MICROTEK

ScanWizard Industry

Reference Manual

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Important

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To obtain optimal results from the Microtek scanning software and user's manual, you should be familiar with such Windows concepts as pointing, clicking, dragging, and selecting from menus and dialog boxed. If these things are new to you, refer to your Microsoft Windows User's Guide.

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Introduction

The ScanWizard Industry scanning software is specifically designed for the use of the industry film scanning. This reference manual covers the various commands and features found in the ScanWizard Industry scanning software for the Windows system. The reference information is divided into three major sections, corresponding to the three major windows of the program:

- Preview
- Settings
- Scan Job Queue

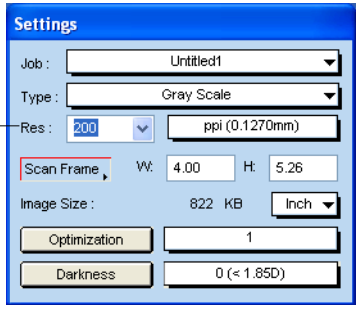
The ScanWizard Industry functions do not apply to all scanner models. See the table below to determine which function can be used for your scanner model.

	MII-800XL Plus	MII-900 Plus
Preview window		
Overview button	v	v
Preview button	v	
Frame tool	v	v
Magnify Glass tool	v	
Pan tool	v	
Scan button	v	v
Transform button	v	v
Settings window	v	v
Scan Job Queue window	v	

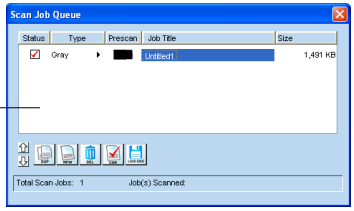
The ScanWizard Industry Interface

ScanWizard Industry consists of three major windows: Preview, Settings, and Scan Job Queue.

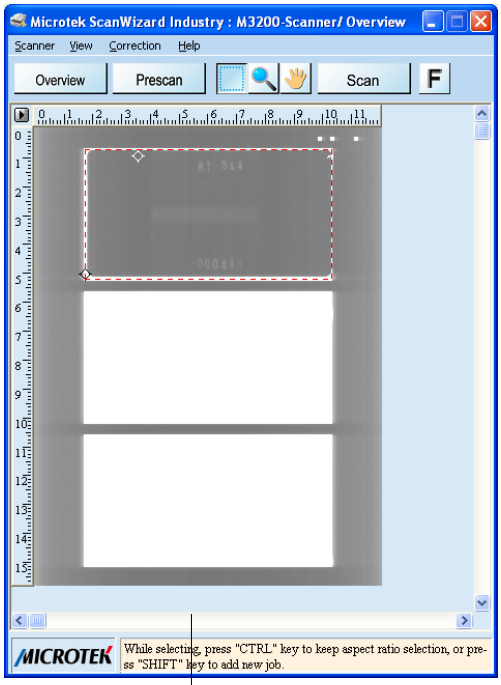
The Preview and Settings windows appear automatically after the ScanWizard Industry is started up. The Scan Job Queue window appears when you bring up ScanWizard Industry at the first time. You may hide or show it from the View menu and click on the command *Hide/Show Scan Job Window.*



Settings window contains scanning parameters for the outputting image



Scan Job window provides key functions in managing scan jobs



Preview window has commands and tools for controlling the scanner

Launching ScanWizard Industry

ScanWizard Industry can be launched in either Stand-alone or Plug-in mode.

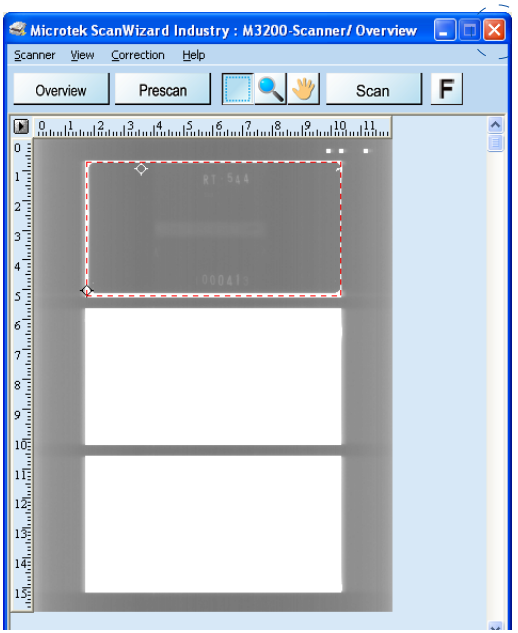
- From Stand-alone mode: Double-click the ScanWizard Industry icon on the desktop, or choose *Start*, *Programs*, *Microtek ScanWizard Industry for Windows,* and then *Microtek ScanWizard Industry*.
- From Plug-in mode: Choose the *Import* or *Acquire* command from the File menu of your image-editing software, then select *Microtek ScanWizard Industry*.

After being launched, the main screen will appear, but the very first time that ScanWizard Industry is started up, the three windows will all appear.

The next time you start up ScanWizard Industry, the main screen will look exactly like the last time you exited the software. This means that if you had all three windows open the last time you quit ScanWizard Industry, the same three windows will appear the next time you start it up.

Exiting ScanWizard Industry

To exit ScanWizard Industry, double click on the close box on the upper left side of the Preview window.

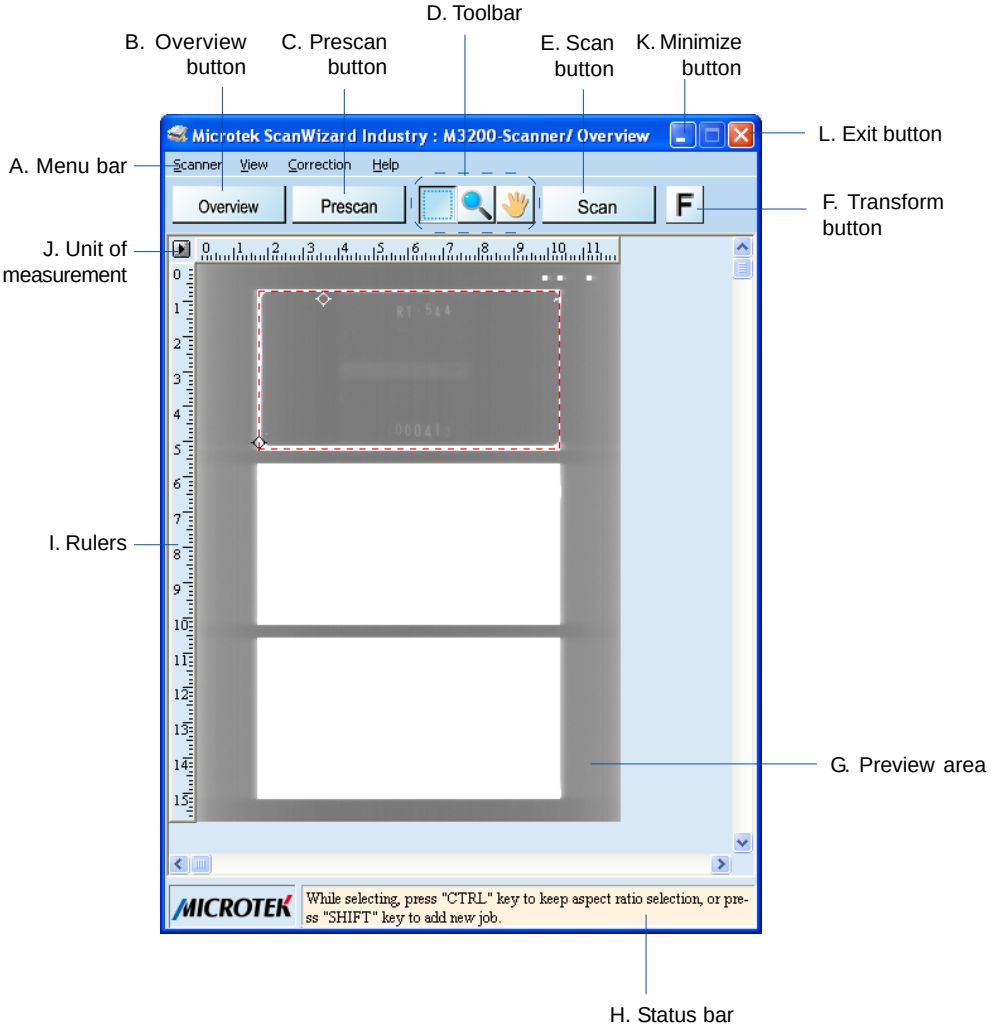


Click here to exit ScanWizard Industry

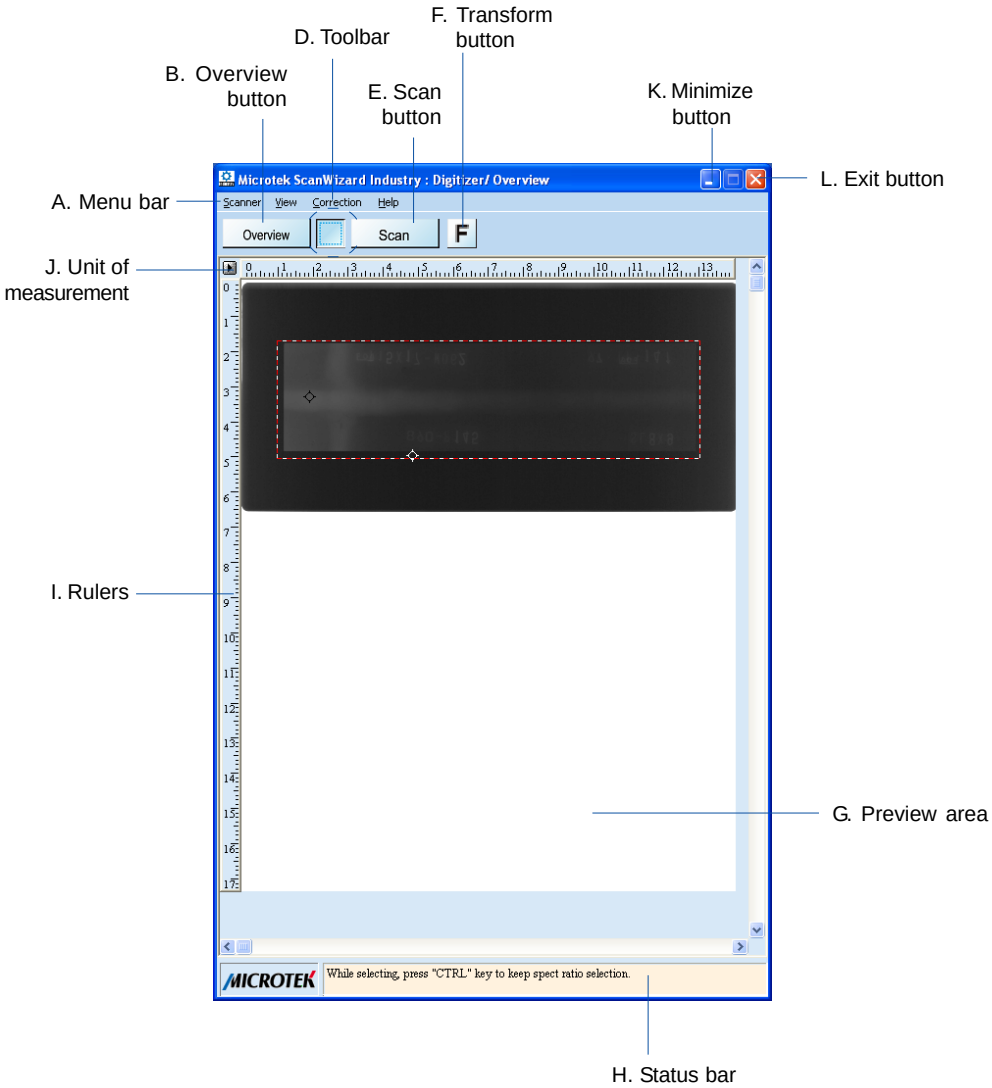
The Preview Window

The Preview window is the prominent window and includes the various commands and tools for controlling the scanner. It may look slightly differet based on the scanner model you are using.

Elements of the Preview Window (Example of MII-800XL Plus)



Elements of the Preview Window (Example of MII-900 Plus)



A. Menu bar: This area includes the different menus for setting up the scanner (Scanner menu), controlling view options (View menu), Image Correction function (Correction menu), and accessing on-line help (Help menu).

B. Overview button: This button previews the specified or entire scan bed.

C. Prescan button: This button previews one or more detailed images of the area(s) selected by the Scan Frame tool.

D. Toolbar: The buttons in the Toolbar perform specific actions on the Overview or Prescan image. The Toolbar includes the *Frame (Scan Frame)* tool, *Magnify Glass* (*Zoom)* tool, *and Pane (Move)* tool.

E. Scan button: This button starts the final scanning process.

F. Transform button: This button lets you flip the image horizontally or rotate the image vertically.

G. Preview area: This area in the Preview window shows the Overview or Prescan image.

H. Status bar: The area shows you some information for easier operation.

I. Ruler: Rulers are located on both sides of the Preview window to help you with measurement and alignment.

J. Unit of Measurement: Select the unit of measurement for the rulers and the ruler colors by clicking the arrow at the 0,0 point of the rulers and choosing from the drop-down menu.

