When you have completed setting your options, click on the **OK** button.

Using the Océ 9800 Scanner

Follow the instructions below to scan using the 9800 scanner:

1. Open the Job Editor if it is not already open.
 2. Click on the Scan button from the toolbar. The Océ 9800 Scanner TWAIN dialog box opens.
-

3. Depending upon how many documents you are scanning click on either the single or double arrow buttons. Click the single arrow button if you are only scanning one document. Click the double arrow button if scanning more than one document.

*Fig 9.17
The Océ
9800
Scanner
TWAIN
dialog box*



4. All other scan settings are selected on the scanner it self.
5. Click on the Stop button when you have finished scanning.

Copying with the Océ 9800 Scanner

The Océ 9800 scanner does not have a copy function. To use this scanner as a copier, scan all the originals into the Job Editor and then output the files. To print individual files only, select the files in the Job Editor grid, select the "Selected files only" check box from the Output dialog box and output the files.

To change a file orientation use the Job Editors "Bottom Edge" option from the "Specified Size" tabbed dialog box of the Detailed Property Sheet. For more information refer to Chapter 4 of the PlotWorks User Guide.

Synergix Scanner

Synergix Scan System support is based on TWAIN technology. Using the PlotWorks Synergix Scan System software with the XES Synergix Scanner, you can scan documents directly into the PlotWorks Job Editor, and to a selected directory in one step. Scanned documents can be saved as TIFF, CALS, or PDF files.

Computer Requirements:

- FireWire card (provided by PLP Digital Systems).
- Windows XP Professional operating system.
- 1.5 GB RAM.

Firmware Requirements:

- Synergix Scanner Firmware version 3.1.9.

Installing the Synergix Scanner

Before attempting to install the scanner ensure that you are logged onto the computer with Administrative rights and the FireWire card is installed. Instructions to do so follow.

Confirming Administrative Rights

1. Click on the Windows **Start** button.
2. Click on **Control Panel**.
3. Double click on **User Accounts**. The User Accounts dialog box opens displaying the Users tab.
4. Locate your user name in the **User Name** column and ensure that Administrator is listed in the **Group** column. If it is not listed in the Group column, contact your organization's network administrator.

Installing the FireWire card

1. Ensure the computer is turned off
2. Insert the FireWire card according to the manufacturer's instructions.
3. Turn on the computer. Once Windows XP Professional is started, the card is automatically recognized.



Do not plug in the scanner just yet.

Configure the Hardware and Software

1. Install PlotWorks.
-

2. Once the installation is complete turn the computer completely off.
3. Plug the scanner cable into the FireWire card. Any FireWire port can be used. The Synergix Scanner is connected either to the PlotWorks Print Server computer or to the AccXES controller.



The Synergix Scanner can only be connected to one controller at a time. If the scanner is attached to the AccXES Controller through the FireWire connection, it cannot be connected to the PlotWorks Print Server using a different FireWire connection.

4. Turn the scanner on.
5. Wait for the "P" to appear in the LED display on the back of the scanner.
6. Turn the computer on.
7. Once Windows starts, the display on the back of the scanner should change to "P." If a "P." does not display on the Scanner LED there is no communication between the Synergix Scanner and the computer. Ensure the "P." displays before proceeding.



8. If prompted by Windows to install a driver, do *not* connect to the Internet to locate drivers. Click on the **Cancel** button to stop and close the new hardware installation wizard. Then skip to the following section titled Verify the driver is installed.

If you are not prompted to install the driver continue with these instructions.



*The last screen of the Wizard contains a check box instructing Windows to not prompt to install this hardware again. Do **NOT** select this check box.*

9. Open Windows **Control Panel**.
 10. Double click on **Add Hardware**.
 11. Click on **Next**.
 12. Select **Yes, I have already connected the Hardware**.
 13. Select **Add a new hardware device**.
 14. Click on **Next**.
 15. Select **Install the hardware that I manually select from a list (Advanced)**.
 16. Click **Next**.
 17. Select **Show All devices**.
-

18. Click on **Next**.
19. Click on **Have Disk**.
20. Browse to **WINDOWS\System32\drivers**
21. Click **Next**. The Synergix driver is installed.
22. Once completed click on **Finish**.
23. Reboot the computer.

Verify the driver is installed

1. Click on the Windows **Start** button.
2. Click on **Control Panel**.
3. Double click on **Administrative Tools**.
4. Double click on **Computer Management**.
5. Click on **Device Manager**.
6. Locate the **Synergix 1394 Scanner**.
7. Close the **Device Manager**.

Color Scanning Support

PlotWorks supports 24-bit color scanning using the Synergix scanner for scan to file engineering color purposes. The **Color Feature Key**, provided by Xerox, is required for color scanning. Install the Feature Key now if you are planning to use color scanning.

PlotWorks color support for the Synergix scanner is designed for:

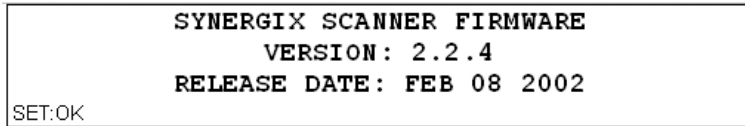
- Scanning in highlight color originals.
- Scan to color files (CAD and GIS) without color management.

It is not designed for full color graphics, art scanning, or color copying currently.

Ensure the Scanner is Ready to Use

When the scanner is first turned on, the firmware version and release date information appear on the scanners user interface screens. (These are the panels on the scanner it self.) Then the user interface screen should display '**Set:OK**' if the scanner is ready for use.

Fig 9.18
*The
Scanners
User
Interface
screen*



Also ensure that the back LED display shows a 'P' with a dot after it. The 'P' indicates that the scanner is initialized. The dot appears once connection is established with the FireWire card.

Configure TWAIN Scanning Options

Select the TWAIN Source

Before you can use the Synergix Scanner you need to select it as a TWAIN source.

1. Open the **Job Editor** if it is not already open.
2. Click on the **File** menu.
3. Select **Twain** from the File menu. The Twain sub menu opens.
4. Click on **Select Source**. The Select Source dialog box displays.
5. Click on **Synergix Scanner 1.0** if it is not already selected.
6. Click on the **Select** button. The Select Source dialog box disappears.

The Job Editor now knows that the Synergix Scanner is the device to use for scanning.

Select TWAIN scanning options

To do so:

1. Click on the Job Editor **Setup** menu.
2. Select **Twain Options**. The Twain Scanning Options dialog box appears. This dialog box is used to select file-naming options for scanned images, and set other TWAIN scanning options.
3. Enter values for options provided in this dialog box. For more information on options provided refer to "Twain Scanning Options" on page 4-88.
4. When you have completed setting your options, click on the **OK** button.



If at a later date you want to change any TWAIN scanning option, it is necessary to first close the Synergix Scan System dialog box before opening the TWAIN Scanning Options dialog box to make your changes. Then close the TWAIN Scanning Options dialog box, and reopen the Synergix Scan System dialog box. Otherwise your changes will be ignored.

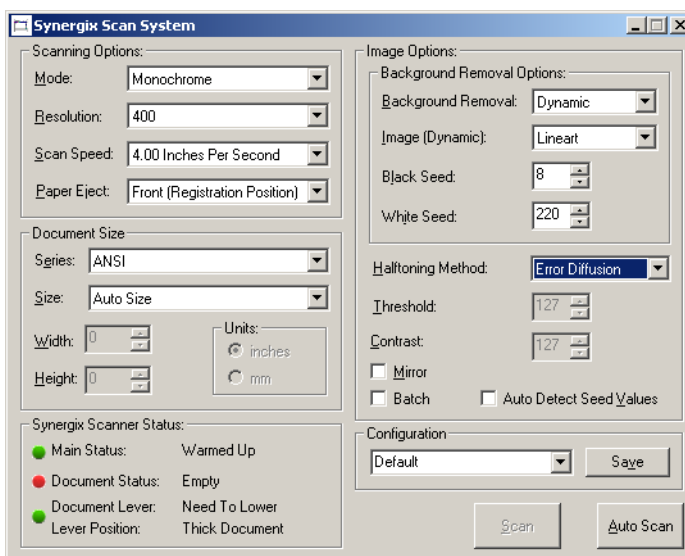
How to use the Synergix Scan System

This section is designed to provide a general description of how to use the scanner. Each function is not described in detail here, but is described later in this chapter along with common trouble shooting information.

