Electronic User's Manual

EPSON PERFECTION™ 660

Welcome to EPSON Perfection 660 and EPSON Scan Tool!

You will experience simple and high quality scanning by EPSON Perfection 660 and EPSON Scan Tool included in your scanner package. They provide the Scan to Printer and Scan to File functions. These functions give you simple operation to scan and print/save the scanned image of your original.

Before you start, check the following items:

• Check if the scanner is correctly installed and connected to your computer. For details, please see the scanner installation guide poster in the package.

• Check if the printer is correctly installed and turned on before using the "Scan to Printer" function.

Click the ▶ button to jump to the next page, the ◀ button to the previous page.

Click the ▲ button to jump to the first page.

Quick Start

Scanning with the Scanner Buttons

Your scanner has three buttons to start working with EPSON Scan Tool; Scan, Document Copy, Photo Copy. To use these buttons, please follow the steps below.

Note: Press the Scan button to save your scanned image as a file in a certain location in your PC.
Press the Document Copy button to scan the black and white document.
Press the Photo Copy button to scan the Photo.

Using the Document Copy or Photo Copy Button

Pressing the Document Copy or Photo Copy button will send the scanned image to a printer. The resolution and the image type depend on the settings of the printer.

Follow the steps below to use these buttons.

Step 1: Make sure that both of your scanner and printer are connected to the PC, and they are turned on.

Note: Connect the printer packed with your scanner to get the best printing results.

Step 2: Make sure that the printer is selected as a default printer in your Windows settings.
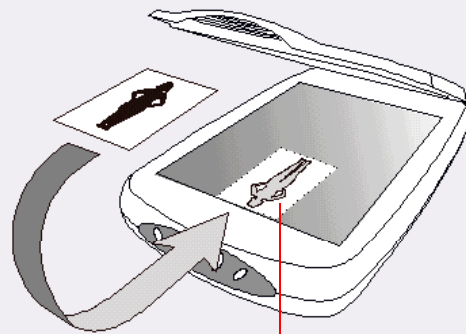
Step 3: Load the paper in the printer.

Note: Use plain paper for the document copy or photo paper for the photo copy to get the best results.

Step 4: Place original on the scanner glass plate. Please refer to the illustrations below for how to place the original you want to scan on the scanner glass plate.

Scanning reflective originals

Place the original with the side to be scanned facing down on the scanner glass plate. Note the direction of the original so that you will not scan the image in the wrong direction.

Note the direction

Step 5: Press the Document Copy or Photo Copy button that matches to your original.

Step 6: The scanner starts scanning, then EPSON Scan Tool opens with Scan to Print destination. Auto preview, Auto type, Auto-crop settings are applied. See "The Advanced Tab" on page 27 for detailed information.

Note: When pressing the Photo Copy button, Auto type setting is not applied.

Step 7: When scanning is finished, the printer prints the scanned image. After printing, EPSON Scan Tool will be close.

Using the Scan Button

Pressing the Scan button will save the scanned image as a file after scanning. File formats like Tiff, Jpg, Bmp, Pcx, Tga, Png are supported (Default file format is *.bmp) and default path of saved file is "My document" (Windows 98/Me/XP) or "Personal" (Windows 2000) folder.

Follow the steps below to use the Scan button.

Step 1: Make sure that the scanner is connected to your PC, and both are turned on.

Step 2: Place original on the scanner glass plate. Please refer to the illustrations above for how to place the original you want to scan on the scanner glass plate.

Step 3: Press the Scan button.

Step 4: The scanner start scanning, then EPSON Scan Tool opens with Scan to File destination. If the Auto preview setting is on, EPSON Scan Tool makes a preview. For information on Auto preview function, see "The Advanced Tab" on page 27.

Step 5: After scanning EPSON Scan Tool is in standby mode.