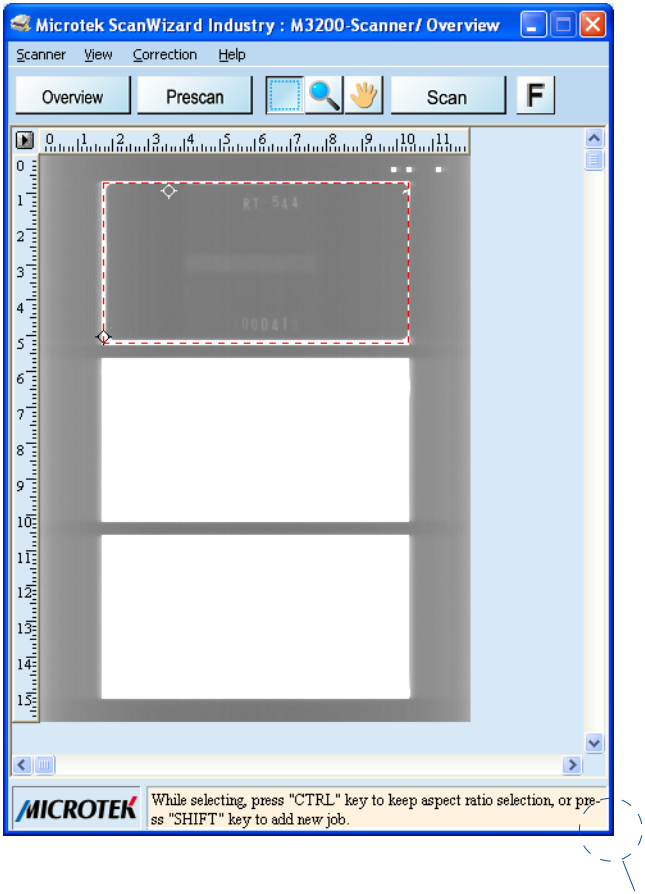
K. Minimize button: Click the Minimize button to minimize ScanWizard Industry.

L. Exit button: Click the Exit button to close ScanWizard Industry scanning software.

Preview Area

The preview area is where the overview or prescan image appears after you click the Overview, Prescan, or Scan button.

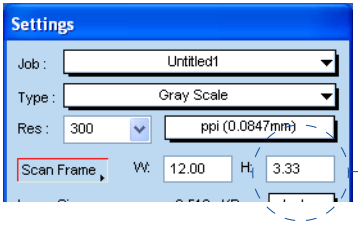
The dimensions of preview area depend on the sizes supported by the scanner. For example, if your scanner only supports a maximum size of 12” x 16”, the maximum preview area will be limited under this limitation.



To increase or decrease the preview window, drag the window to resize

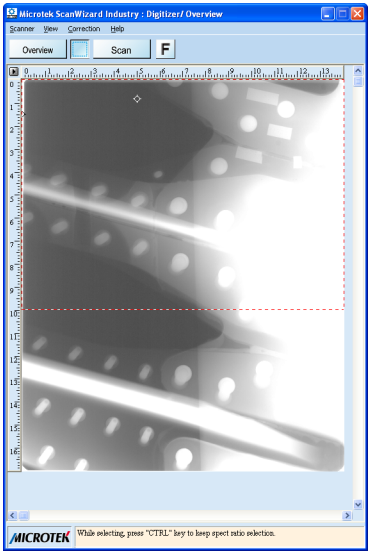
However, for some scanner models (ex. MII-900 Plus), you are allowed to resize the preview area as you wish.

For example, the MII-900 Plus offers you two kinds of dimensions of preview area, which are 14" x 17" (default) and 14" x 52" (maximum), depending on which one you select in the Scan Frame settings. You can use the maximum size instead of the default size for the preview area by entering a value greater than 17, for example, 20, in the Height (H) edit box of the Scan Frame settings. Then, press the Overview button to perform a preview of the image. Thereafter, the preview area will be resized to the maximum size of 14" x 52" at once.

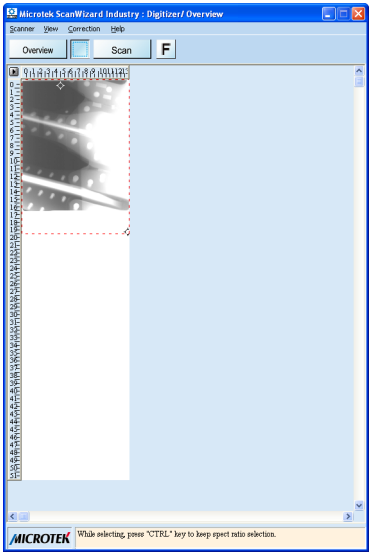


For MII-900 Plus, enter a value greater than 17 to expand the preview area up to maximun size of 14" x 52" if needed; enter a value less than or equal to 17 to reverse the value back to the default size.

Please take note that you cannot use the Scan Frame settings to resize the preview area given by using the Scan Frame tool.



Default size of preview area



Maximum size of preview area

Overview, Prescan

Overview

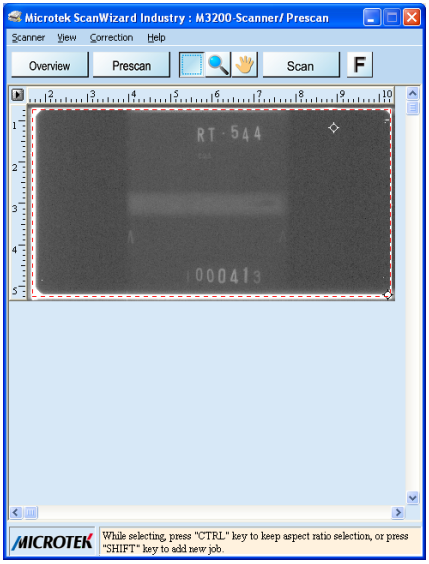
The Overview button previews the image on the scan bed . By default, the entire scan bed is previewed when you click the Overview button.

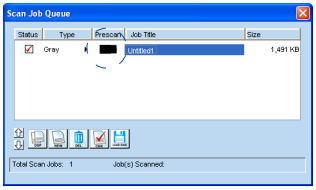
Prescan

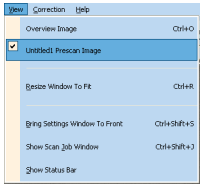
The Prescan button previews in high resolution the area selected by the Scan Frame tool. Multiple prescans can be done if you have several selected scan jobs, and the prescans are done one after another in the order that they are listed in the Scan Job Queue window.

To obtain the prescan image:

1. Click the *Scan Frame* tool.
2. Select the area to be prescanned by drawing a frame around the area in the Overview image.
3. Click the *Prescan* button. The Prescan image will then be available for viewing in the View menu, and a thumbnail of the image will appear in the Scan Job Queue window.





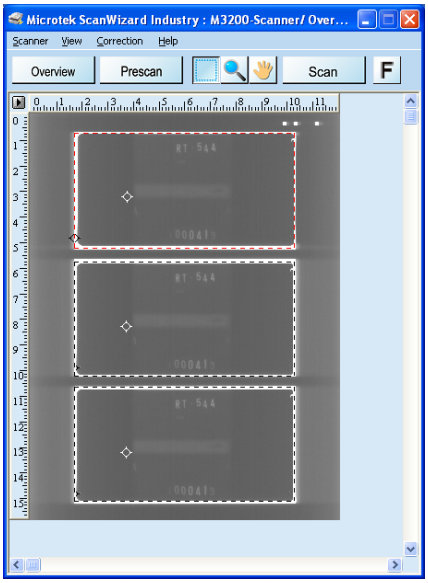


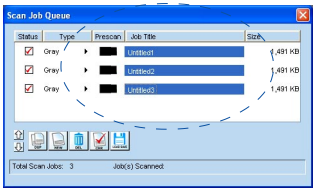
Prescan viewing mode

To obtain multiple prescan images:

1. Define your scan jobs in the Scan Job Queue window (see the Scan Job Queue window section for more details).

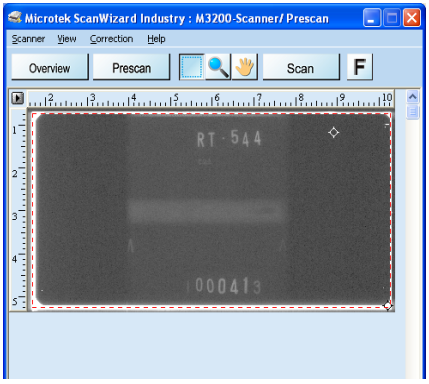
2. To select multiple scan jobs, press the *Ctrl* key and click on the jobs to be selected in the Scan Job Queue or Preview window.

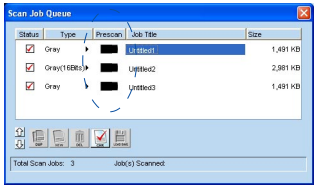


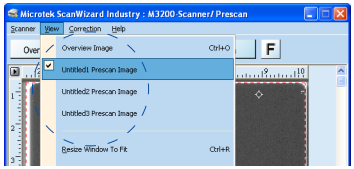


Overview viewing mode

3. Click the *Prescan* button. Multiple prescans are created in the process, corresponding to the number of scan jobs defined. You can then switch among the various prescan images for viewing.





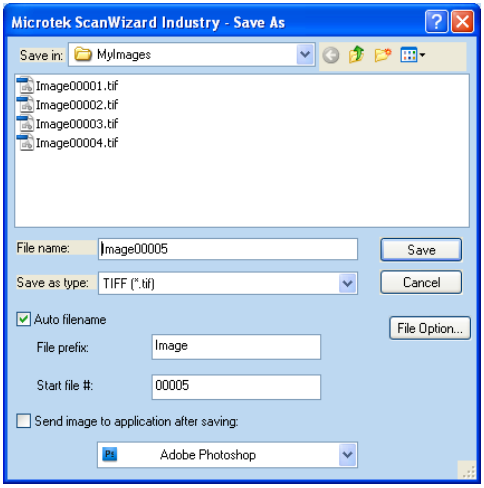


Prescan viewing mode

Scan

The Scan button scans the images on your scanner and delivers the images to your selected folder or application. The images that are scanned are the scan jobs that have been checked in the Scan Job Queue window. This is the default button when ScanWizard Industry is launched either as a stand-alone or from an application program.

When the "Scan To: Save As" dialog box appears, key in a file name, then select TIFF, JPG, or J2K as the export file format, and click Save to perform the final scan.



File name

This is the file name to store images.

Save as type

This menu box lets you select a file format when saving a file. If TIF is selected, the scanned images will be automatically identified as "Image00001.tif", "Image00002.tif", etc. You can change the default root file name to uniquely label your scan jobs.

Auto filename

If Auto filename is checked, the file name consists of the file prefix, plus the file serial number. If unchecked, no file serial number is appended to the file name.

- File prefix: This edit box lets you enter a root file name. “Image” is the default.
- Start file #: This edit box lets you enter a starting number to be appended to the file name. “00001” is the default.

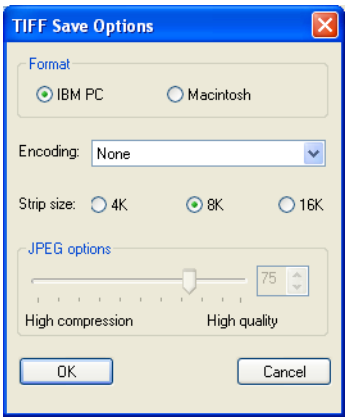
Send image to application after saving:

If this option is checked, the scanned images are sent to your selected application.

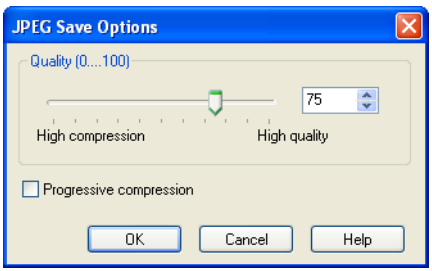
File Option

The File Option button is a file compression tool, allowing you to save your scanned image with different image quality. This button is activated only when the file format is set as TIFF or JPG; otherwise it will not be shown.

- If “TIF” is selected, a “TIFF Save Options” window will appear after clicking the File Option button. Specify your requirements for your file as your desired. If you choose “None” in the Encoding option, the file compression will not be available for adjusting.



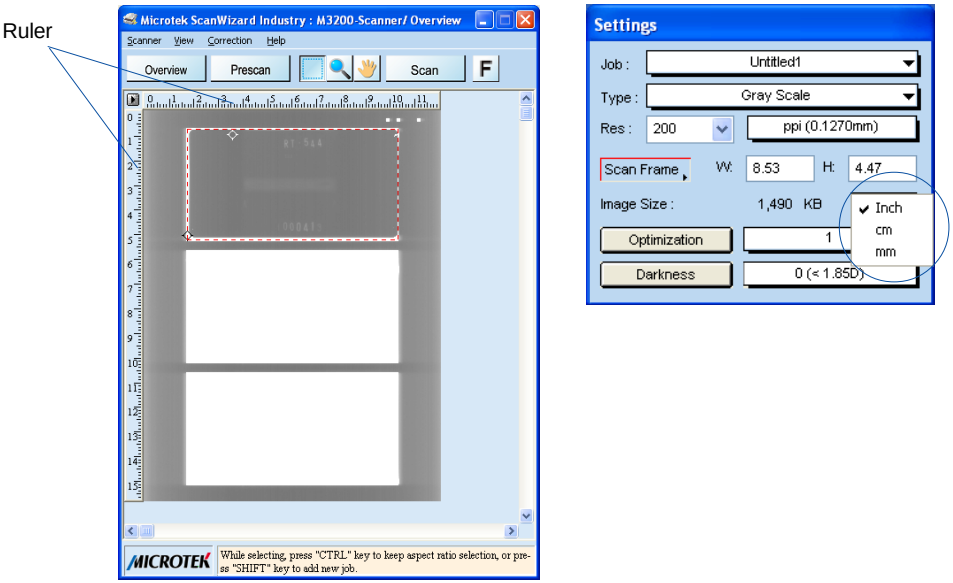
- If “JPG is selected, a “JPG Save Options” window will appear after clicking the File Option button.