Scanning a drawing into the Job Editor

1. Load the document to scan centered and face down.
2. Open the **Job Editor** if it is not already open.
3. Open the Synergix Scan System dialog box. There are two possible ways to do this:
 - If you selected the "**Scan button launches TWAIN interface**" check box in the TWAIN Options dialog box, click on the **Scan** button on the Job Editor tool bar.
 - Otherwise, click on the Job Editor File menu, select **TWAIN**, and then **Acquire**.

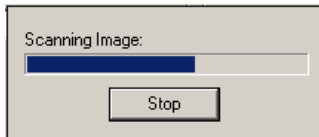
*Fig 9.19
The
Synergix
Scan
System
dialog box*



4. Select a scanning configuration from the **Configuration** drop down list depending on the type of document you are scanning. These options are discussed in detail later.
5. Select **Size** options. The Auto Width option usually correctly detects the document width. If not, rescan the document as before or specify the document size.

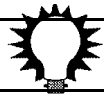
6. Click the **Scan** button. The Scan progress dialog box appears. The scan progress bar remains active until the scan is completed. If it is necessary to stop the scanning process click the **Stop** button on the scan progress dialog box. The user then has to remove the document manually from the scanner.

*Fig 9.20
The Scan
Progress
dialog box*



Once the image is scanned:

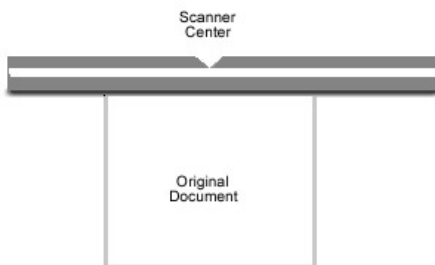
- If you selected the Launch viewer after each scan check box from the TWAIN Scanning dialog box, the Viewer will display the scanned image.
- The scanned document is saved in the Scan directory specified in the Twain Scanning Options dialog box.
- The scanned document is listed in the Job Editor grid. Refer to Chapter 4 for information on how to set print parameters and output print jobs.



Subsequent scans are added in the Job Editor grid one after the other or immediately after a selected document, if one is selected.

Loading documents to scan

*Fig 9.21
Load the
document
centered
on the
scanner*



The Synergix Scanner is a center-based scanner. The scanner expects the document to be loaded so that the center of the original document lines up with the center of the scanning area. So for best results insert documents face down and centered on the scanner.

User specified document sizes like **User Size**, **Auto Height**, and selected standard sizes are all dependant on documents loaded centered in the scanner. If the document is not centered the resulting scan may be clipped.

When **Auto Standard Size** or **Auto Standard Width** is selected and the document is not centered, but is instead shifted left on the scanner, the media space added for the standard size may view or print as a black or stripped area on the scanned image depending on the scanning mode used.



If the document does not load correctly the first time, remove the document and wait for the light on the scanner to blink off, and then back on before reloading the document.

Copying with the Synergix Scanner

The Synergix Scanner does not have a copy function. To use the Synergix Scanner as a copier, scan all the originals into the Job Editor and then output the files. To print individual files only, select the files in the Job Editor grid, select the "Selected files only" check box from the Output dialog box and output the files.

To change a file orientation use the Job Editors "Bottom Edge" option from the "Specified Size" tabbed dialog box of the Detailed Property Sheet. For more information refer to Chapter 4 of the PlotWorks User Guide.

Production Scanning

To optimize scanning speed for production scanning load the original documents centered and use the following options:

- Mode: Monochrome
- Document Size: Select one of the standard sizes provided or specify a User Size
- Paper Eject: Rear
- Batch mode: Select this check box
- Scan Speed: Turbo III (requires the Xerox Feature Key)

Intentionally not scanning a document completely

In some cases it is necessary to not scan in all elements of an original document. For example the original may contain a hanging strip, a border, etc. that you do not want to include in the scanned image. In this case you can scan the document intentionally clipping the unwanted area, with or without having the unwanted area pass through the scanner.

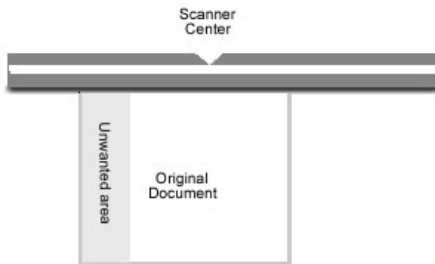
Clipping the document

To clip the document:

1. Specify the size of the document by either:
 - Selecting a size from the Size drop down list
-

- Selecting **User Specified** and then entering values in the **Width** and **Height** fields.
1. Load the original document in the scanner with an off set from the center that will accommodate the area to clip. Therefore the hanging strip or border is outside the specified scan width.
 3. Click the **Scan** button.

*Fig 9.22
Loading
the
original
offset from
the center*



Example

To scan in a 17x22" document that includes a 2" border we want to skip we would:

1. Select **User Specified** from the **Size** drop down list.
2. Enter 17" in the **Height** field.
3. Enter 20" in the **Width** field.
4. Load the document with a 2" offset from the center of the scanner. This places the border outside of the specified scan width.
5. Click on the **Scan** button.

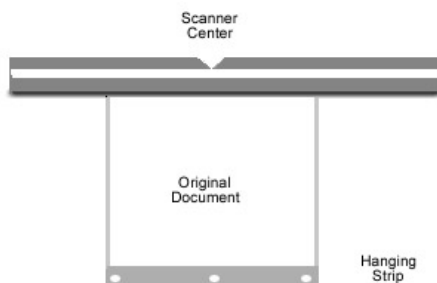
The scanned image will measure 17x20".

Clipping without passing through the scanner

To clip the document without passing the unwanted area through the scanner:

1. Select **User Specified** from the **Size** drop down list.
2. Select **Front (Registration Position)** from the **Paper Eject** drop down list.
3. Enter the document width in the **Width** field.
4. Enter the document height minus the unwanted area in the **Height** field.
5. Load the original document in the scanner centered with the hanging strip last.

Fig 9.23
*Loading
 the
 original
 with the
 hanging
 strip last*



6. Click the **Scan** button.

The scanner will scan the document up to the specified height then stop and return the document to the front of the scanner without passing the hanging strip through the scanner.

Scanning thick documents

Thick documents cannot effectively be pre-scanned to set certain automated values. Therefore when scanning thick documents when the document lever is raised, some options from the Synergix Scan System dialog box will become unavailable. Once the thick document is scanned and the document lever is back in its original position, the Synergix Scan System dialog box will revert to the last saved scanning configuration.

Using the Synergix Scanner with GFI Folders

To use the Synergix Scanner with GFI Folders efficiently follow the instructions below:

1. Scan the first document and ensure it is listed in the Job Editor job grid.
2. Press the **CTRL** and **T** keys simultaneously to open the Title Block Location dialog box.
3. Note the location listed for the title block and then click **OK**.
4. Select the **Proto** line in the Job Editor grid.
5. Click on the **Properties** button from the Job Editor tool bar. The Detail Properties Sheet opens displaying the Main tabbed dialog box.
6. From the **Title Block Location** drop down list of the Main tabbed dialog box select the location noted in Step 3.
7. Close the Detailed Property Sheet.
8. Select the first document that was scanned in the job grid.
9. Scan all subsequent files with the title block in the same location as the first document.