Making a scan with EPSON Scan Tool

To start working with EPSON Scan Tool in the Console Mode, please follow the steps below.
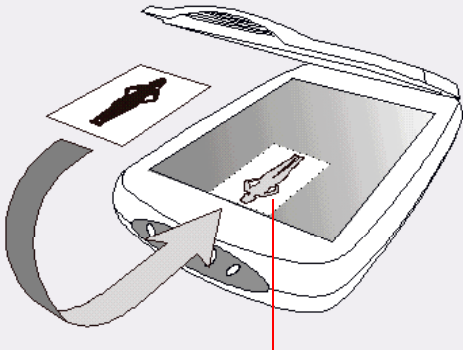
Step 1: Make sure that the scanner is connected to your PC, and both are turned on. If you will use the Scan to Printer function, connect the printer to the PC and turn it on.

Note: Connect the printer packed with your scanner to get the best printing results.

Step 2: Select the printer connected to the PC as a default printer in your Windows settings, and load the paper in the printer, if necessary.

Step 3: Place original on scanner glass plate. Please refer to the illustrations below for how to place the original you want to scan on the scanner glass plate.

Scanning reflective originals

Scanning reflective originals	
 Note the direction	Place the original with the side to be scanned facing down on the scanner glass plate. Note the direction of the original so that you will not scan the image in the wrong direction.

Step 4: Open EPSON Scan Tool by clicking "Start" on Windows Task bar, then "Programs" > "EPSON Scan Tool" > "EPSON Scan Tool" or double-click the 🖼 icon on desktop. EPSON Scan Tool will start previewing the original and when finished, the preview image will appear on the Preview Window.

Step 5: Click the 👁 button in the Control Window to preview the original.

Step 6: Now you can choose to make adjustments to the scan, which includes:

• Use the Frame Tools in the Preview Window to add, duplicate and navigate the scan jobs (see "Frame Tools" on page 30).

• Click the 🔷 button in the Control Window to use the pre-set scan macros (see "The Scan Setting Macro" on page 19).

• Click the 🖺 button in the Control Window to open Job Setting List window to modify settings for each scan job (see "The Jobs List window" on page 59).

• Click the 🖼 button in the Control Window to open Image Adjustment Window to make more detailed adjustments to the image (see "The Image Adjustment Window" on page 33).

• Choose a destination where the scanned image will be delivered by clicking the 📁 button in the Control Window and selecting an application program or device from the list that appears.

Step 7: Click the ⬆ button to start scanning the original. When finished, the scanned image(s) will be delivered to the destination you specified.

Using EPSON Scan Tool

Overview

As a radically new application program, EPSON Scan Tool provides a more convenient and friendly user interface and functions thanks to a more advanced design and development. EPSON Scan Tool offers an ultimately novel operative way for users.

For optimum personalization, this version offers the following advanced features:

Console Mode --- This mode offers you a complete and efficient control over all operations. You can undertake respective operation in relatively independent window as well as shift among partial and necessary windows at your discretion. You can readily apply your advanced user's skills. We have provided user-friendly settings, parameters, macros and operations. As in other popular image processing software, movable and controllable sub-windows are featured beside main windows for easy operation. The great functions of this application program guarantee professional output. But you needn't worry about maybe not having the right skills. With this help, you will eventually become an imaging expert.