Rulers, Unit of Measurement

The rulers on the top and left sides of the Preview window help you with measurement and alignment, marking off measurement according to the selected unit.

The unit of measurement can be selected from the *Unit* box in the Settings window. The options for unit of measurement include *inch*, *centimeter*, and *millimeter*.



Transform

The Transform function allows you to rotate and / or flip the image.

The effects of the Transform function will be seen in the Prescan image or are after you click the Scan button and scan the image in; the Transform effect is not shown in the Overview viewing mode.

To use the Transform function:

1. Click the *Transform* button in the Preview window.
2. From the options that appear, choose the degree of rotation you wish.
3. Click the *Scan* button in the Preview window. When the image is scanned, it will be rotated or transformed according to the selected option.

The Toolbar

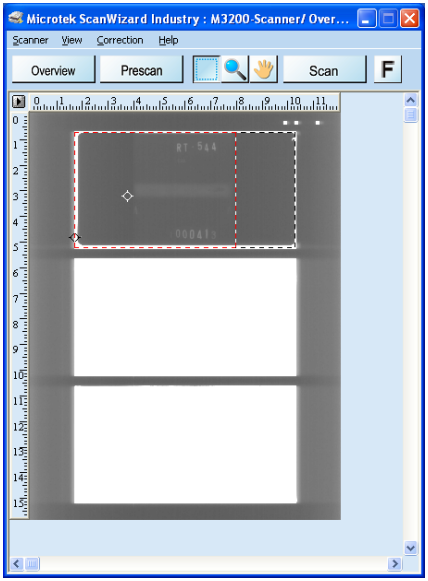
The buttons in the Toolbar perform specific actions on the Overview or Prescan image. The Toolbar includes the *Frame (Scan Frame)* tool, *Magnify Glass (Zoom)* tool, *and Pane (Move)* tool.

Scan Frame (Frame) Tool

The Scan Frame tool lets you select the area to be scanned or prescanned. You can have multiple scan frames, but only one scan frame can be current at a time; the current scan frame is indicated by a flashing marquee.

To use the Frame tool:

1. Click the Frame tool.
2. Move the pointer (now a crossbar) to the Overview image, and draw a frame enclosing the area to be selected. When you release the mouse, a flashing marquee will indicate the scan frame. To create multiple scan frames, hold down the *Shift* key and drag your next scan frame.
3. To resize the scan frame, drag a corner of the scan frame and resize to the desired area.
4. To change the position of the scan frame, drag inside the scan frame and move to a new location.



Magnify Glass (Zoom) Tool

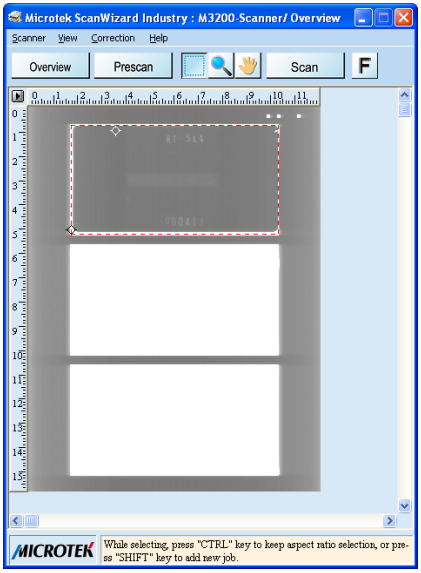
The Magnify Glass tool lets you zoom in (magnify) and zoom out (reduce) your view of the image. Only your view of the preview image is changed; the actual size of the image remains unaffected.

Each click of the Magnify Glass tool magnifies or reduces by a factor of 2. Thus, the magnification levels increase from 100% to 200%, to 400%, and to the maximum 800%.

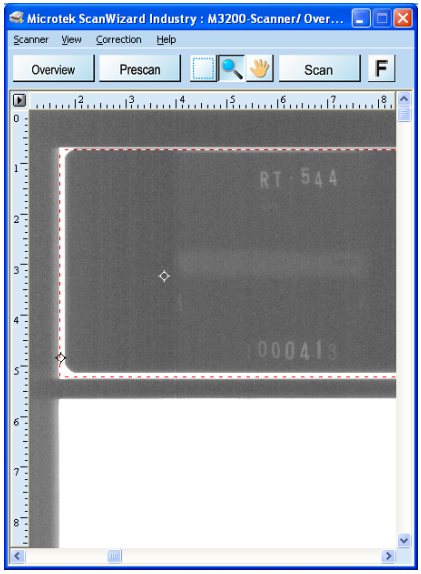
To magnify (reduce), hold down the *Shift* key and with the Magnify Glass tool selected, click the image. A minus sign will be in the middle of the lens to indicate the image is being zoomed out.

To use the Magnify Glass tool:

1. Click the Magnify Glass tool.
2. Place the pointer — now a lens with a plus sign inside it — on the image and click. To reduce the view, hold down the Shift key (the Magnify Glass tool changing to show a minus sign inside it), and click again.



Magnify before



Magnify after

Pane (Move) Tool

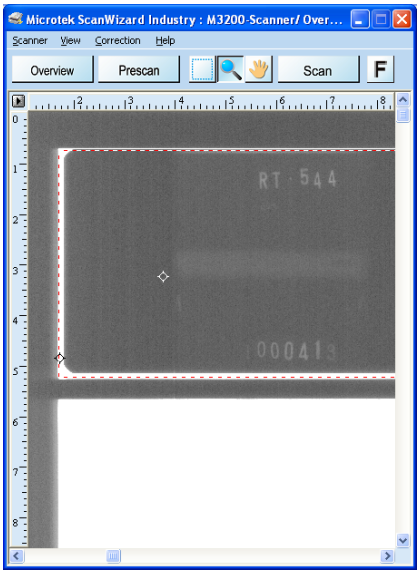
The Pane tool lets you scroll through an overview or prescan image, allowing you to move parts of the image into view quickly without using the scroll bars.

You can use the Pane tool for scrolling through zoomed-in images that were enlarged through the Magnify Glass tool, or for scrolling through parts of an image not included completely within the frame of the preview window.

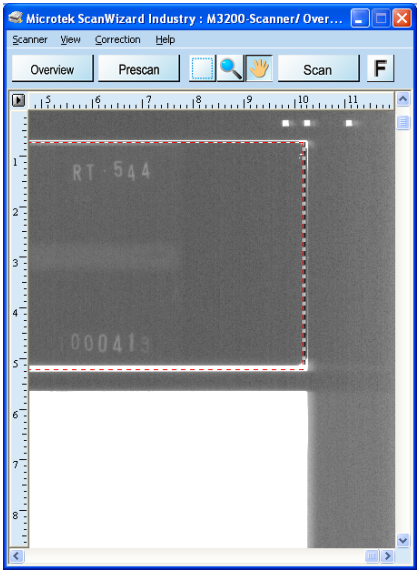
To use the Pane tool:

1. Click the Pane tool.

2. Move the pointer (now in the form of a hand) to the image. Hold down the mouse and move the Pane tool left, right, up, or down, and you will see portions of the image come into view.

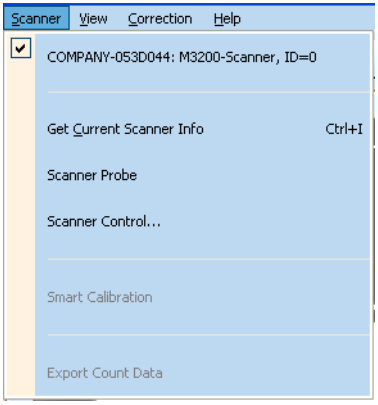


Move before



Move after

The Scanner Menu



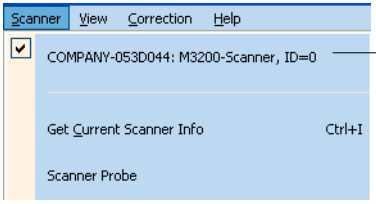
The Scanner Menu lets you:

- Show your scanner model or select a scanner if you have multiple scanners
- Get information about your scanner
- Get scanner information on the USB / FireWire chain
- Perform special scanner controls unique to the scanner (e.g. set idle time for saving power)
- Save the calibration time
- Get a scan count

Scanner Model

The scanner model (and its USB or FireWire ID number) is shown at the top of the scanner. If you have multiple scanners on your system, all the scanners are shown with their respective IDs, and the current scanner is indicated by a check.

Only one scanner can be accessed at a time. To switch among various scanners, select the scanner to be used.



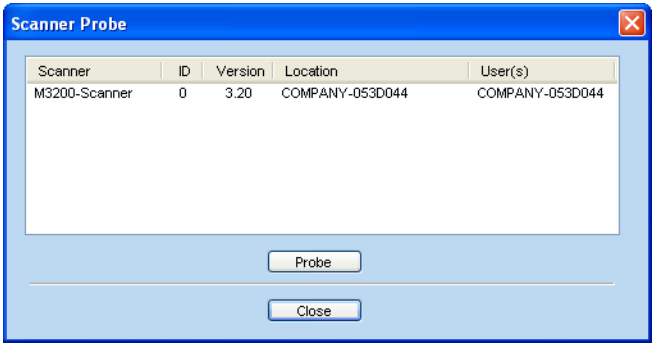
The scanner is displayed with its USB or FireWire ID number. The current scanner is marked by a check.

Get Current Scanner Info

This command provides information about your current scanner. When you choose this command, a dialog box appears showing the scanner model, the scanner ID number, and the firmware version.

Scanner Probe

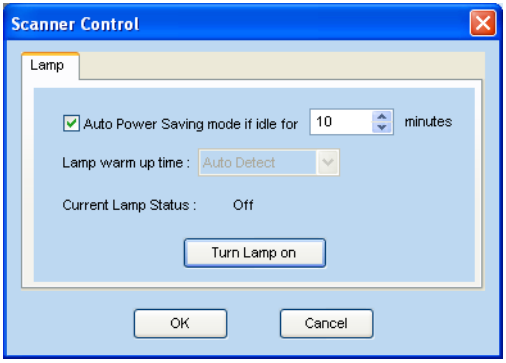
This command shows the scanner information on your USB or FireWire chain. If your scanner does not show in the Scanner Probe dialog box, make sure your scanner is properly installed, connected, and turned on, and then click the *Probe* button. For details on connecting your scanner, refer to your scanner hardware installation guide.



Scanner Control (Power Saving Control)

This command lets you use some of the special features of your scanner, such as lamp control.

Note: Not all scanner models support these features. If your scanner model is not supported, the Scanner Controls command will be grayed out in the Scanner menu.



Lamp Control

This the power-saving feature of the scanner lamp to save energy and extend the life cycle of the lamp. By default, the lamp turns off automatically if the scanner is idle for 15 minutes. You can change the lamp idle time in your preferences or disable this feature completely by unchecking the *Auto Power Saving Mode* check box.

By default, the lamp warm-up time is 3 minutes. A lamp warm-up dialog box will appear if you try to perform a scan or preview operation without the lamp having fully warmed up. If the lamp is not fully warmed up, the light intensity of the scanner may not be stable and may adversely affect the quality of your scanned image.

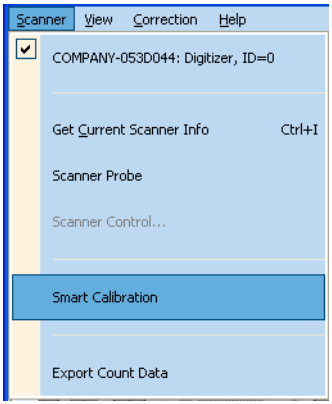
The current lamp status is indicated. You may specifically turn the lamp on or off if you wish. Please note that the lamp On / Off state is automatically controlled by the software, and no user intervention is necessary. You may want to do this manually *if and only if* you wish to turn on and warm up the lamp a few minutes before you actually finish your scan job editing.

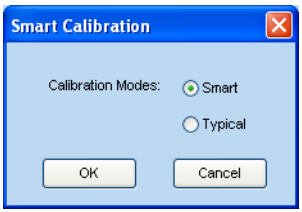
Smart Calibration

This function allows you to skip the calibration when you perform the scans with a same value of resolutions. For instance, if you wish to run all your scan jobs at 200 dpi of the resolution, the system will only calibrate the scanner at first time. After the first scan is done, this calibration data will be memorized and kept for subsequent use. Therefore, you do not need to calibrate your scanner every time when you press the Scan button.

This command is enabled only when the scanner model used supports this function (i.e., MII-800XL Plus) ; otherwise, it will be grayed out in the Scanner menu.

Note: The calibration data used for each resolution value will be erased once you exit ScanWizard Industry each time.





Smart

This option enables you to perform the Smart Calibration function. By default, this option is checked automatically when you activate the Smart Calibration command.