If a document is scanned and the title block is in a different location than specified in the Proto line, change the title block location for that document using the Detailed Property Sheet or the Title Block Location Viewer.

10. Select the desired folding program and output the files.

Synergix Scan System options in detail

Scanning Options

- **Scanning Mode:** Select a scanning mode from this drop down list depending on the type of document you are scanning.
 - **Monochrome (1Bit):** This mode is for black and white scanning.
 - **Grayscale (8 Bit):** This mode is for scanning documents containing shades of black, white and gray.
 - **Color (24 Bit):** This mode is for color scanning. The Color Feature Key, provided by Xerox, is required for color scanning.

Depending on the mode selected various other options can be selected from the Synergix Scan System dialog box. All options are not available for all modes to ensure better scanning results.

- **Resolution:** Select the desired resolution in DPI from this drop down list.
- **Scan Speed:** Select the desired scanner speed. The Scan Speed option enables selecting slower speeds to protect fragile originals. The available speeds are dependant on what Speed Feature Keys are installed.
 - **Turbo III:** Turbo III is only available when the Turbo III Feature Key is installed. Turbo III supports scanning at 7.33 Ips at 400 DPI. This is the optimal scanning speed for copying with the XEROX WIDE FORMAT 721p. If this speed does not provide the desired quality when scanning, select another scanning speed.

Occasionally the scanner may not scan at the selected speed. This may be because the required scanner speed key is not purchased or installed. The scanner may also slow down to meet the required quality or document size as needed.

- **Paper Eject:** There are 3 options for Document Eject:
- **Front (Registration position):** This option is available when Auto Scan is not selected. This is to enable rescanning a document with new settings.
- **Front (Eject in the front):** This option is available when Auto Scan is selected.
- **Rear (Eject in the back)**

Document Size:

- **Series:** This refers to the paper series. Select either **ANSI**, **Arch**, or, **ISO**.
- **Size:** Options available in this drop down list depend on the paper series selected. All the standard sizes and orientations for the selected paper series are available, plus the four following automatic width detection functions:

- **Auto Size:** Select this option to automatically determine the width and height. Thick documents cannot be pre-scanned for edge detection effectively. Therefore this option is not available when scanning thick documents.

The maximum supported length for Auto Size is dependant on what Mode is selected. The maximum supported length for each mode is provided below:

- Monochrome (1Bit): 900" or 2286 cm
- Grayscale (8Bit): 100" or 254 cm
- Color (24Bit): 30" or 76.2 cm
- **Auto Standard Size:** Select this option to automatically determine a standard width and height depending on the Series selected with an error margin of .20.

For example, if a document measuring 11" x 22" is scanned in with Auto Standard Size selected, the resulting scan is justified top and left, and will measure 17" x 22", the next possible standard size that can accommodate the 22" length.

Thick documents cannot be pre-scanned for edge detection effectively. Therefore this option is not available when scanning thick documents.

- **Auto Standard Width:** Select this option to automatically determine a standard width depending on the Series selected and the height entered in the Height text box. The resulting scanned image is centered.

Thick documents cannot be pre-scanned for edge detection effectively. Therefore this option is not available when scanning thick documents.

- **Auto Height:** Automatically determines the height when the width is entered in the Width text box. The maximum supported length for Auto Height is dependant on what Mode is selected. The maximum supported length for each mode are provided below:
 - Monochrome (1Bit): 900" or 2286 cm
 - Grayscale (8Bit): 100" or 254 cm
 - Color (24Bit): 30" or 76.2 cm



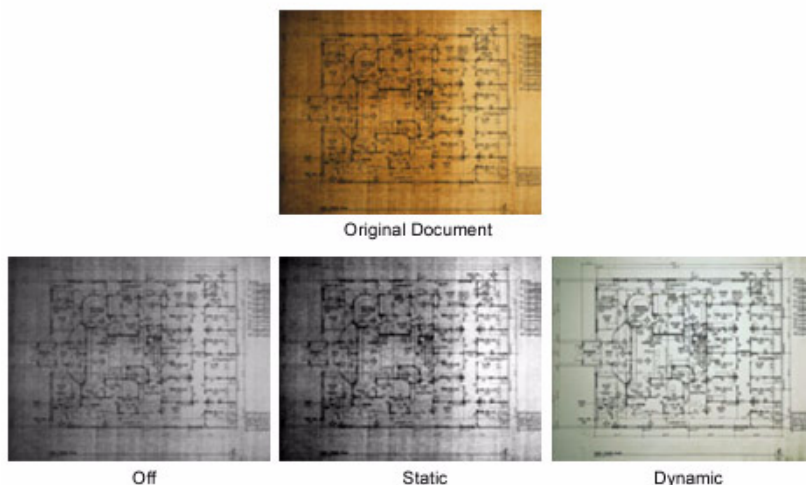
If you wish to add a custom paper size to the size drop down list, contact PLP's technical support department.

- **Width:** Enter a width between 5 and 36 inches in this text box. if **User Size** or **Auto Height** is selected. The software automatically detects the width if **Auto Size**, **Auto Standard Size**, or **Auto Width** is selected.
- **Height:** Enter a height of at least 1 inch in this text box if **User Size** or **Auto Standard Width** is selected. The software automatically detects the height if **Auto Size**, **Auto Standard Size**, or **Auto Height** is selected.
- **Units:** When **ANSI** or **Arch** is selected in the Series select box, all measurements are provided in inches. When **ISO** is selected in the Series select box, all measurements are provided in millimeters.

Image Options:

- **Background Removal Options:**
 - **Background Removal:** The following background removal options are available:
 - **Off:** When Off is selected, no background removal is applied and Seed values are not used. Also note that if Off is selected and Error Diffusion is selected for the Halftoning Method, when a document with a gray background is scanned, a diffusion pattern is applied to the entire background.
 - **Static:** When Static is selected, the same Seed Values are used for the entire image whether user selected or automatically detected. In this case a scanned document containing a background that ranges from dark to light will show some background noise.
 - **Dynamic:** When Dynamic is selected, Seed Values are automatically adjusted as necessary during the scan. This is the default setting.

*Fig 9.24
Effect of
Back-
ground
Removal
options*



- **Image (Dynamic):** The following Image options are now available:
 - **Dark:** Select this option when the document you wish to scan is very dark.
 - **Invert:** Select this option when you want the scanned image to be inverted. Black areas of the original document will then appear white and vice versa. This option is not available when Auto Size is selected.
 - **Line-Art:** Select this option when scanning line art drawings. This is the default value.



Understanding seed values is useful when selecting scanning options. Seed values define the black and white points of an image. Seed values are automatically set prior to scanning a document. The Synergix Scan System dialog box provides options to select seed values manually or automatically. Setting seed values manually is recommended when you need to improve the quality of a scan when auto detected seed values do not provide the desired scan result.

- **Black Seed:** Enter a value between 0-255 in this text box. This number defines what shades of gray are considered black. If the Black Seed value is set at 8, all darker shades of gray are considered black. To scan in gray lines as black, increase the Black Seed value.
- **White Seed:** Enter a value between 0-255 in this text box. This number determines what shades of gray should be converted to white. If the

White Seed value is set to 200, brighter parts (values from 200-255) of the image are considered white. In this case light, thin, gray lines contained in the image may not be scanned correctly. Increasing the White Seed value ensures that lighter lines are scanned correctly.