Scan Jobs Window --- You can specify a scanning job sequence in the novel Scan Jobs window. The Job List offers you an overview of your workflow. All information on browsing, scanning, variables and operation, etc. is available in this window. You can define properties for various items to best suit your needs.
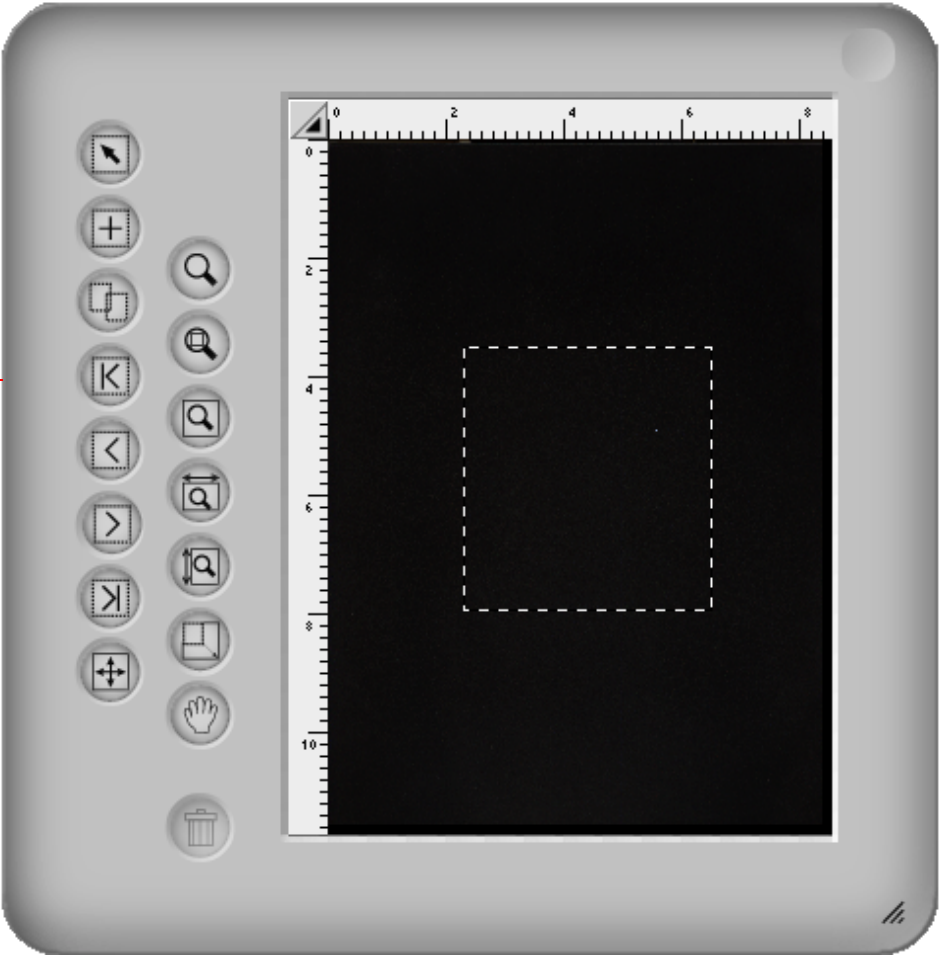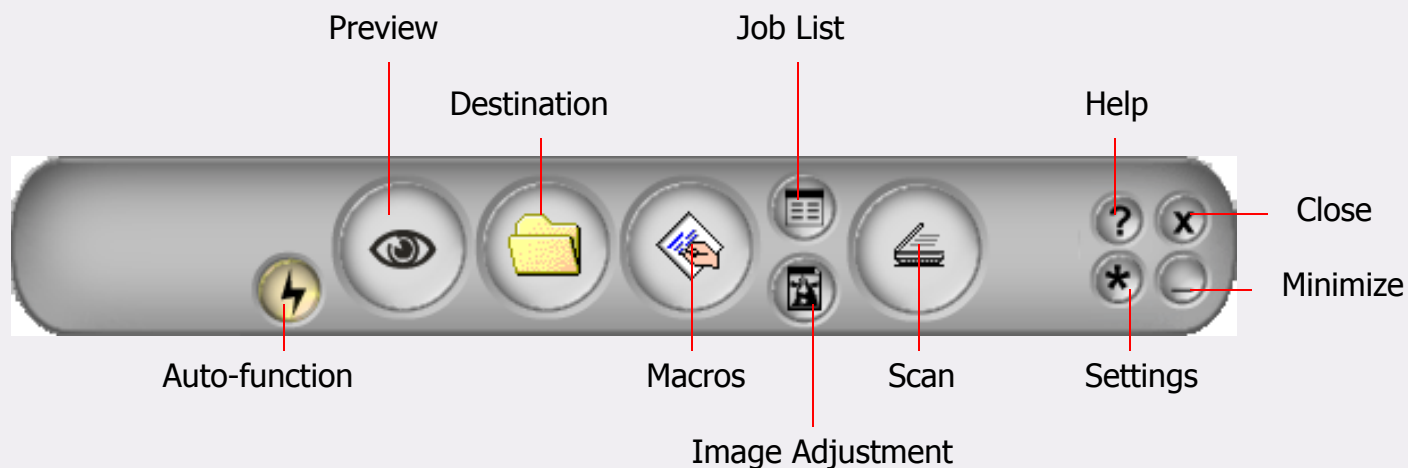
The Console Mode

Control Window —

Preview Window —

CONTROL WINDOW

Preview

Destination

Job List

Help

Close

Minimize

Auto-function

Macros

Scan

Settings

Image Adjustment

Auto-function Switch

Here you can enable or disable the auto function of settings.