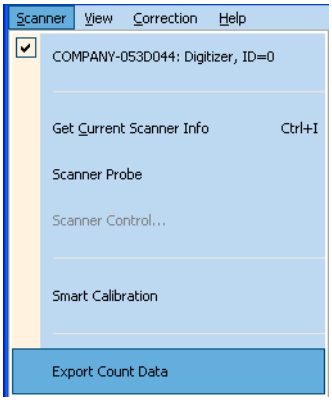
Typical

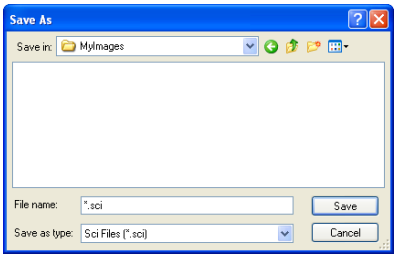
This option can be used instead of the “Smart” if you like to calibrate your scanner every time when scanning.

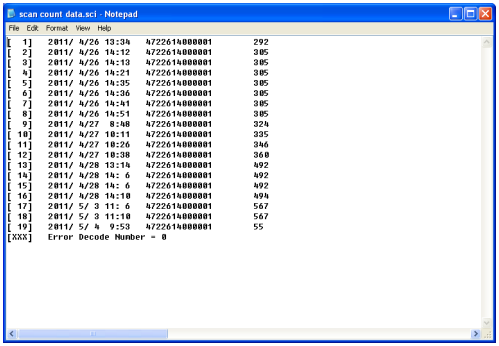
Export Count Data

Some scanner models can keep the trace of some scan data, such as scan count, scan date, scanner's series number, etc. Such a trace data is encrypted and can be saved in a SCI file format for output use. It is very useful in getting a scan data after the scanner is being used for a period of time.

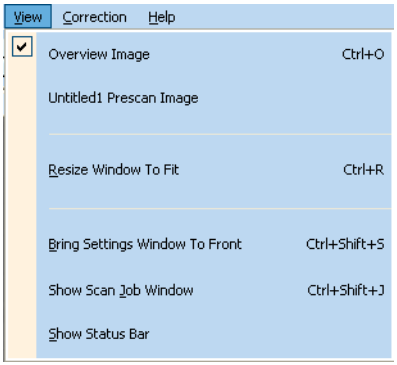
This command is enabled only when the scanner model used supports this function (i.e., MII-800XL Plus); otherwise, it will be grayed out in the Scanner menu.







The View Menu



The View menu lets you:

- Select an overview or prescan view of an image
- Resize the Preview window to fit
- Bring the Settings window to the front
- Show or hide the Scan Job Queue window
- Show or hide Status Bar

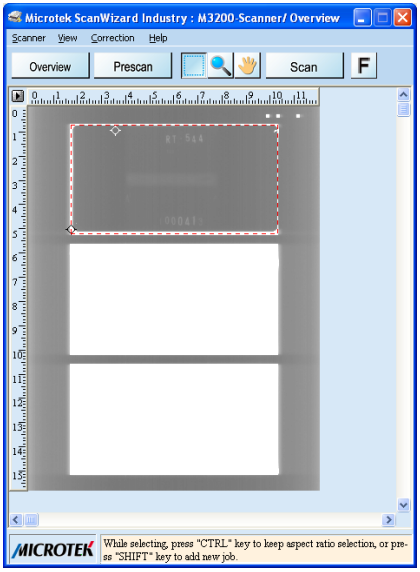
Overview Image, Prescan Image

These commands allow you to switch between Overview or Prescan viewing modes.

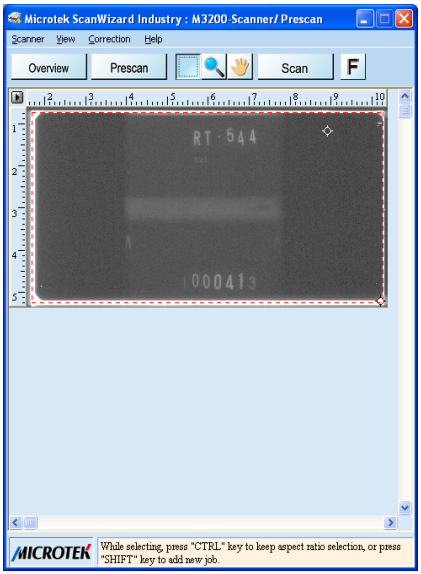
- Overview image: This is an image obtained when you click the Overview button in the Preview window. The image shows you whatever is on your scan bed.

- Prescan image: This is a detailed image obtained from selecting an area in the Overview image and then clicking the Prescan button in the Preview window.

The Overview is a preview of your image. The maximum size of the Overview varies, depending on your scanner model. For example, if the scan bed (the glass surface) of your scanner has a maximum size of 12" x 16", the maximum Overview will be limited to those dimensions.



Overview viewing mode



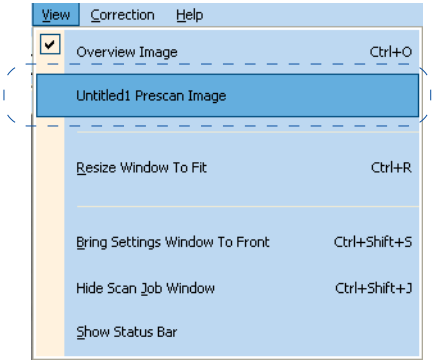
Prescan viewing mode

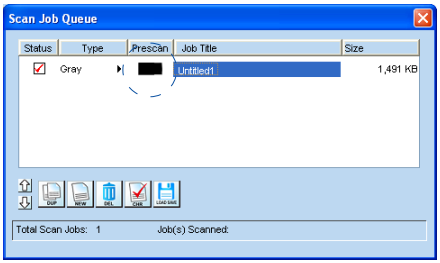
A. To obtain the Overview image

With the image(s) placed on your scanner, click the *Overview* button.

B. To obtain the Prescan image:

1. Click the *Scan Frame* (Frame) tool.
2. Select the area to be prescanned by drawing a frame around the area in the Overview image.
3. Click the *Prescan* button. The Prescan image will then be available for viewing in the View menu, and a thumbnail of the image will appear in the Scan Job Queue window.





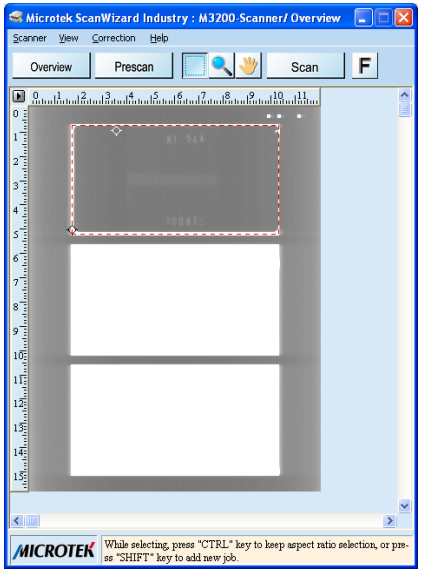
C. To obtain multiple Prescan images:

1. Define your scan jobs in the Scan Job Queue window (see the Scan Job Queue window section of the manual for more details).
2. To select multiple scan jobs, press the *Shift* key and click the jobs to be selected in the Scan Job Queue or Preview window.
3. Click the *Prescan* button. Multiple prescans are created in the process, corresponding to the number of scan jobs defined. You can then switch among the various prescan images for viewing.

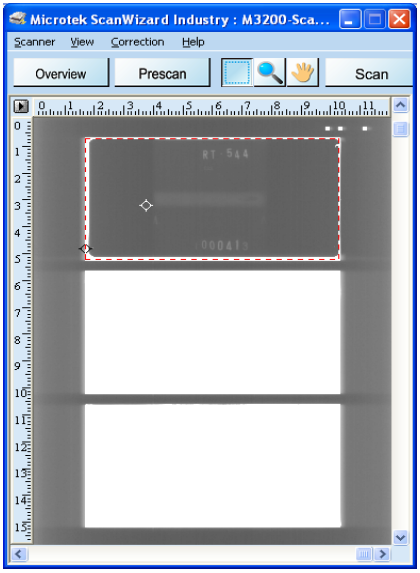
Resize Window to Fit

This command resizes the Preview window, which you may find helpful to do for conserving space on your desktop monitor (especially after you have enlarged the Preview window).

This command is available only when the current zoom level is set as 100%. It will be disabled if the zoom is set to other levels.



Resize before



Resize after

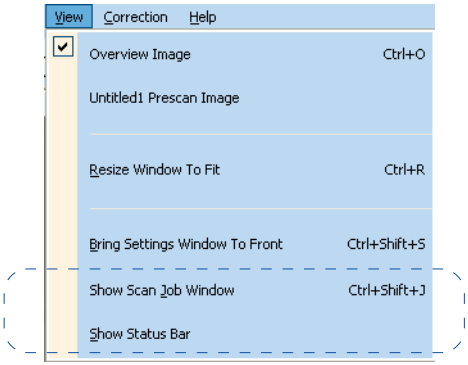
Bring Settings Window to Front

This command brings the Settings window to the forefront, which is useful if you have the Settings window hidden behind other windows or if you have a expanded your Preview window such that it covers the Settings window.

Show/Hide Commands

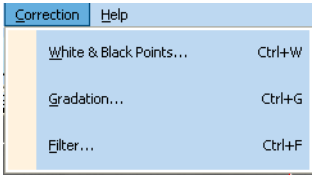
These commands allow you to switch between showing or hiding the Scan Job Queue window and Status Bar on your screen.

To use this feature, choose the correct command from the View menu for viewing a window. When the window appears, you can hide it by choosing the particular *Hide* command for it.

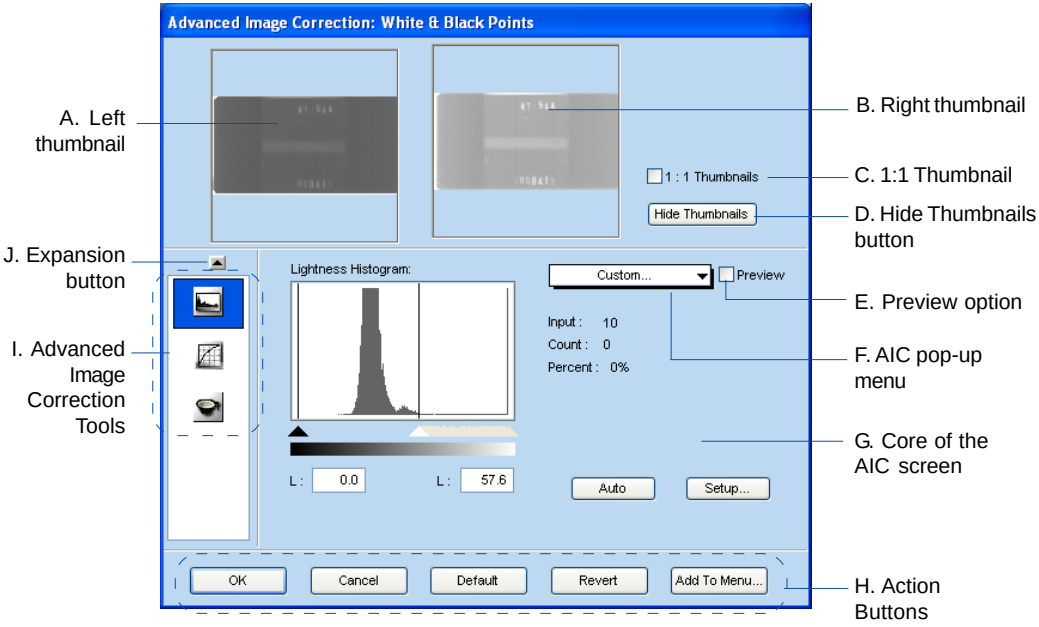


The Correction Menu

The Correction Menu lets you use the Advanced Image Correction (AIC) tools of ScanWizard Industry, allowing you to adjust and enhance the image, and image corrections are displayed in real time.



Elements of the Advanced Image Correction (AIC) Dialog Box



A. Left thumbnail: This shows the image *before* enhancements are applied.

B. Right thumbnail: This shows the image *after* enhancements are applied.

C. 1:1 Thumbnail: If checked, size of the thumbnail is about the same as the image shown in the Preview window. If unchecked, the image size appears fit into the shown dialog box.

D. Hide Thumbnails button: If checked, the before and after thumbnails are shown in the AIC screen. You can choose to uncheck this option and hide the thumbnails, since changes can be previewed in the Preview window. If unchecked, the screen collapses to show only the lower portion of the dialog box.

E. Preview option: If checked, changes or enhancements are applied immediately to the Preview window image (for both Overview and Prescan images). If unchecked, changes are seen only after you close the AIC dialog box.

F. AIC pop-up menu: This contains custom and other settings you have created for the particular AIC tool shown. See the Custom Settings section for more details.

G. Core of the AIC screen: This is the heart of the AIC screen, and the content here changes to reflect your selected AIC tool.

H. Action Buttons: These carry out a specific action. See the next section for more details.

I. Advanced Image Correction Tools (AIC): These tools adjust or enhance your images. Click any tool in this area, and see how the core of the AIC screen changes to reflect the properties of that tool.

J. Expansion button: The button reveals the top half of the AIC screen, which includes the various thumbnail controls.

The Action Buttons

The Action Buttons in the AIC dialog box let you accept, cancel, or control the application of AIC settings.

OK button

This button applies to the current scan job whatever image enhancements you have performed, and then closes the AIC dialog box.