- **Halftoning Method:** Halftoning Method options are only available when Monochrome is selected from the Mode drop down list. The following options are available here:
 - **Error Diffusion:** This is the default value that produces the best copy quality. Error Diffusion optimizes the scanned original for printing by applying an error diffusion pattern. This option should not be used when scanning to file since the error diffusion pattern increases the file size and makes the files harder to use for raster to vector conversion.
 - **Fixed Threshold:** When this option is selected, image quality is controlled using a selected Threshold Value. Then every 8-bit pixel is compared to this value. If the pixel value is less than the Threshold selected, the pixel is considered black; if greater than, it is considered white.
 - **Bi-Tonal:** When Bi-Tonal is selected, all lines and marks are scanned in as solid black for improved visibility. Select this option when scanning and copying documents with very fine lines like pencil drawings.
- **Threshold:** This option is not available when Grayscale (8Bit) or Color (24Bit) is selected from the Mode drop down list. The default Threshold value is 100. Increase or decrease this value as necessary depending on the scanning configuration selected.
- **Contrast:** Enter a contrast value between 96 and 160 in this text box. Lower values make the image darker and higher numbers make the image lighter. 128 is the default value.
- **Mirror:** Select this check box to mirror the scanned image.
- **Batch scanning:** Batch scanning increases scanning speed when scanning multiple documents of the same width. Batch scanning should only be used when scanning documents of the same type. When Batch is selected, the first image loaded from the set is pre-scanned. The resolution, width, height, seed values, and edge detection set for the first document are applied to all subsequent images scanned until Batch scanning is disabled.

When Batch scanning, center the documents on the scanner and ensure that the Batch check box is selected.

To disable Batch scanning, either deselect the Batch check box or change a resolution, width, height, white seed value or black seed value.

To change the image size or other settings simply make the changes then reselect the Batch check box. The next image is then pre-scanned; settings are updated and batch scanning resumes.

- **Auto Detect Seed Values:** Selecting Auto Detect Seed Values automates setting seed values. When a document is loaded in the scanner, the first few inches are automatically pre-scanned to determine the document width and the optimal scan values, including white and black seed values.

This option is not available when scanning thick documents or during Batch scanning.

- **Configuration:** The Configuration option is used to apply a default configuration or a previously saved configuration and to save a configuration.

Saving a new configuration

Additional configurations are added by selecting the desired options, typing in the name and clicking the **Save** button.



Use caution before clicking the Save button. If one of the Default Configurations is selected in the Configuration drop down list, like Sepia (Medium Quality), and you change any scanning option and then click the Save button, you will overwrite the Default Configuration.

Applying a default or previously saved configuration: Simply select the desired configuration from the drop down list. Default configurations and their settings follow:

- **Blue Print (High Quality):** This is the default configuration for high quality blue print scanning. When this option is selected the following settings are used:
 - Mode is set to Grayscale
 - Resolution is set to 400
 - Scan Speed is set to 4.00 Inches Per Second
 - Paper Eject is set to Front (Registration position)
 - Background Removal is set to Dynamic
 - Image (Dynamic) is set to Lineart
 - Contrast is set to 127
 - Auto Detect Seed Values is selected
 - All other values are either grayed out or user selected
-

- **Blue Print (Low Quality):** This is the default configuration for low quality blue print scanning. When this option is selected the following settings are used:
 - Mode is set to Grayscale
 - Resolution is set to 100
 - Scan Speed is set to 4.00 Inches Per Second
 - Paper Eject is set to Front (Registration position)
 - Background Removal is set to Dynamic
 - Image (Dynamic) is set to Lineart
 - Contrast is set to 127
 - Auto Detect Seed Values is selected

All other values are either grayed out or user selected

- **Blue Print (Medium Quality):** This is the default configuration for medium quality blue print scanning. When this option is selected the following settings are used:
 - Mode is set to Grayscale
 - Resolution is set to 200
 - Scan Speed is set to 4.00 Inches Per Second
 - Paper Eject is set to Front (Registration position)
 - Background Removal is set to Dynamic
 - Image (Dynamic) is set to Lineart
 - Contrast is set to 127
 - Auto Detect Seed Values is selected

All other values are either grayed out or user selected

- **Default:** This is the default configuration. When this option is selected the following settings are used:
 - Mode is set to Monochrome
 - Resolution is set to 100
 - Scan Speed is set to 4.00 Inches Per Second
 - Paper Eject is set to Front (Registration position)
 - Background Removal is set to Dynamic
 - Image (Dynamic) is set to Lineart
 - Threshold is set to 100
 - Auto Detect Seed Values is selected

All other values are either grayed out or user selected

- **Line:** This is the default configuration for line art. When this option is selected the following settings are used:
 - Mode is set to Monochrome
 - Resolution is set to 400
 - Scan Speed is set to 4.00 Inches Per Second
 - Paper Eject is set to Front (Registration position)
 - Background Removal is set to Dynamic
 - Image (Dynamic) is set to Lineart
 - Halftoning Method is set to None
 - Threshold is set to 100
 - Auto Detect Seed Values is selected

All other values are either grayed out or user selected

- **Maps:** This is the default configuration for maps. When this option is selected the following settings are used:
 - Mode is set to Grayscale
 - Resolution is set to 200
 - Scan Speed is set to 4.00 Inches Per Second
 - Paper Eject is set to Front (Registration position)
 - Background Removal is set to Dynamic
 - Image (Dynamic) is set to Lineart
 - Contrast is set to 127
 - Threshold is set to 100
 - Auto Detect Seed Values is selected

All other values are either grayed out or user selected

- **Mixed:** When this option is selected the following settings are used:
 - Mode is set to Grayscale
 - Resolution is set to 200
 - Scan Speed is set to 4.00 Inches Per Second
 - Paper Eject is set to Front (Registration position)
 - Background Removal is set to Dynamic
 - Image (Dynamic) is set to Lineart
 - Contrast is set to 127
 - Auto Detect Seed Values is selected
-

All other values are either grayed out or user selected

- **Photo:** This is the default configuration for black and white photographs. When this option is selected the following settings are used:
 - Mode is set to Grayscale
 - Resolution is set to 200
 - Scan Speed is set to 4.00 Inches Per Second
 - Paper Eject is set to Front (Registration position)
 - Background Removal is set to Dynamic
 - Image (Dynamic) is set to Lineart
 - Contrast is set to 127
 - Auto Detect Seed Values is selected

All other values are either grayed out or user selected

- **Photo Color:** This is the default configuration for color photographs. When this option is selected the following settings are used:
 - Mode is set to Color (24 bit)
 - Resolution is set to 400
 - Scan Speed is set to 4.00 Inches Per Second
 - Paper Eject is set to Front (Registration position)
 - Auto Detect Seed Values is selected

All other values are either grayed out or user selected

- **Sepia (High Quality):** This is the default configuration for high quality sepia scanning. When this option is selected the following settings are used:
 - Mode is set to Grayscale
 - Resolution is set to 400
 - Scan Speed is set to 4.00 Inches Per Second
 - Paper Eject is set to Front (Registration position)
 - Background Removal is set to Dynamic
 - Image (Dynamic) is set to Lineart
 - Contrast is set to 127
 - Auto Detect Seed Values is selected

All other values are either grayed out or user selected

- **Sepia (Low Quality):** This is the default configuration for low quality sepia scanning. When this option is selected the following settings are used:
 - Mode is set to Grayscale
 - Resolution is set to 100P
 - Scan Speed is set to 4.00 Inches Per Second
 - Paper Eject is set to Front (Registration position)
 - Background Removal is set to Dynamic
 - Image (Dynamic) is set to Lineart
 - Contrast is set to 127
 - Auto Detect Seed Values is selected

All other values are either grayed out or user selected

- **Sepia (Medium Quality):** This is the default configuration for medium quality sepia scanning. When this option is selected the following settings are used:
 - Mode is set to Grayscale
 - Resolution is set to 200
 - Scan Speed is set to 4.00 Inches Per Second
 - Paper Eject is set to Front (Registration position)
 - Background Removal is set to Dynamic
 - Image (Dynamic) is set to Lineart
 - Contrast is set to 127
 - Auto Detect Seed Values is selected

All other values are either grayed out or user selected

- **Scan:** When the Auto Scan button is not selected, the Synergix Scan System waits for you to click the Scan button before a loaded, registered document is scanned. The green Start button on the Synergix Scanner LCD control panel (DDS Hardware User Interface) provides the same functionality as the Scan button.
- **Auto Scan:** When the Auto Scan button is selected, the scanner automatically scans documents that are loaded and registered. The Auto Scan button stays selected until you deselect the button. It does not automatically become disabled as the Scan buttons does.