Preview

With this button you can preview scanned material. The result will be shown in the Preview Window.

Destination

If you click this button, a drop-down menu appears in which you can choose a destination for the scan.

Macros

If you click this button you can select a pre-defined or customized macro for scan settings. For details see "The Scan Setting Macro" on page 19.

Jobs List Button

Opens and closes the Jobs List Window. For details see "The Jobs List window" on page 59.

Image Adjustment

This button opens and closes the Image Adjustment Window. When you open the Image Adjustment Window for the first time, it appears in Color Wizard Mode. See detail in "Color Wizard Mode" on page 34.

Scan

Click this button to start scanning.

Help

Click this button to link to the Help system.

Exit

Click this button to close EPSON Scan Tool and save all current settings.

Settings

Click this button to change the default Console Mode settings or to customize macros. See "The Scan Setting Macro" on page 19.
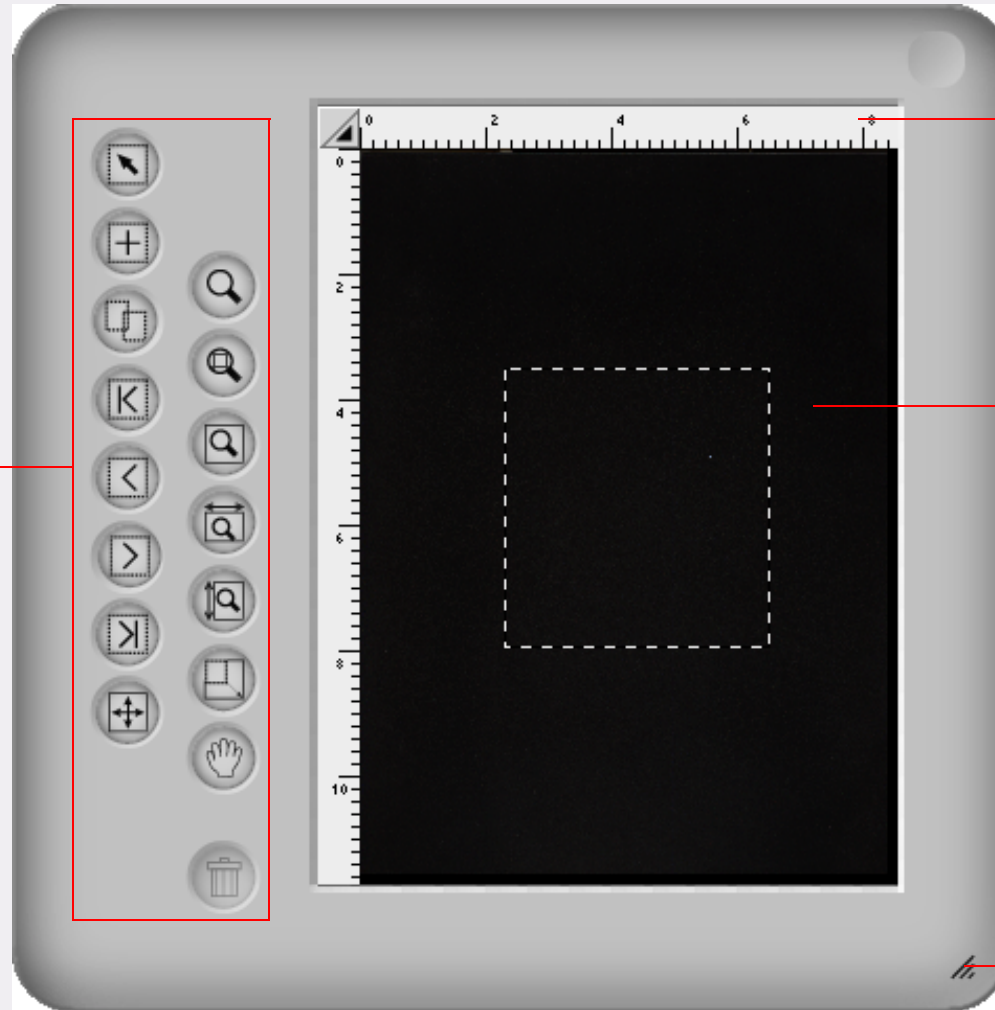
Minimize