Cancel button

This button cancels out all image-enhancement changes you have made to the current scan job, and then closes the AIC dialog box. The settings remained unchanged.

Default button

The button cancels the changes you have made with the image correction tools and restores all settings to their default values.

Revert button

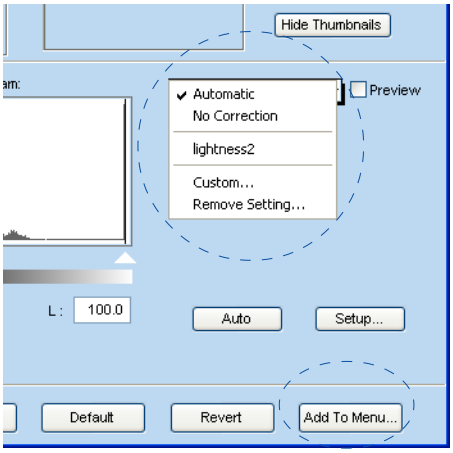
This button cancels out the changes that were made with the current image enhancement tool. This means that if you used several AIC tools, *Revert* cancels the effect of only the last used (or current) tool, and preserves the effects of the other preceding tools.

Add to Menu button

This button allows you to save the changes you have made to the current scan job as a custom setting. You may retrieve this customized setting afterwards from the AIC pop-up menu. Maximum 20 sets of customized settings for each AIC function.

Custom Settings

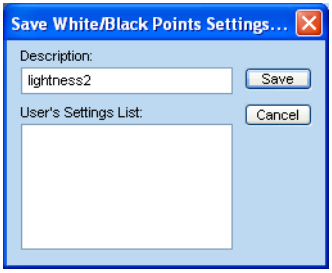
When you click the AIC pop-up menu in AIC dialog box, a drop-down menu will show options for adding (Custom..), removing, or loading custom settings. These custom settings are settings that you define yourself for your scan jobs.



For instance, if you wish to apply a certain white point to an image and then save that white point setting for future jobs, you can add the new white setting as a custom setting. The next time you wish to retrieve that particular white point setting, simply go to the AIC pop-up menu, and choose that setting.

A. Adding custom settings

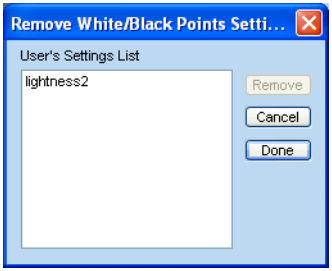
The **Add to Menu...** allows you to save a custom setting you have made to the current scan job. You may retrieve this custom setting later from the AIC tool's pop-up menu.



To add a custom setting for an AIC tool, click the *Add to Menu...* button in AIC dialog box. When a dialog box comes up, enter the name of the new custom setting to be added. For instance, the added setting can be called "lightness2" as shown below.

B. Removing custom settings

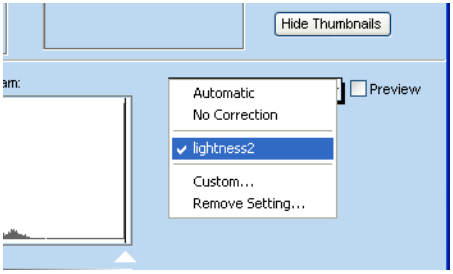
The **Remove Settings...** allows you to remove a custom setting (or a factory preset setting) from the list of settings available.



To remove a custom setting for an AIC tool, click the *Remove Setting...*in that tool's AIC pop-up menu. When a dialog box comes up, select the particular setting to be removed, then click *Remove* in the dialog box.

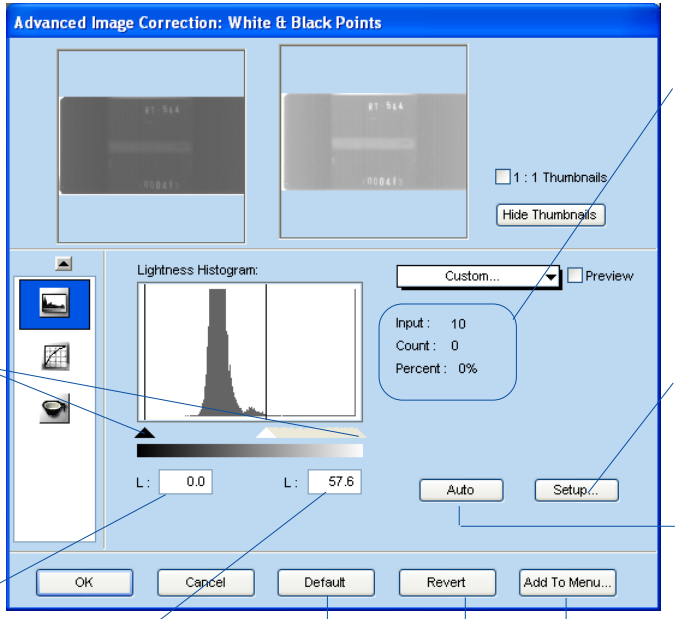
C. Loading / retrieving user-defined AIC settings

To load or retrieve a custom setting that you have previously defined for an AIC tool, go to that tool's AIC pop-up menu, and choose the setting you wish to be loaded.



White/Black Points Tool

The White/Black Points tool is used to change the shadow and highlight points of an image. By using this tool, you can manipulate an image to either bring out the highlights in a very dark image, or bring out more of the shadows in a very light image.



Observe histogram values for distribution of the Lightness "L" channel in the image, as cursor is swept around histogram

Click to bring up the White/Black points setup dialog box. For more details, see the next section "*White/* Black Points Setup".

Click to let ScanWizard Industry determine the shadow and highlight points automatically

Drag sliders to define custom shadow and highlight settings

Enter custom Lightness value for Shadow (Black area) here

Enter custom Lightness value for Highlight (White area) here

Click to restore all settings to default ScanWizard Industry values

Click to save the changes you have made to the current scan job as a custom setting

Click to cancel out the changes that were made with the current image enhancement tool

White/Black Points Setup

This button provides you with advanced controls for setting the clipping points for your white and black points, as well as determining the output levels for the white/black points on your printer.

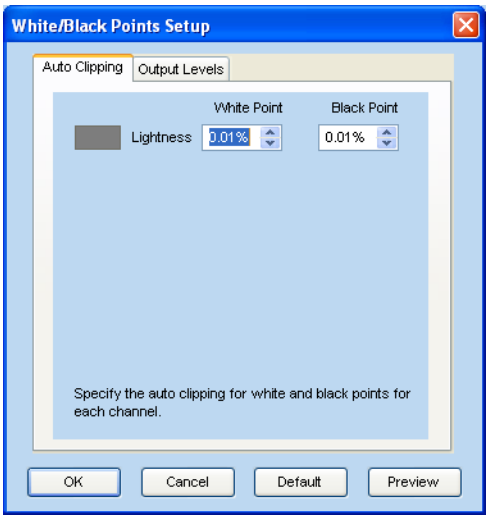
To use this feature, click the *Setup* button in the White/Black Points dialog box. When the dialog box comes up, specify your preferences.

A. Auto Clipping

The *Auto White Point Clipping* and *Auto Black Point Clipping* fields allow you to specify the percentage by which the white and black points, respectively, can be clipped from the histogram. The clipping is done after you click the Auto button in the AIC White/Black Points dialog box.

For example, if you specify 10 percent as your White Point clipping value and then click the Auto button, the white point on the histogram is adjusted so that 10 percent of the color information is "clipped" or ignored. The resulting 90 percent information leftover is then remapped, resulting in an image with less highlight detail.

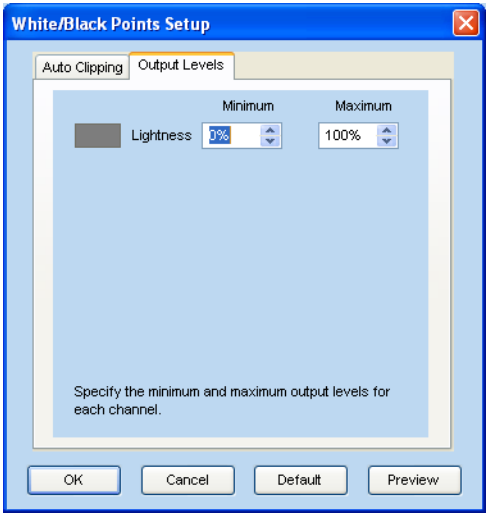
The same principle above applies to the Auto Black Point Clipping feature, which governs the black point for shadows. These fields are normally used by more advanced users..



B. Output Levels

The *Minimum Output Level* lets you set the minimum output level of the black point. The higher the percentage value, the lower the contrast will be.

The *Maximum Output Level* lets you set the output level of the white point. The lower the percentage value, the lower the contrast will be.

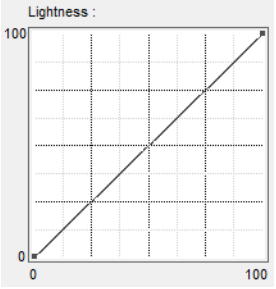


Gradation Tool

The Gradation tool lets you adjust the midtones (the mid-level grays) of the lightness channel “L” of an image without altering the color itself. This is because even with changes to the luminance or lightness value, the chroma and hue values are kept constant.

How to read the curve

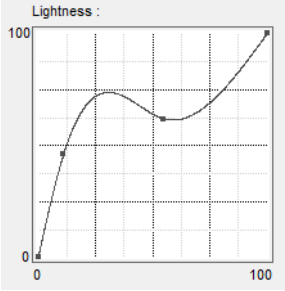
The curve shows the relationship of the brightness changes across the middle pixels between the resulting image and the original. When you open the Curves dialog box, the line on the graph is diagonal because the Input and Output values are the same.



Original curve

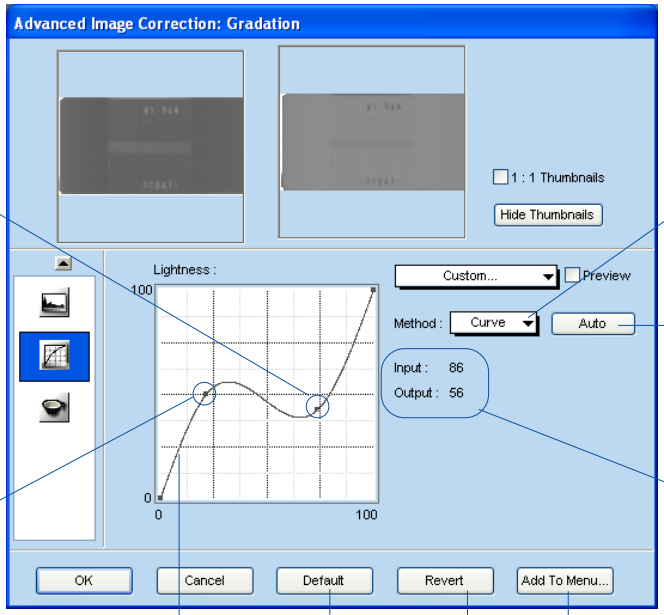
When the curve is moved up or down, the relationship between input value and output value changes accordingly.

- In areas where the curve is moved down, pixels in that portion of the image are darkened.
- In areas where the curve is moved up, pixels in that portion of the image are lightened.



Modified curve

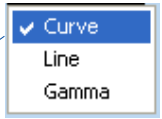
Contrast in an image can be seen by the angle of the line. The steeper the slope, the higher the contrast. The closer the line is to horizontal, the lower the contrast.