The Auto Scan button cannot be disabled if a document is inserted in the scanner. Remove the loaded document, and then deselect the button.

Clicking the Scan or Auto Scan buttons generates the Scan Progress dialog box, which illustrates the scan progress.

- **Stop:** The Stop button on the Scan Progress dialog box is used to stop the scanning process. The user then has to remove the document manually from the scanner. Before clicking on this button ensure that the progress bar is displayed and indicating that the scan process is started. If the Stop button is clicked before the progress bar starts, the application may freeze and it will be necessary to power down the computer and scanner.

The red Stop button on the Synergix Scanner LCD control panel (DDS Hardware User Interface) provides the same functionality as this Stop button.

Synergix Scanner LCD control panel

The Synergix Scanner LCD control panel (DDS Hardware User Interface) now provides the following functionality when the Synergix Scan System software is installed:

- **Start:** The green Start button starts the scan process just like the Scan button on the software user interface.
- **Stop:** The red Stop button stops the scan process just like the Stop button on the software scan progress dialog box.
- **Scanner status:** The scanner status is displayed on the both the scanner's user interface as well as on the software user interface. Both the DDS control panel and the smaller control panel display statuses. The following dynamic statuses are provided:
 - Powered by PlotWorks
 - Main Status
 - Document Status
 - Document Lever: The Document lever is used to determine how thick or thin the document being scanned is
 - Lever position

*Fig 9.25
Statuses
displayed
on the
scanner's
LCD
screen*

Powered by PlotWorks	
Main Status:	Warmed up
Document Status:	Registered
Document Lever:	Lever OK
Lever Position:	Thin Document

Document Status lights

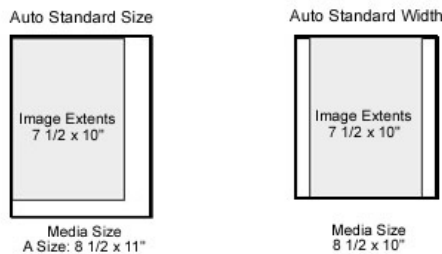
Statuses are displayed using red, yellow, and green document status lights and identifying text on the Synergix Scan System dialog box.

- A **red light** appears if a document is not inserted.
- A **yellow light** appears if a document is inserted but not registered
- A **green light** appears if a document is inserted and registered. The Scan button is enabled only when the green Document Status light displays.

Miscellaneous information regarding the Synergix Scanner

Image placement for Auto Standard Size or Auto Standard Width

*Fig 9.26
7 1/2 x 10"
image
placement*



When Auto Standard Size is selected the scanner automatically determines the size of the scanned image and calibrates the resulting scan such that the image is placed on the next largest standard media size, justified top and right.

When Auto Standard Width is selected the scanner automatically determines the width measurement of the scanned image and calibrates the resulting scan such that the image is placed centered on the next largest standard width size.

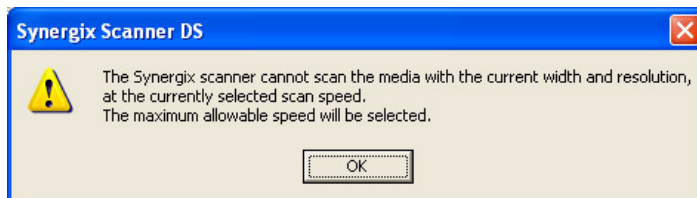
This placement is standard for all PlotWorks supported scanners.

Retrieving scanned files from the AccXES controller

To retrieve scanned files from the AccXES controller, refer to the topic "Adding Files from a Polled FTP Directory" on page 4-84.

Synergix Scanner speed negotiation

*Fig 9.27
The
Synergix
Scanner
DS speed
warning*



The scanner may not always scan at the selected speed. This may be because the necessary speed key is not purchased or installed. Once the scanning process begins, the scanner may also slow down to meet a required quality and document size. If a slower speed is required, a Synergix Scan System DS dialog box may open, notifying the user that the scan speed will be automatically adjusted. In this case, click on the **OK** button to continue.

Using the Synergix Scanner and Adobe PhotoShop simultaneously

Occasionally if Adobe PhotoShop, the Synergix Scanner, and the Job Editor are all being used simultaneously the computer will freeze and will need to be rebooted. This is because Windows XP allocates both PhotoShop and the Synergix Scanner a large amount of memory regardless of whether it is available or not. Therefore for best results close Adobe PhotoShop before scanning.

Trouble Shooting

Symptom: A document is jammed

When a document becomes jammed in the scanner, press the red stop button on the scanner it self, or the Stop button on the Scan progress dialog box. The scanner will stop. Then lift the scanner lid, remove the document, wait for the scanner to reset, and then reload the document to scan.

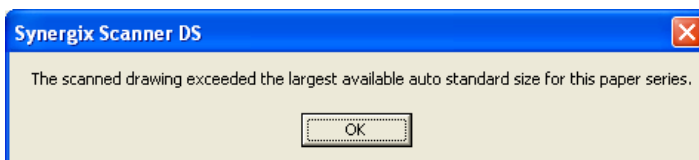
If the error message "An error has occurred receiving scanner status" appears it is necessary to reboot the Scanner Interface, the Job Editor and the Synergix Scanner.

Symptom: A Synergix Scan System DS warning dialog box appears

- **Auto Standard Size is selected**

When an Auto Standard Size is selected and the document being scanned is larger than the largest Auto Standard size available for the selected paper series, the document is not scanned and a Synergix Scan System DS dialog box appears.

*Fig 9.28
A Synergix
Scan
System DS
dialog box*



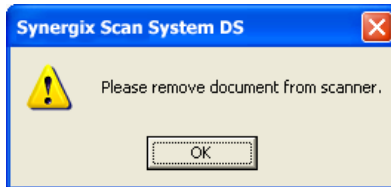
Click the **OK** button to continue. The dialog box will close. Then specify a size.

- **Document is loaded**

If the Synergix Scan System DS (Data Source) warning dialog box appears,

remove the document that is physically loaded in the scanner, then click on the **OK** button

Fig 9.29
*A Synergix
Scan
System DS
warning
dialog box*



Symptom: Memory errors occur when Auto Size is selected

Because scanned images are kept in memory for transfer to the Job Editor, memory requirements for the Synergix Scanner are high. When Auto Size is selected, PlotWorks allocates enough memory to accommodate the largest document length available. This can create memory errors. To reduce the required memory amount, manually select the document size from the Size drop down list on the Synergix Scan System dialog box.

Symptom: The Auto Scan button does not work and a document is loaded

To place the scanner in Auto Scan mode, ensure a document is not currently loaded on the scanner. It is necessary to first remove any loaded document and then select the Auto Scan mode. This ensures that a document is not accidentally scanned.

Symptom: The diagnostic test failed

Lift and lower the top of the scanner then let it reset.

Symptom: The scanner appears frozen

This may be due to scanner recalibration. Occasionally before scanning a document the scanner may need to recalibrate. If a document is loaded in the scanner at that time, the computer may look like it has frozen. In this case simply remove the document from the scanner and reload it.

Symptom: The scanner does not accept paper

- **Scan light is on**

If the scanner does not accept paper and the scan light is on, lift and lower the top of the scanner then let it reset.