Click this button to minimize the user interface to the Task bar (default) or the System tray (optional in Settings).

Preview Window

Ruler

Preview area

Frame tool buttons

Window resizing handle

Frame tool buttons

Select
Click this button to select a single or multiple frames. For details see "Frame Tools" on page 30.

Add
Click this button to draw a new frame in the Preview Window.

Duplicate Frame
Click this button to duplicate the frame.

First Frame
Click this button to activate the first frame.

Previous Frame
Click this button to activate the previous frame.

Next Frame
Click this button to activate the next frame.

Last Frame
Click this button to activate the last frame.

Flip
Click this button to reverse a canvas horizontally. You can also flip vertically by clicking this button and pressing the "Shift" key on keyboard.

Zoom
Click this button to zoom in or out on an image.

Zoom Selected
Click this button to magnify active frame(s) as large as possible.

Maximize Image
Click this button to display the preview as large as possible, whether Zoom Scan is used or not.

Show Max by Width

Click this button to show the preview as wide as possible.

Show Max by Height

Click this button to show the preview as high as possible.

Zoom Scan

Click this button to zoom in the active frame to fit the Preview Window and view it at the highest resolution.

Hand

Click this button to display a hand to drag an image if it does not entirely fit the Preview Window.

Trash Can

Click this button to delete the active frame. It will be removed when you exit the program.

Ruler's Option

For details see "Rulers' Operation" on page 30.

Rulers

A horizontal ruler helps you locate the image and calculate its size. It will automatically convert to the appropriate unit when you select another unit in Ruler's operation.
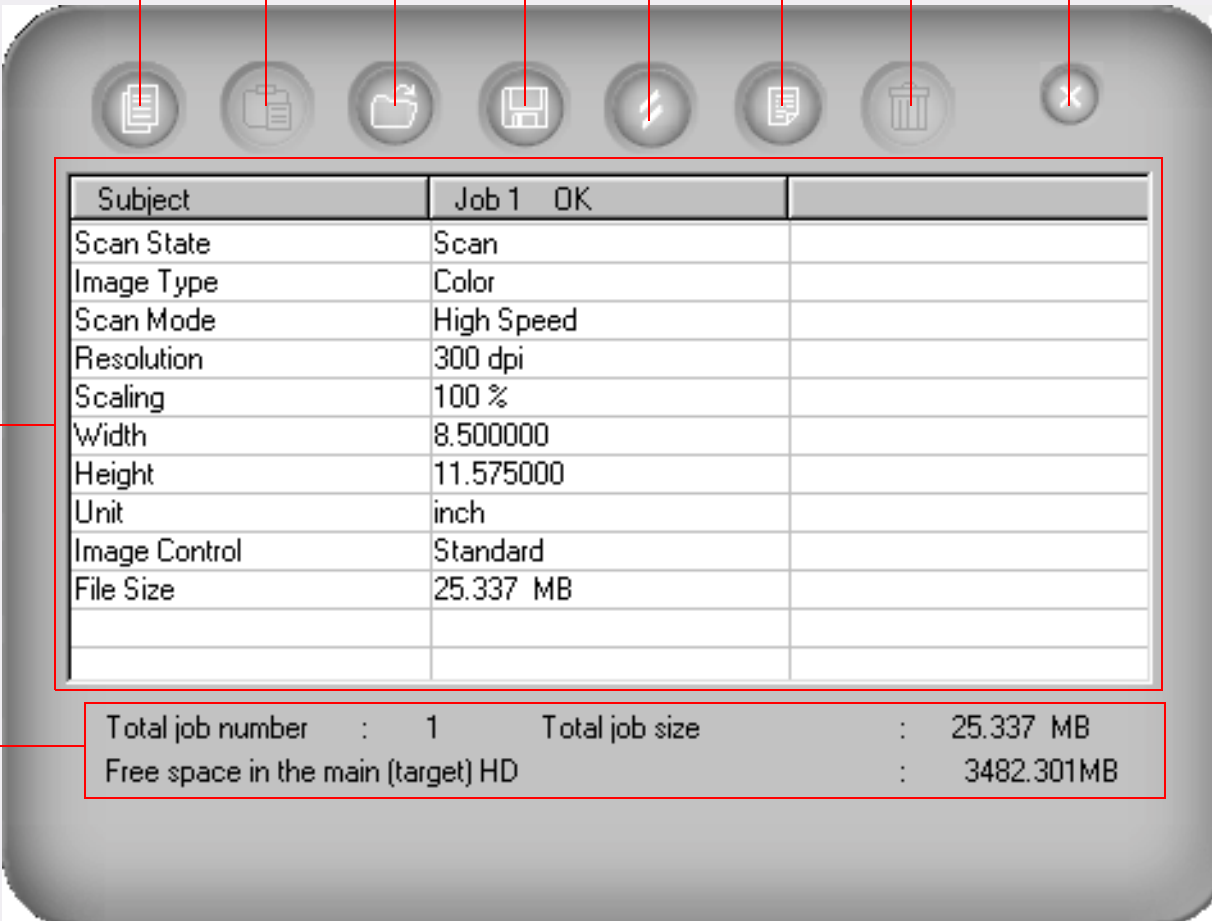
Preview Area