Dragging the top-right section of the curve below the default diagonal line will add shadow to light tones

Dragging the bottom-left section of the curve above the default diagonal line will add lightness to shadow tones

Choose the method you wish to display the gradation curve. Select from Curve, Line, or Gamma



Click **Auto** to let ScanWizard Industry calculate the Gradation setting automatically

Coordinates information of cursor position within the grids

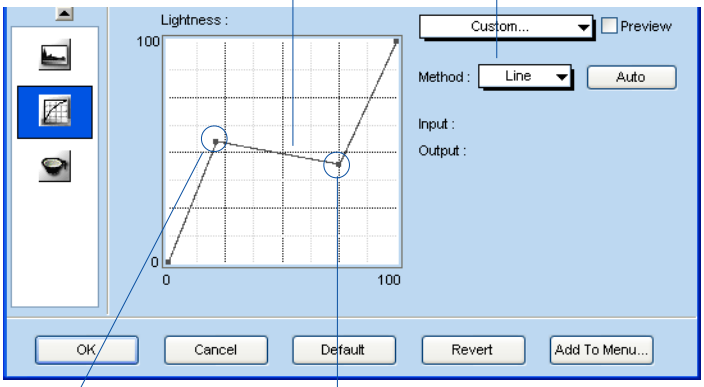
Click to restore all settings to default ScanWizard Industry values

Click to save the changes you have made to the current scan job as a custom setting

Click to cancel out the changes that were made with the current image enhancement tool

Click to create handles from which to drag and manipulate a portion of the curve.
The more handles are created, the easier and smoother it is to manipulate the curve.
To remove a handle, drag it off the graph or the grid

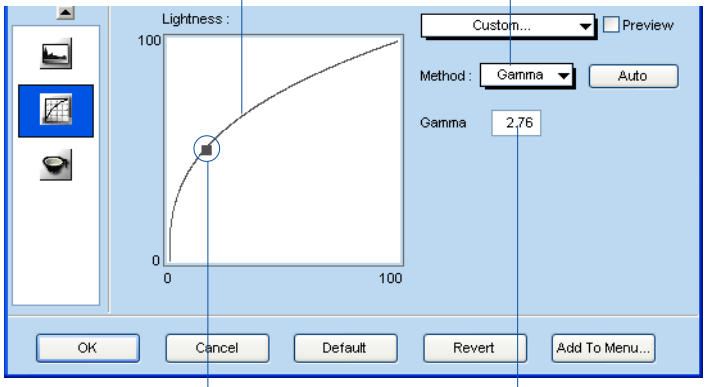
Appearance of curve if Method chosen is “Line”



Dragging the lower left section of the line above the default diagonal line will add shadow to light tones

Dragging the upper right section of the line below the default diagonal line will add lightness to shadow tones

Appearance of curve if Method chosen is “Gamma”



Dragging points on the curve to a Gamma value above 1.00, will lighten the dark tones. Dragging points on the curve to a Gamma value below 1.00 will add shadows to light tones

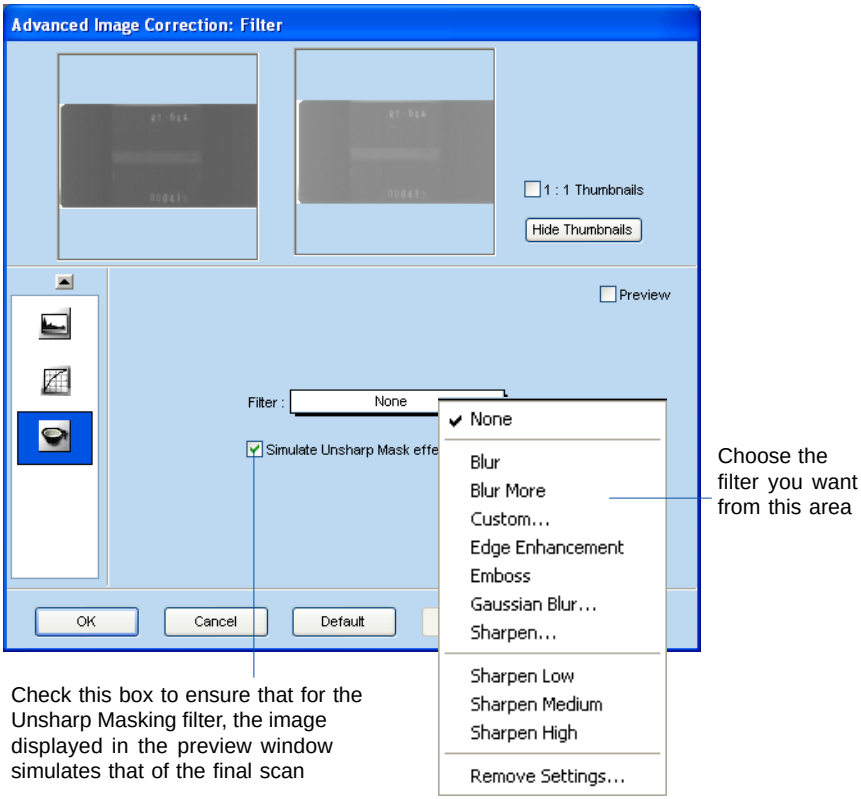
Instead of dragging the Gamma handle, you can also directly enter the appropriate Gamma value in the edit box.

Filter Tool

The Filter tool is used to apply special effects to your images. Several filters are provided in ScanWizard Industry, including Blur / Blur More, Sharpen, Emboss, Edge Enhancement, Gaussian Blur, and Automatic Sharpness Enhancement.

In using most of the Filters (except Unsharp Masking), the image you obtain in the preview window may differ from the way the image appears when you finally scan it in. For the Unsharp Masking filter, the final scan result can be simulated and previewed, either from the thumbnail on the filters dialog box or from the preview image in the Preview window.

Keep in mind too that the appearance of the image in the preview window and how it is affected by a filter will depend on the resolution of the image. The higher the resolution, the less obvious the effect of certain filters (such as Blur).



A. Blur

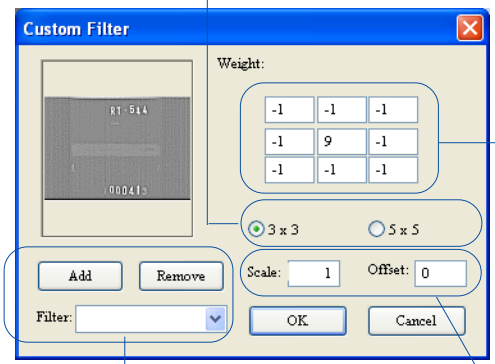
The Blur filters eliminate noise in the parts of the image where significant color transitions occur. These filters decrease the contrast between adjacent pixels, making the image appear hazy and out of focus.

- *Blur* smooths out the transitions by lightening pixels next to the hard edges of defined lines and shaded areas.
- *Blur More* produces an effect three or four times stronger than Blur.

B. Custom

The **Custom** filter changes the brightness values of each pixel in the image according to a predefined algorithm known as convolution. This filter allows you to define a 3x3 or 5x5 mask size custom filter (see dialog box next page for details).

Choose a filter mask size, 3x3 or 5x5. Notice the **Weight** edit boxes switches between 5x5 (25) and 3x3 (9) edit boxes.



Click the center **Weight** edit box. This represents the pixel being evaluated. Enter the value by which you want to multiply that pixel's brightness value. Value range is +/- 99

Click a **Weight** edit box representing an adjacent pixel for you to assign a weighted value. Enter the value by which you want to multiply the pixel in that position multiplied.

For example, if you want the brightness value of the pixel to the immediate bottom of the current pixel multiplied by 1, enter 1 in the **Weight** edit box right under the center **Weight** edit box.

Repeat the last two steps for all the pixels you want to include in the operation. It is not necessary to enter values in all the **Weight** edit boxes.

Enter a filename in the **Filter** edit box, and click the **Add** button to save current customized filter in the Filter drop-down menu. Click **Remove** button to delete custom setting from the Filter menu.

In the **Scale** edit box, enter the value by which to divide the sum of the brightness values of the pixels included in the operation.

In the **Offset** edit box, enter the value to be added to the result of the scale calculation.

C. Edge Enhancement

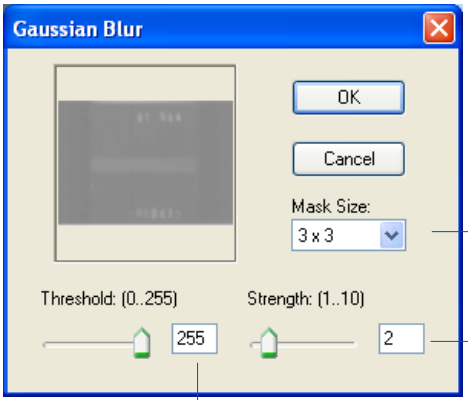
The Edge Enhancement filter gives greater contrast to edges. The filter can do this because edges are areas in an image where gray or color levels change abruptly. It is best to use this tool for improving geometrical contoured shapes.

D. Emboss

The Emboss filter makes a selection appear raised or stamped by suppressing the color within the selection and then tracing its edges with black.

E. Gaussian Blur

The Gaussian Blur is used to defocus an area of the image where significant color transitions occur or where noise exists, and the filter produces a hazy effect. “Gaussian” refers to the bell-shaped curve that is generated when this filter adjusts the color values of the affected pixels. The dialog box below appears when you choose Gaussian Blur from the Filters menu.



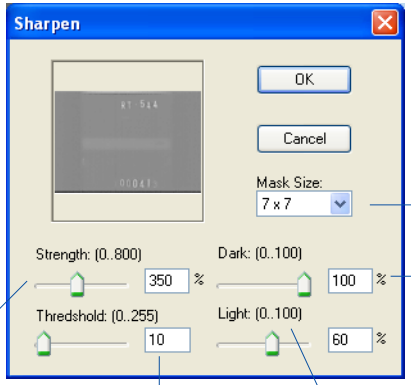
Select a mask size from the **Mask Size** list box.
This parameter determines the depth of the surrounding pixels that will be affected. The larger the mask size, the stronger the blurring effect of the filter.

Enter a value (1-10) in the **Strength** edit box (or drag the slider).
This parameter specifies the degree of the filter’s effect. The higher the value, the stronger the blurring effect of the filter.

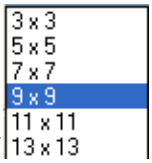
Enter a value (0-255) in the **Threshold** edit box (or drag the slider).
This parameter allows you to specify a tolerance range or a field of contrast between adjacent pixels before blurring is applied. Blurring is applied only when pixel differences are below the Threshold value. The smaller the Threshold value, the weaker the blurring effect.

F. Sharpen (Unsharp Masking)

The Sharpen filter adjusts the contrast of edge detail and creates the illusion of more image sharpness. This filter can be useful for refocusing an image that has become blurry from interpolation or scanning. The dialog box below appears when you choose Sharpen from the Filters menu.



Select a mask size from the **Mask Size** list box.
This parameter determines the depth of surrounding pixels that will be affected. The larger the mask size, the stronger the sharpening effect of the filter.



Enter a value (0-100) in the **Dark** edit box (or drag the slider).
This parameter pertains to how the Sharpen filter affects pixels which are **darker** than their adjacent pixels. By default, a value of 100 is specified for this field.
The higher the value, the darker the edge around the lighter areas and the more pronounced the Unsharp Masking effect is.

Enter a value (0-100) in the **Strength** edit box (or drag the slider) to specify the degree of the filter's effect.
The higher the value, the stronger the sharpening effect of the filter. Too much sharpen will emphasize the noise in the image.

Enter a value (0-60) in the **Light** edit box (or drag the slider).
This parameter pertains to how the Sharpen filter affects pixels which are **lighter** than their adjacent pixels. By default, a value of 60 is specified for this field.
The higher the value, the lighter the edge around the darker areas and the more pronounced the Sharpen effect is.

Enter a value (0-255) in the **Threshold** edit box (or drag the slider).
This parameter specifies a tolerance range to prevent overall sharpening that might generate noise or cause unexpected results.

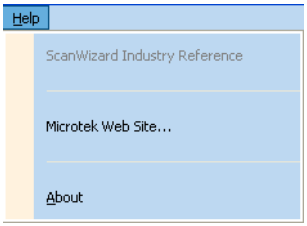
The Threshold defines the required range of contrast between adjacent pixels before Sharpen is applied. Only the pixels with the range of contrast between adjacent pixels before sharpening is applied to an edge. A lower Threshold value produces a more pronounced effect.

G. Automatic Sharpness Enhancement

The Automatic Sharpness Enhancement feature includes Sharpen Low, Sharpen Medium, and Sharpen High. This feature emphasizes the edges (contours) of an image, contributing to the increased sharpness.

The Help Menu

The Help menu lets you access on-line help for ScanWizard Industry, and gives you information on the ScanWizard Industry scanning software.



Microtek Web Site

This command allows you to link to Microtek's website. You can download the driver from Microtek support site if it is necessary to be upgraded.

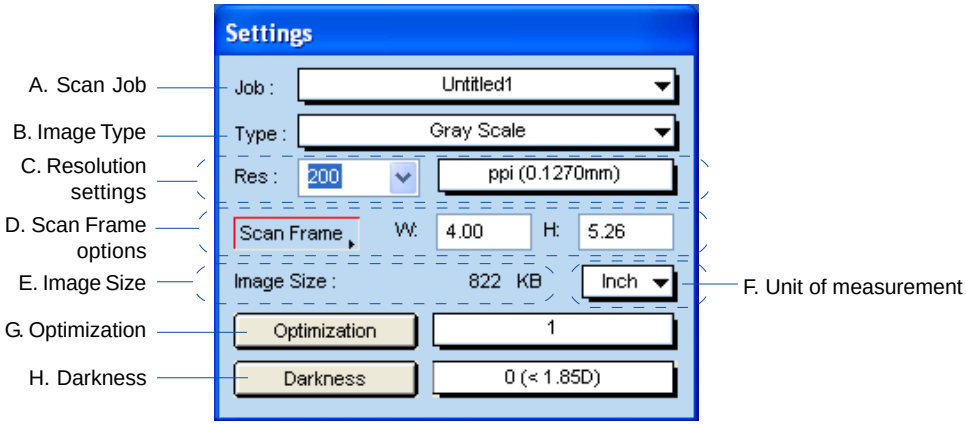
About

This command gives you information on the ScanWizard Industry scanning software. ScanWizard Industry is also referred to in the *About* screen as the ScanWizard Industry scanner controller.

The Settings Window

The Settings window contains the parameters for outputting your scanned image for the current scan job.

Elements of the Settings Window



A. Scan Job (Job): This shows the current scan job as indicated by the Scan Job Queue window and by the selected image in the Preview window.

B. Image Type (Type): This shows the image type of the current scan job.

C. Resolution (Res) settings: This area includes the following: the Resolution box for specifying your output resolution; the Resolution list box (with the down arrow) that provides predefined resolution values for easier selection of the resolution setting; and the Resolution unit, which presents you resolution unit and the size of the dot (pixel). Your most recent scan resolution settings will be recorded as well.

D. Scan Frame options: Includes the Scan Frame settings which represent the dimensions of the image that you wish to scan.

E. Image Size: This shows the size of the file when the image is scanned.

F. Unit of measurement: This lets you choose your desired unit of measurement, which will then be reflected in the rulers alongside the Preview window. Choose from inch, cm, or mm.