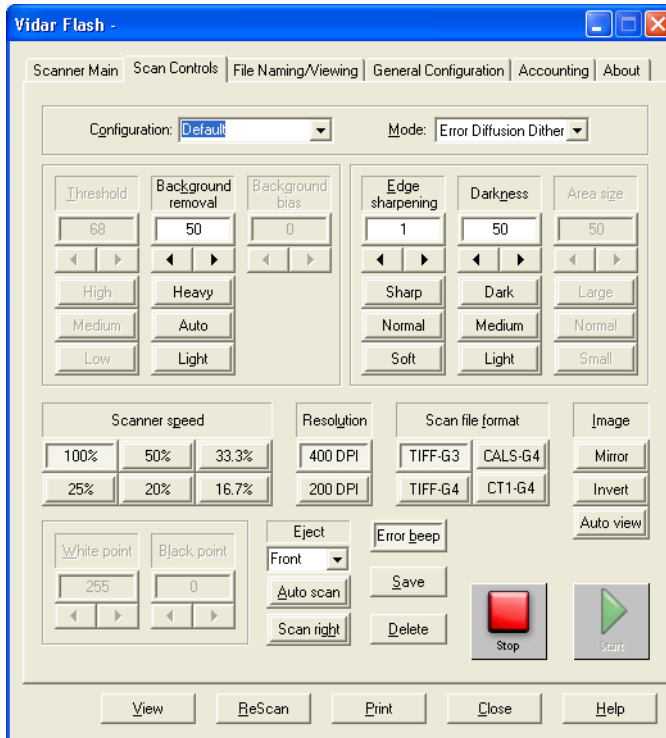
- **Scan light is off**

Remove the loaded document and wait for the scan to light to come back on.

Vidar Flash Scanner Interface

This section details only the features and settings specific to this scanner. Any features, options, or menus not mentioned are considered to be standard for all scanners. Their descriptions and instructions for use are found in *Chapter 9 - The Scanner Interface*.

*Fig 9.30
Flash Scan
Controls*



*When the Main Scanner dialog box or Scan Controls dialog box is active, you can press **Enter** to start the scanning process.*

The Vidar Flash Scanner operates in the following modes:

- **Bilevel (Manual):** This mode works best with line art that has a fairly constant background.
- **Bilevel (Adaptive Area):** This mode works best with line art that uses text or other fine lines and has a varying background (such as a faded blueline). Adaptive thresholding allows the Scanner Interface to set different white point (background) values for different areas of the image as the document

gets scanned. The white point is set by determining the difference between the background and the data in a set area. The size of this area is specified in the Area Size setting. This mode does not work well with documents that contain large black areas.

- **Ordered Dither:** This mode works best with photographic images. Ordered dithering resolves lines very clearly, but it can produce a somewhat grainy image.
- **Error Diffusion Dither:** This mode works best with photographic images and produces very smooth gradients. However, this mode can diffuse the edges of lines, causing a “fuzzy” look. Error Diffusion Dither creates larger raster file sizes.

The following enhancements are available for the Flash scanner. The active buttons depend on the mode you have selected.

- **Area Size:** Lets you set the size of the area used for adaptive thresholding. Use the buttons for preset values (Small, Normal, or Large) or enter a value in the field. This value is a relative number, with 0 representing the minimum area allowed, and 100 representing the maximum area allowed. Set this option to scan past any dark or light leading edges on the image.
- **Background Removal:** Lets you remove unwanted specks and smears from the image background, allowing the image to compress more efficiently. Click **Light**, **Auto**, or **Heavy** for the amount of background removal you want, or enter a value in the field.



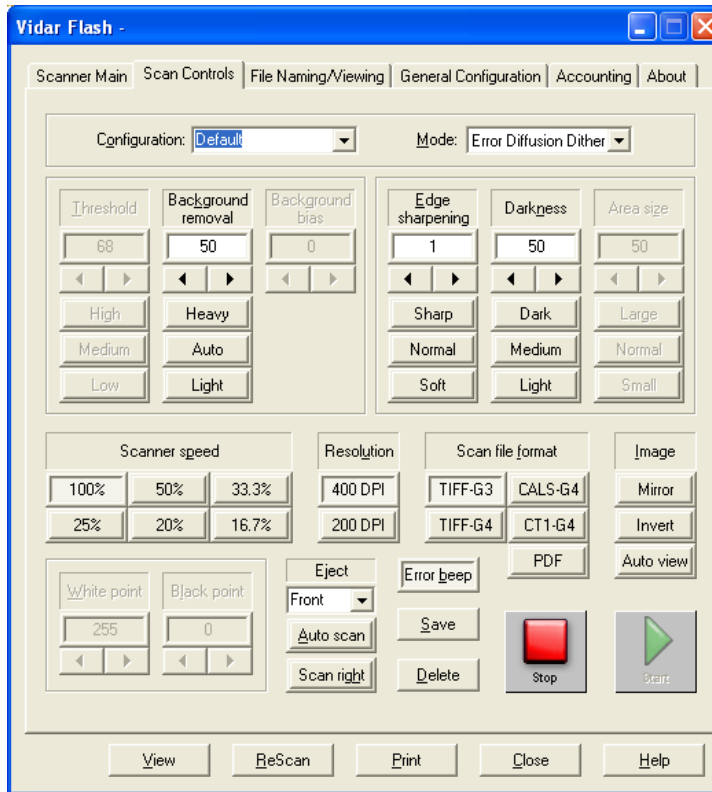
See also: "Remove Background Automatically" on page Chapter 9-24

- **Darkness:** Lets you set the brightness or darkness of the image.
- **Edge Sharpening:** Lets you sharpen the image.
- 11. **Threshold:** Lets you set the point that divides black (0) and white (100) data. Any scanned data that is lighter than the threshold value will display as white. Any scanned data that is darker than the threshold data will display as black

Vidar Flash+ Scanner Interface

This section details only the features and settings specific to this scanner. Any features, options, or menus not mentioned are considered to be standard for all scanners. Their descriptions and instructions for use are found in *Chapter 9 - The Scanner Interface*.

*Fig 9.31
Vidar
Flash +
Scan
Controls*



*When the Main Scanner dialog box or Scan Controls dialog box is active, you can press **Enter** to start the scanning process.*

The Flash+ scanner operates in the following modes:

- **Bilevel (Manual):** This mode works best with line art that has a fairly constant background
- **Bilevel (Adaptive Area):** This mode works best with line art that uses text or other fine lines and has a varying background (such as a faded blueline). Adaptive thresholding allows the Scanner Interface to set different white point (background) values for different areas of the image. The white point is set by determining the difference between the background and the data in a set area. The size of this area is specified in the Area Size setting. This mode does not work well with documents containing large black areas.

- **Ordered Dither:** This mode works best with photographic images. Ordered dithering resolves lines very clearly, but it might produce a somewhat grainy image. Ordered Dither creates larger raster file sizes.
- **Error Diffusion Dither:** This mode works best with photographic images and produces very smooth gradients. However, this mode might diffuse the edges of lines, causing a “fuzzy” look. Error Diffusion Dither creates larger raster file sizes.
 - **Darkness:** Lets you set the brightness or darkness of the image. Click the **Light**, **Medium**, or **Dark** button, or enter a value in the field.
 - **Area size:** Lets you set the size of the area used for adaptive thresholding. This value is a relative number, with 0 representing the minimum area allowed, and 100 representing the maximum area allowed. Set this option to scan past any dark or light leading edges on the image. Click the **Small**, **Normal**, or **Large** button, or enter a value in the field.
 - **Background removal:** Lets you remove unwanted specks and smears from the image background, allowing the image to compress more efficiently. Click the **Light**, **Auto**, or **Heavy** button, or enter a value in the field.
 - **Background bias:** If you clicked **Auto** under Background removal, you can set a strength here. The higher the strength, the more specks and smears will be removed from the background.



Use Background removal with caution as it could remove light lines or images.