All pre-scanning results will be displayed in this area for you to preview.

JOB LIST WINDOW

This Job List Window will appear when the Job List button in the Control Window is clicked.

Copy   Paste   Load   Save   Reset   Add   Delete   Close

Jobs sheet

Subject	Job 1 OK	
Scan State	Scan	
Image Type	Color	
Scan Mode	High Speed	
Resolution	300 dpi	
Scaling	100 %	
Width	8.500000	
Height	11.575000	
Unit	inch	
Image Control	Standard	
File Size	25.337 MB	

Status display area

Total job number	:	1	Total job size	:	25.337 MB
Free space in the main (target) HD				:	3482.301MB

Copy

Click this button to copy the original job or all parameters onto a clipboard.

Paste

Click this button to paste the parameters from the clipboard to a selected job or storing cell.

Load

Click this button to load scan parameters from a file.

Save

Click this button to save selected or all parameters as a file.

Reset

Reset all parameters to system default values.

Add

Click this button to add a new scan job in the Jobs sheet.

Delete

Click this button to delete selected jobs.

Jobs Sheet

Here you can edit the parameters of various jobs. For details see Jobs Sheet.

Status display area

Shows current scan and system status, including available free hard disk space, scan job numbers and total job size.

More about the Console Mode of EPSON Scan Tool

EPSON Scan Tool provides the Console Mode. You can make detailed adjustments and to achieve the best scanning results with this mode.