G. Optimization: This lets you reduce the random noise of the scanned image.

H. Darkness: This allows you to brighten the entire image and to make the dark area clearer.

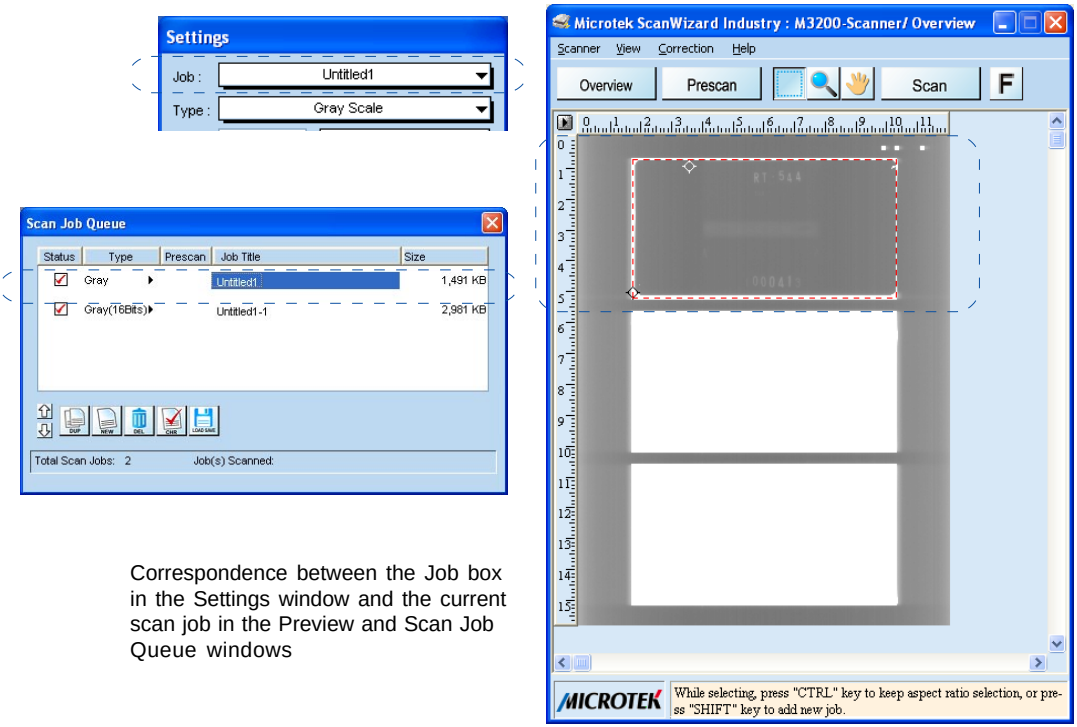
Scan Job (Job)

The Scan Job box shows the currently selected scan job, which is also shown in the Scan Job Queue window and the Preview window.

There is always at least one scan job in existence (by default). If you have multiple scan jobs, not only are these reflected as multiple entries in the Scan Job Queue window and as multiple images in the Preview window, they will also be shown as multiple entries in the Job box of the Settings window.

To select from multiple scan jobs, choose the scan job you wish in the Scan Job box; this will automatically select the corresponding scan job in the Preview and Scan Job Queue windows as well. Conversely, selecting a scan job in either the Preview or Scan Job Queue window will automatically show that selection in the Scan Job box.

This means that a quick look at the Job box, the Preview Window, or the Scan Job Queue window can show you which is your currently selected scan job.

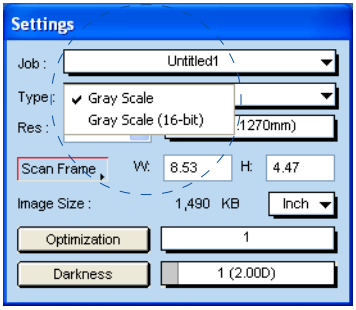


Correspondence between the Job box in the Settings window and the current scan job in the Preview and Scan Job Queue windows

Image Type (Type)

The Image Type box shows you the image type of the current scan job. ScanWizard Industry allows direct scanning Grayscale color space only.

- Grayscale: Grayscale images use shades of gray to simulate gradations of color or tonal values, and contain 8 bits per pixel.
- Grayscale 16-bit: Grayscale 16-bit option is provided in ScanWizard Industry for professional pre-press scanners.



Resolution Settings

The settings related to resolution include the resolution box, the resolution list box, and the resolution unit.

Resolution is the sampling of image pixels per measurement unit or the amount of pixel information stored in an image. Together, the image resolution and dimensions determine the file size of the image, which is measured in kilobytes (KB) or megabytes (MB).

The resolution of an image is important in determining the quality of the output image. Resolution is also directly related to file size, and the higher the resolution, the larger the resulting file size will be.

When dealing with resolution, remember to distinguish between optical resolution and interpolated resolution.

Optical resolution is the “real” resolution as measured by the scanner’s optics. Interpolated resolution is software-enhanced resolution and can be useful for enlarging very small images or for printing line art to obtain superior results.

A. Resolution box

This shows the resolution setting. To set your resolution:

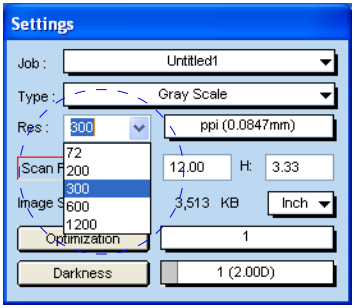
Enter a resolution setting in the Resolution edit box, then press Enter. If the value you enter is too high or too low, the maximum or minimum resolution value is entered for you instead.

Depending on the type of image you have selected, a default resolution is displayed in the resolution box. After you enter your own resolution value, this value is then recorded for subsequent use, until a new value is entered and takes over.

B. Resolution list box

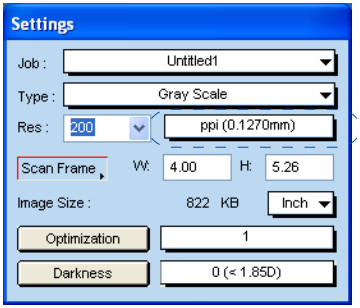
This provides predefined resolution values for easier selection of the resolution setting.

To select your setting, press the up/down arrows next to the Resolution box, and choose your setting from the list box.



C. Resolution unit

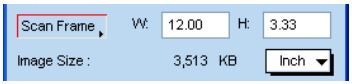
The unit of measurement for resolution is in *ppi* (pixels per inch) which is most commonly used as a measure of image resolution. The dot (pixel) size indicates how big the dot (pixel) will be when a resolution setting is given in the Resolution edit box, together with the resolution unit “ppi”. For instance, if your image will be scanned at 200 ppi, the dot size will be 0.127 mm; and at 400 ppi, the dot size will be 0.0635 mm.



If your scanned images are intented for on-screen display, you need not go higher than the target resolution of your monitor (usually 96 dpi for Windows). A higher resolution value will simply increase the file size of your image without any perceptive improvement in image quality.

Scan Frame, Image Size, and Unit of Measurement

The scan farme settings affect your output image size, while a desired unit of measurement provides you to get the correct size of the scan frame.

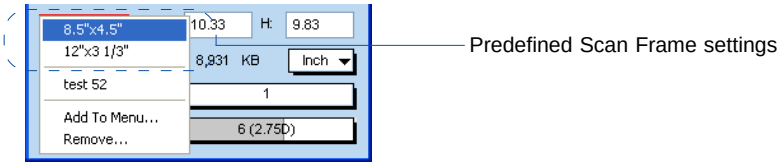


A. Scan Frame settings

The Scan Frame settings (width and height) represent the area on the scan bed that you wish to scan.

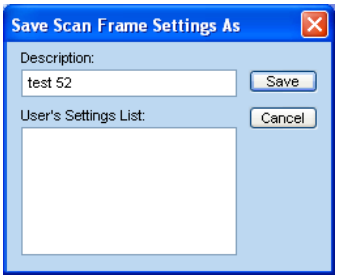
• Specify scan frame settings

If you purchase a specific scanner model (ex. MII-900 Plus), when you activate the Settings window of the ScanWizard Industry, you can choose from a list of predefined Scan Frame settings which are designed for the tailor-made holders came with your scanner. To do this, click "Scan Frame" in the Settings window, and choose a value you want from the drop-down menu. You can use the predefined Scan Frame settings directly if you scan the film with the bundled holder.



If you do not want to scan the film with the holder and want to define your own scan frame, enter the dimensions manually in the width and height edit boxes; or use the Scan Frame (Frame) tool to define or resize your scan frame. Changes made in the Preview window are automatically displayed in the Scan Frame setting edit boxes.

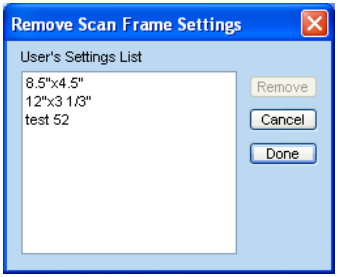
• Adding custom settings



The **Add to Menu...** allows you to save the setting you have made to the current scan job as a custom setting. You may retrieve this custom setting later from the Scan Frame drop-down menu.

To add a custom setting for a scan frame, click *Scan Frame* and choose *Add to Menu ...* in the drop-down menu. When a dialog box comes up, give a setting and enter the name to be added in the description box; then click *Save* in the dialog box.

• Removing custom settings



The **Remove Settings...** allows you to remove a custom setting from the list of scan frame settings available.

To remove a custom setting, click *Scan Frame* to open its drop-down menu, and then choose *Remove Settings*. When a dialog box comes up, select the setting you want to remove, and then click *Remove* in the dialog box.

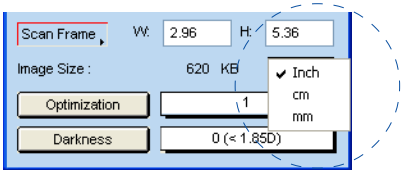
B. Image Size

The Image Size field indicates how big the file will be when you accept the dimensions shown in the edit boxes, together with the resolution setting that you have selected. Size is calculated automatically. The resulting file size depends on the image type; resolution; and dimensions of the image.

C. Unit of Measurement

The Unit of Measurement lets you select the desired unit (inch, cm, mm) for your image dimensions.

Important: Make sure you select the correct unit of measurement before entering any of the values for width or height in the Scan Frame Settings.

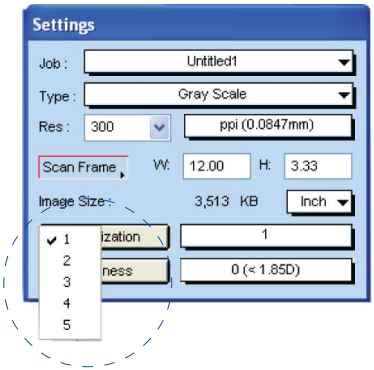


Optimization

The Optimization function is a process in which the scanner samples each line in the image a number of times, then obtains an average to reduce random noise. Enabling optimization will slow down scanning, as the process requires extra time to yield higher-quality images.

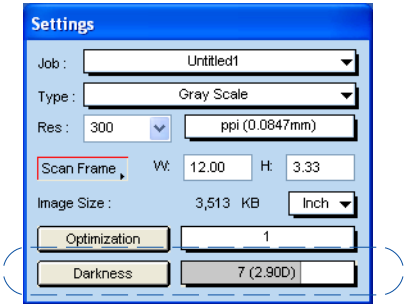
To use the Optimization function,

1. In the Preview window, click the “Overview” button to preview the image.
2. Select the image area in the preview image where optimization will be applied.
3. In the Settings window, click “Optimization”, then choose an optimization level as you desire from its drop-down menu.
4. Click the “Scan” button to start scanning. Optimization is applied, producing a higher-quality image.



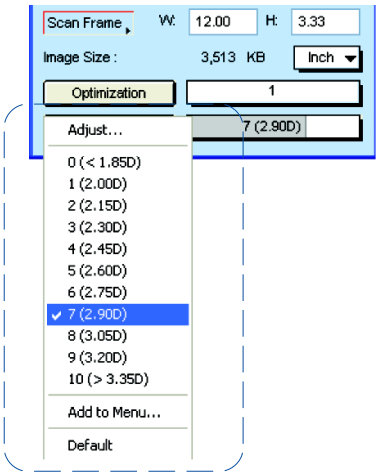
Darkness

The Darkness function allows you to perform the exposure correction for the current scan job. This function tries to average the intensity of the image and to compensate for a very dark image, making the dark areas of the image much brighter. However, a high darkness value will extend scanning processing time, for it requires extra time to produce a better visible image. After each darkness value, there comes a corresponded and suggested density value for your reference.



To use the Darkness function,

1. In the Preview window, click the “Overview” button to preview the image.
2. Select the image area in the preview image where exposure will be applied.
3. In the Settings window, click “Darkness”, then choose a predefined setting as you desire from its drop-down menu.
4. Click the “Scan” button to start scanning.

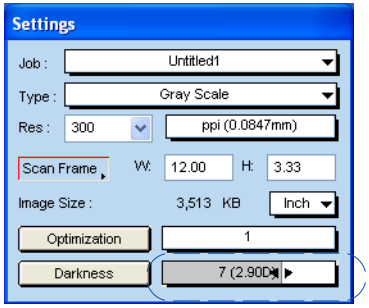


A. Adjust Command

The **Adjust…** command is an alternative way to give a darkness setting for a scan job. This command is enabled automatically when the ScanWizard Industry is started up at the first time.