- **Threshold:** Lets you set the point that divides black and white data. Any scanned data that is lighter than the threshold value will display as white. Any scanned data that is darker than the threshold value will display as black. Click the **Low**, **Medium**, or **High** button, or enter a value in the field.
 - **Edge sharpening:** Lets you sharpen the image to make fine lines clearer. Click the **Soft**, **Normal**, or **Sharp** buttons, or enter a value in the field.
-

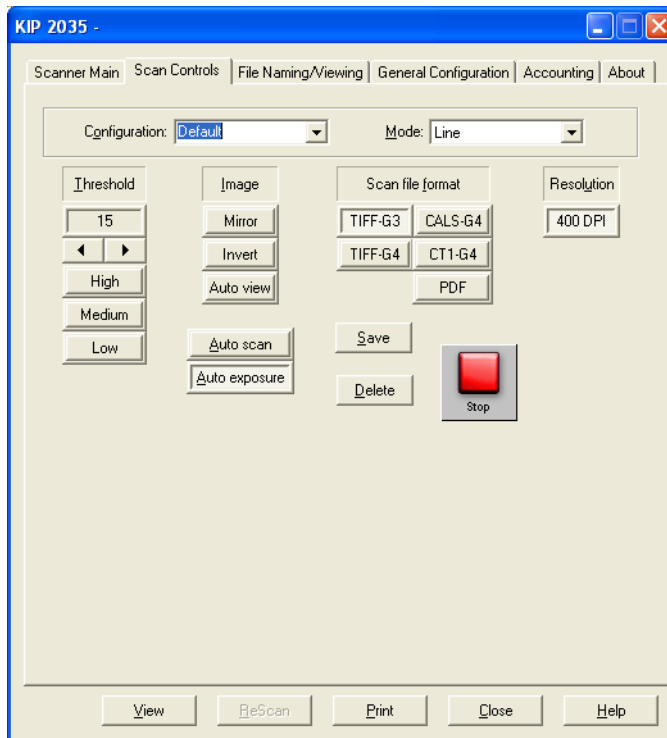
The Vidar Flash+ scanner also offers the following fields in the Scan Controls dialog box:

- **Black Point:** Sets the black point of the image. All data that is darker than the black point will appear as black in the image. Absolute black is 0.
- **White Point:** Sets the white point of the image. All data that is lighter than the white point value will appear as white in the image. Absolute white is 255.
- .

KIP 2035 and 7095 Scanner Interface

This section details only the features and settings specific to these KIP scanners. Any features, options, or menus not mentioned are considered standard for all scanners. These are described in *Chapter 9 - The Scanner Interface*.

Fig 9.32
2035 Scan
Controls



The following options are unique to the 2035 and 7095 scanners:

- **Modes**
 - **Line:** This mode works best with line art.

- **Photo1:** This mode works best with a combination of line and photographic images.
- **Photo2:** This mode works best with photographic images.

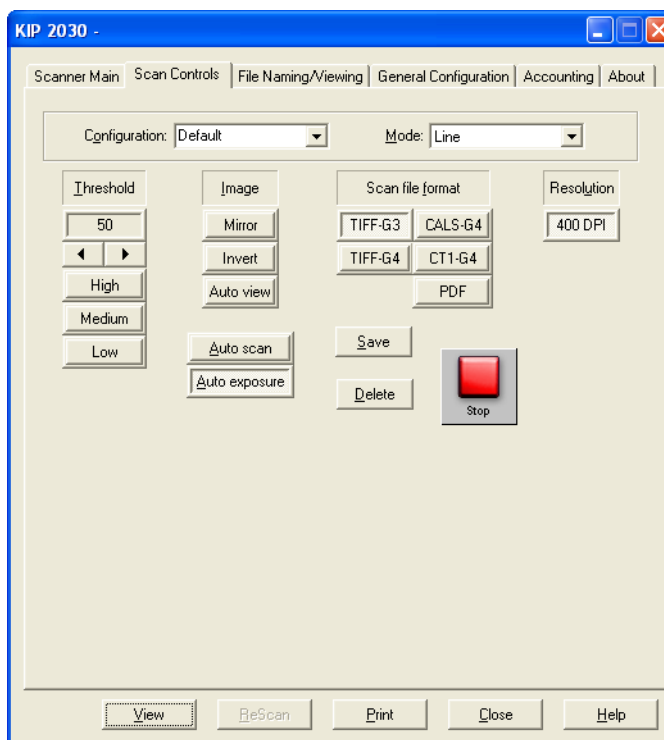
The following enhancement buttons are available for all modes:

- **Threshold:** Lets you set the point that divides black and white data. Any scanned data that is lighter than the threshold value will display as white. Any scanned data that is darker than the threshold value will display as black. Click the **Low**, **Medium**, or **High** button, or enter a value in the field.
- **Auto exposure:** When selected (down) lets the software automatically set the best darkness, white point, and sharpening values as each image is loaded.

KIP 2020 and 2030 Scanner Interface

This section details only the features and settings specific to these KIP scanners. Any features, options, or menus not mentioned are considered to be standard for all scanners. Their descriptions and instructions for use are found in *Chapter 9 - The Scanner Interface*.

Fig 9.33
2030 Scan
Controls



The following modes are unique to the 2020 and 2030 scanners:

- **Line:** This mode works best with line art.
- **Photo1:** Use this mode when line and photographic images are combined.

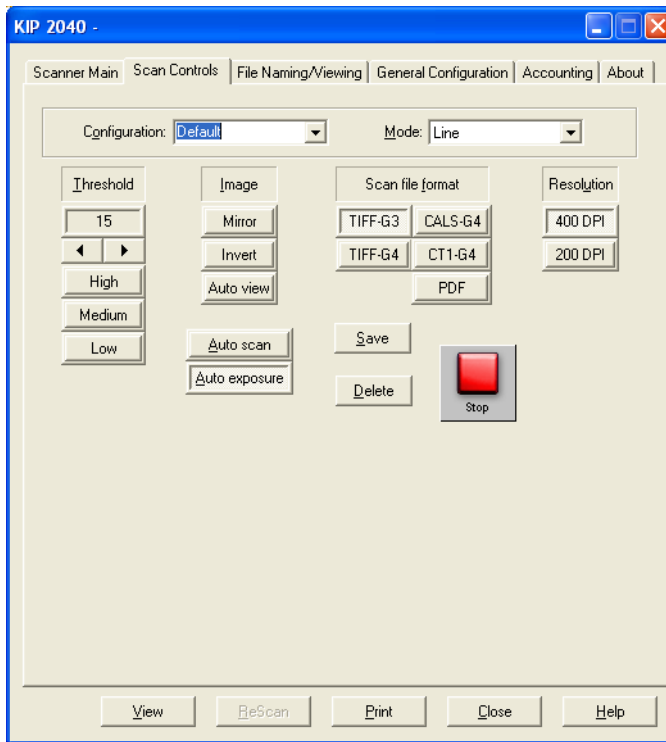
The following enhancement buttons are available for all modes:

- **Threshold:** Is used to set the point that divides black (0) and white (100) data. Scanned data lighter than the threshold value displays as white. Scanned data darker than the value displays as black.
- **Auto exposure:** Select this button to automatically determine the amount of background removal, to compress the image more efficiently.

KIP 2040 Scanner Interface

This section details items specific to the KIP 2040 scanner. Items not mentioned here are considered standard and are described in *Chapter 9 - The Scanner Interface*.

Fig 9.34
2040 Scan
Controls



The following modes are unique to the 2040 scanner:

- **Mode:** Lets you select the appropriate scanner mode:
 - **Line:** This mode works best with line art.
 - **Text/Photo:** This mode works best with less than perfect originals.
 - **Photo:** This mode works best with photographic images.

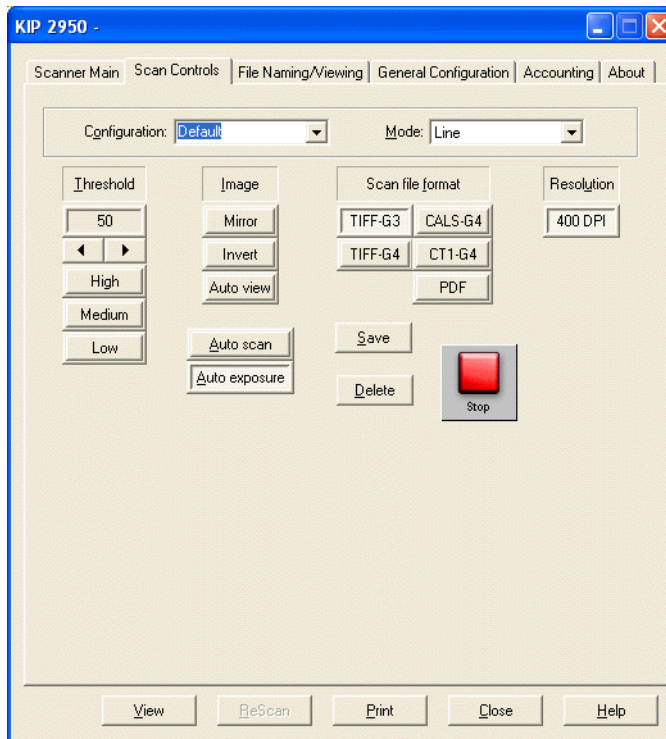
The following enhancement buttons are available for all modes:

- **Threshold:** Is used to set the point that divides black and white data. Scanned data lighter than the threshold value will display as white. Scanned data darker than this value displays as black. Click the **Low**, **Medium**, or **High** button, or enter a value in the field.
- **Auto exposure:** Selected this button to automatically determine the amount of background removal, to allow the image to compress efficiently.

KIP 2950 Scanner Interface

This section details only the features and settings specific to these KIP scanners. Any features, options, or menus not mentioned are considered to be standard for all scanners. Their descriptions and instructions for use are found in *Chapter 9 - The Scanner Interface*.

Fig 9.35
2950 Scan
Controls



The following modes are unique to the 2950 scanner:

- **Mode:** Lets you select the appropriate scanner mode:
 - **Line:** This mode works best with line art.
 - **Photo1:** This mode works best with photographic images.

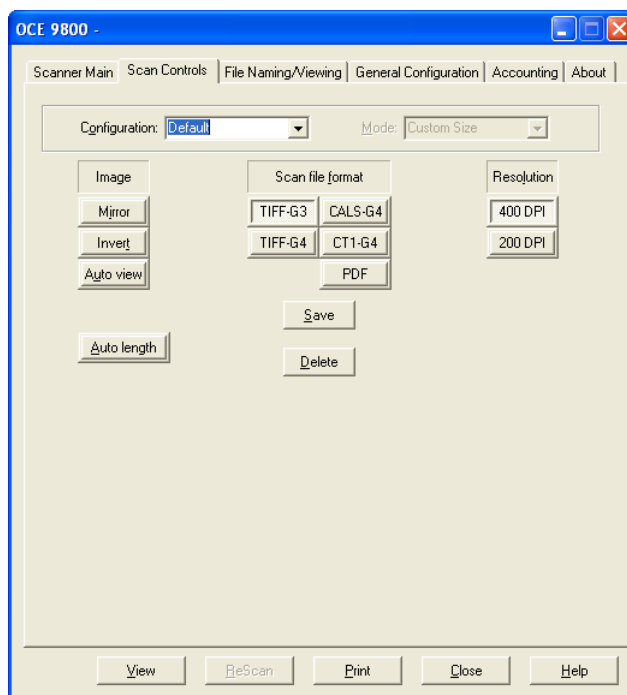
The following enhancement buttons are available for all modes:

- **Threshold:** Is used to set the point that divides black and white data. Scanned data lighter than the threshold value displays as white. Scanned data darker than this value displays as black. Click the **Low**, **Medium**, or **High** button, or enter a value in the field.
- **Auto exposure:** Selected this button to automatically determine the amount of background removal, allowing the image to compress more efficiently.

Océ 9800 Scanner Interface

This section contains features and settings specific to the Océ. Features, options, or menus not mentioned are considered standard for all scanners and are described in *Chapter 9 - The Scanner Interface*.

Fig 9.36
9800 Scan
Controls



9800 Scan Controls

The 9800 scanner Scan Controls dialog box is limited to only those features the scanner allows PlotWorks to influence (click the **Scan Controls** tab).

- **Configuration:** This feature is comprised of 7 choices - Blueprint (High Quality, Low Quality, Medium Quality), Default (previously configured), and Sepia (High Quality, Low Quality, Medium Quality).
- **Mode:** There are two modes, Standard and Custom.
- Select **AUTOLENGTH** to have the software automatically detect the closest (higher) standard length. PlotWorks detects the actual width of the document, even if it is not a standard size.

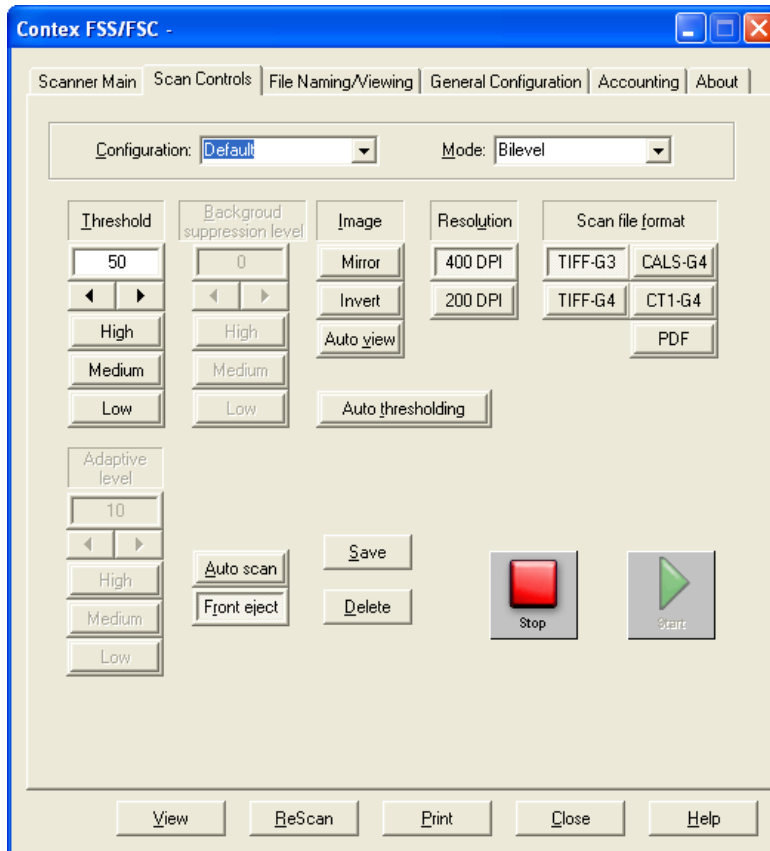


200 DPI Resolution is not currently supported.

Contex FSS/FCS Scanners

This section details features and settings specific to the Contex FSS scanners. Options not mentioned are considered to be standard for all scanners. These are described in *Chapter 9 - The Scanner Interface*.

Fig 9.37
Contex
FSS Scan
Controls



The following modes are unique to the FSS scanners:

- **Bilevel:** This mode works best with line art.
- **Dither/Halftone:** This mode works best with photo or grayscale images.

The following enhancement buttons are available for all modes:

- **Threshold:** Lets you set the point that divides black (0) and white (100) data. Any scanned data that is lighter than the threshold value will display as white. Any scanned data that is darker than the threshold value will display as black.

- **Auto thresholding** button: When selected (down), this option automatically determines the best threshold setting for the image being scanned.
- **Background Suppression:** Removes unwanted background specks and smears, allowing the image to compress more efficiently.

Contex FSS Scanning Tips

When scanning with the Contex scanners, always feed the image to be scanned from the left side of the scanner — not the center as indicated on the scanner.