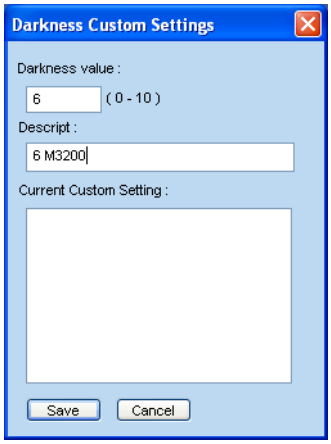
To use this command,

1. Click *Darkness* and choose *Adjust... in* its drop-down menu.
2. Point the mouse to the Darkness box. You will see an arrow appear in the box.
3. Click and hold the arrow to adjust slider bar in order to increase/decrease the value of a user setting. After you select your desired value, this value is then memorized for subsequent use until a new value is selected and then it will be taken over.



B. Adding custom settings

The **Add to Menu…** allows you to save the setting you have chosen to the current scan job as a custom setting. You may retrieve this custom setting later from the Darkness drop-down menu. The darkness adjustments are made from 0 to 10 in 1 up increment.

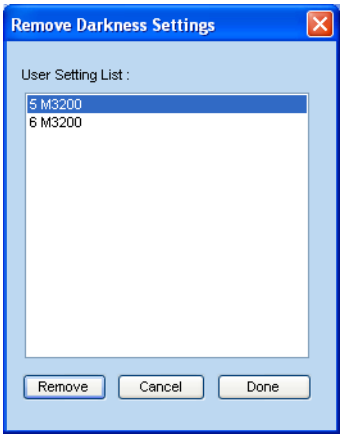


To add a custom setting for darkness, click *Darkness* and choose *Add to Menu ...* in the drop-down menu. When a dialog box comes up, give a setting from the range (0-10) and enter the name to be added in the description box; then click *Save* in the dialog box.

C. Removing custom settings

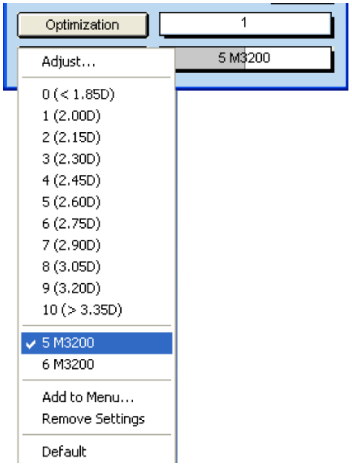
The **Remove Settings...** allows you to remove a custom setting from the list of darkness settings available.

To remove a custom setting, click *Darkness* to open its drop-down menu, and then choose *Remove Settings*. When a dialog box comes up, select the setting you want to remove, and then click *Remove* in the dialog box.



D. Loading / retrieving custom Darkness settings

To load or retrieve a custom setting that you have previously defined, click *Darkness* to open its drop-down menu, and then choose a setting you wish to be loaded.



E. Restoring default setting

The Default command restores exposure setting back to the default value offered by the ScanWizard Industry software. The default value is 0.

To restore the default exposure setting, click *Default* in the Darkness drop-down menu.

The Scan Job Queue Window

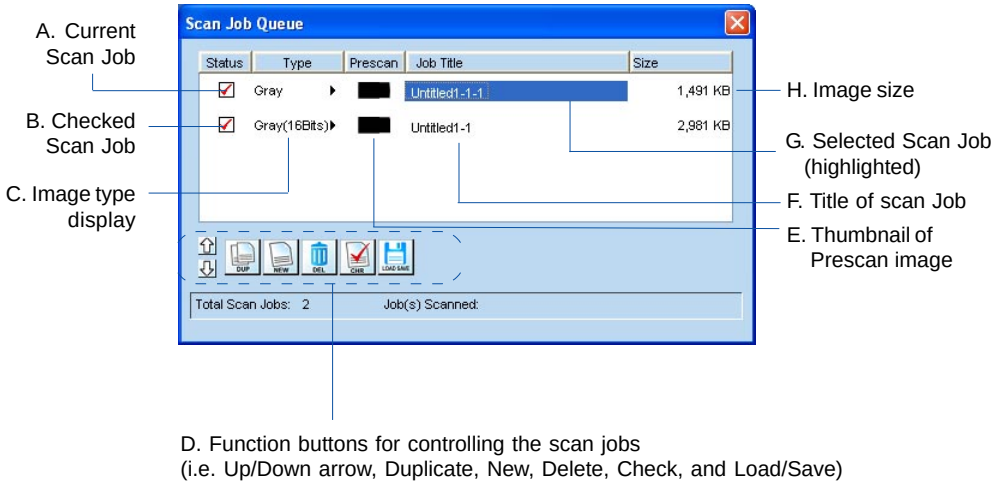
The Scan Job Queue window provides several functions for managing your scan jobs. By definition, a scan job contains the following elements: a set of scanning parameters (shown in the Settings window); a scan frame (shown in the Preview window); and one or several scan job items (shown in the Scan Job Queue window).

You can have multiple scan jobs, each having its own distinct settings. Scan jobs marked with a check are the ones designated to be scanned, and the jobs are scanned in the order that they appear in the Scan Job Queue window.

The Scan Job Queue window works only for the scanners that support multi-film scanning (ex. MII-800XL Plus). If the scanner model you purchased is not supplied with the Scan Job Queue window, ignore the introduction of the whole section about the Scan Job Queue Window.

Note: If the Scan Job Queue window is closed, go to the View menu in the Preview window, and choose the Show Scan Job Queue window command.

Elements of the Scan Job Queue Window



A Current scan job: This is the current scan job, indicated by a frame around the title. There may be several defined scan jobs, but only one scan job can be current. In the Preview window, the current scan job is the one with the flashing marquee.

B. Checked scan job: Checked scan jobs are the ones that are scanned when you click the *Scan* button in the Preview window. The check box is a toggle for checking / unchecking a scan job. To check a box, you can either click the check box or use the *Check* button at the bottom of the Scan Job Queue window.

C. Image type display: This shows the image type of the scan job .

D. Function buttons for controlling scan jobs: These buttons perform a specific action on the selected scan job. The *Duplicate*, *New, Delete*, *Check* and *Load/Save* buttons can be used on multiple selected scan jobs.

E. Thumbnail of prescan image: A thumbnail appears for the selected scan job after you click the *Prescan* button in the Preview window. This means a prescan image is available for that scan job. To see the prescan image, double-click the scan frame or go to the View menu in the Preview window and switch to prescan image viewing mode.

F. Title of scan job: The title of each scan job is shown. To edit a scan job title, double-click the title and type a new name when an edit box appears.

G. Selected scan job: The selected scan job is the highlighted item. You can have multiple selected scan jobs, and clicking on a function button (such as *Check* or *Duplicate*) will implement that function on the selected scan job.

H. Image size: This is the image size of the scan job.

Selecting Multiple Scan Jobs

The *Duplicate*, *Delete*, and *Check* buttons at the bottom of the Scan Job Queue window can be used for multiple job selections.

For example, you can select multiple scan jobs, and then click the *Delete* button to remove all the jobs simultaneously.

To select multiple scan jobs, press the *Ctrl* or *Shift* key and click on the jobs to be selected.

Editing Multiple Scan Jobs

ScanWizard Industry lets you edit multiple scan jobs at the same time, increasing your efficiency in using the software.

To edit multiple scan jobs, simply select all the scan jobs to be edited in the Scan Job Queue window. To include each scan job for selection, use the *Shift* + Click combination (pressing the *Shift* key while clicking the mouse at the same time). Then perform the selected editing function.

For instance, you can go to the Settings window and choose an image type that will apply to all the scan jobs. Another example is to apply a common resolution setting to all the scan jobs. Simultaneous editing simplifies the scanning process for you.

Adding a New Scan Job

The New button lets you create a new scan job; the new scan job will have default settings. This feature allows you to create as many scan jobs as you wish, and each scan job can then have its own settings.

1. Click the *New* button.
2. When a title of new scan job appears, accept the default name or enter a name for the new scan job. Use unique names for your scan jobs, as duplicate names are not accepted.
3. Define the scan frame in the Preview window for the new scan job.
4. In the Settings window, specify the settings for the new scan job. With the creation of a new scan job, the new scan job becomes the current scan job.

Duplicating a Scan Job

The Duplicate button lets you duplicate the settings of a scan job. This function is very helpful if you have created optimal settings for a scan job and wish to use these settings as a template for other scan jobs. This saves time, as you don't have to create the settings repeatedly for every scan job you make.

1. From the list of scan jobs available, select the scan job(s) to be duplicated.
2. Click the *Duplicate* button. The selected scan job(s) will be duplicated. The Duplicate function is very useful when scanning several images at the same settings.

Removing a Scan Job

The Delete button allows you to remove a scan job from the list of scan jobs available.

To delete a scan job, highlight the scan job to be removed, then click the *Delete* button.

Checking a Scan Job

The Check button allows you to select the scan jobs to be scanned. Checked scan jobs are the ones that are scanned when you click the *Scan* button in the Preview window. The check button is a toggle for checking / unchecking a scan job.

To check a scan job, highlight the scan job, then click the *Check* button. A check sign will appear next to the selected scan job.

To uncheck a scan job, highlight the scan job, then click the *Check* button. The scan job will be unchecked, and the scan job will not be scanned when you click on the Scan button.

The Up/Down Arrows

The Up/Down arrows allow you to change the order of the scan jobs in the Scan Job Queue window.

To move up/down the scan job, highlight the scan job, then click the Up/Down arrow to change the order of the scan job in the list.

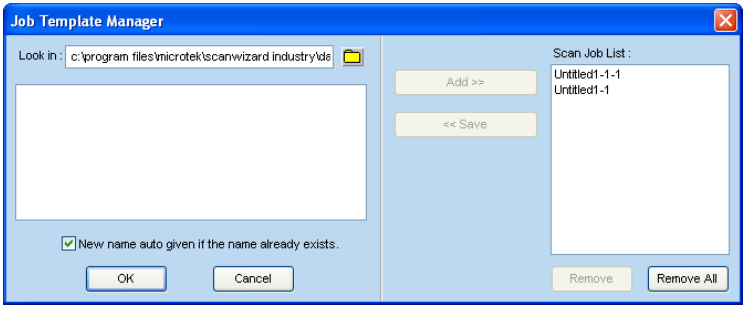
When you start scanning, the scan jobs will be processed and scanned in the order that they appear in the Scan Job Queue window.

The Load/Save button

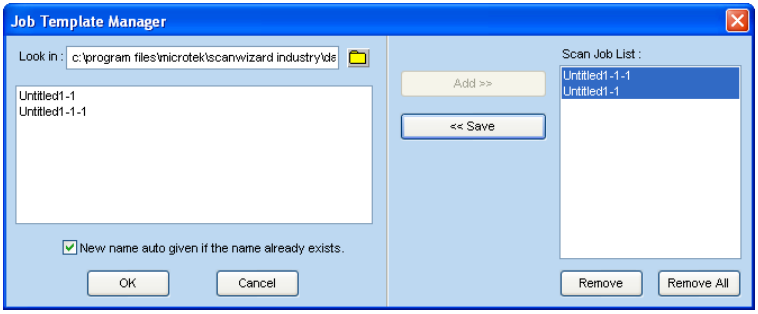
The Job Template Manager lets you save current scan job as a template which can be loaded when necessary. Also, it allows you to delete scan jobs easily from folders.

To save a scan job as a template into a selected folder:

1. Click on the *Load/Save* button to open the Job Template Manager window.



2. Click the Folder icon (yellow) or use the current default folder to select the folder for saving scan jobs.
3. Highlight the scan jobs to be saved at the right column of the window.
4. Click the <<*Save* button. The selected scan jobs will be saved and appeared at the left column of the window.



You may also specify different folders for respective scan job templates as you desired.

To load a scan job to the Scan Job Queue,

1. Click the *Load/Save* button to open the Job Template Manager window..
2. Switch to the folder where the scan job is stored.
3. Highlight the scan job to be loaded at the left column of the window.

   Before loading a new scan job, you may remove your existing scan jobs from the right column
4. Click the *Add*>> button to load the scan jobs from a selected folder to the Scan Job Queue.

To remove a scan job from the Scan Job Queue,

1. Click the *Load/Save* button to open the Job Template Manager window..
2. Highlight the scan job to be removed at the right column of the window.
3. Click the *Remove* or *Remove all* button to remove the scan job from the Scan Job Queue.

New name auto given if the name already exists

When you load or save scan jobs, you may check or uncheck the “New name auto given if the name already exists” option. Suppose the scan jobs already exist, if you check this check box, the number suffix is automatically appended as a new scan job. If unchecked, the existing scan jobs are overwritten.

Appendix

Product and Technical Support

If you need to call Technical Support, please have the following information ready:

- Your scanner model. The model name is indicated on the front of the scanner, not the back.
- The scanner's serial number. This can be found on the back of the scanner.
- Your computer name and model
- The version number of ScanWizard Industry. This is indicated on the ScanWizard Industry scanning software.
- Your system components, or the devices on your system, such as an external hard drive, CD-ROM, etc.
- Software being used with your scanner.

Important

Aside from having the above information ready, please make sure that when calling technical support, you (or someone calling for you) are knowledgeable about the basic operations that may need to be performed on PCs. These procedures include:

- How to edit the CONFIG.SYS file
- How to edit the Windows WIN.INI file

Microtek's technical support will not walk you through these procedures. You are assumed to have knowledge of your Windows system.