The Console Mode

When you shift to the Console Mode, it is shown as:
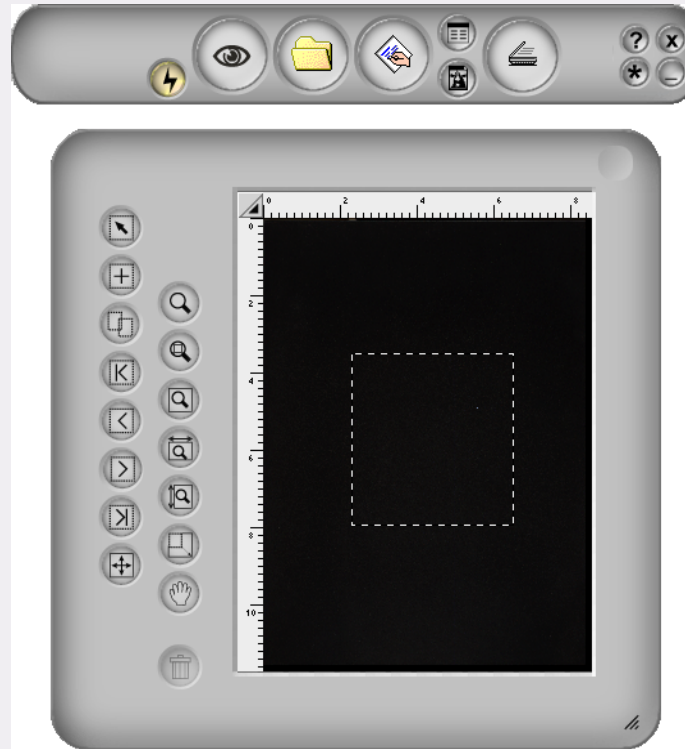
The Console Mode consists of 4 different windows: The Control window, Preview window, Job Setting List Window (default hidden) and the Image Adjustment Window (default hidden) . As their names suggest, you can control scan operation, preview image, view job settings and make image adjustments in these windows.

You can click the ▦ button on the Control Window to open Job Setting List Window and the ▦ button to open Image Adjustment Window.

The Control Window

The Control Window is the window located at the top of the default window.

Each button has a specific function:

Auto Function Switch

You choose to apply the auto function or not. The auto functions are set in the Settings window (see "Auto functions" on page 27).

Preview Button

To preview or refresh the preview image.

Destination

You can appoint scanning destination in the popped-up list according to files' types, formats, purposes or other. EPSON Scan Tool categorizes destinations beforehand into two sorts.

Scan Setting Macro

EPSON Scan Tool provides Macros for user to operate diverse scanning conveniently. We are eager to recommend them to you. See details in "The Scan Setting Macro" on page 19.

Open Jobs Settings List Window

Click this button to open the Jobs Settings List Window (see "The Jobs List window" on page 59).

Open Image Adjustment Window

Click this button to open the Image Adjustment Window (see "The Image Adjustment Window" on page 33).

Scan

Click this button to start scanning.

Settings

Open the Settings window. For more information on the Settings window, see "The Settings Window" on page 21

Help

Click this button to access the Help system, EPSON Scan Tool and update information.

Minimize

Click this button to minimize the window to the Task Bar or the System Tray.

Exit

Click this button to exit EPSON Scan Tool.

The Scan Setting Macro

The scan setting macro provides several frequently used, pre-defined scan settings combinations that you can use to scan, so you get just the scanned image that fits your needs.

To select a scan setting macro to use on a scan job:

1. After preview, choose a scan job (frame) in the Preview Window.

2. Click Scan Setting Macro button . The scan setting macros tool bar will pop up.

3. According to the purpose of the scan, click to choose a scan setting macro icon on the tool bar.

4. The scan setting macro icon that you selected will appear on the scan setting macro button. The macro settings will be applied to the selected scan job.

5. If you have multiple scan jobs, repeat step 1 ~ 4.

6. Now you can start scanning with the macro settings applied to the scan jobs.

In addition to the pre-set scan setting macros, you can also customize your own ones. See "The Macro tab" on page 25.

The tables below lists available pre-set scan setting macros.

Item		Meaning
	Text only for OCR	Used when you want to scan a text-only document and perform OCR.
	Text and photo for OCR	Used when you want to scan a document that contains text and pictures and perform OCR.
	Line-art for Trace	Used when you want to convert the scanned image to vector images in other application programs.
	Line-art for Office	Used when you want to scan line-art pictures and put them on office documents.
	Line-art for printing	Used when you want to scan line-art pictures and print them out.

	Photo for Web	Used when you want to scan photos and put them on web pages.
	Photo for Office	Used when you want to scan photos and put them on office documents.
	Photo for Print	Used when you want to scan photos and print them out.

The Settings Window

Click the ✳ button to open the Settings window. There are five tabs in this window, namely General Tab, OA Tab, Push Button Event Tab, Macro Tab, and Advanced Tab.

THE GENERAL TAB
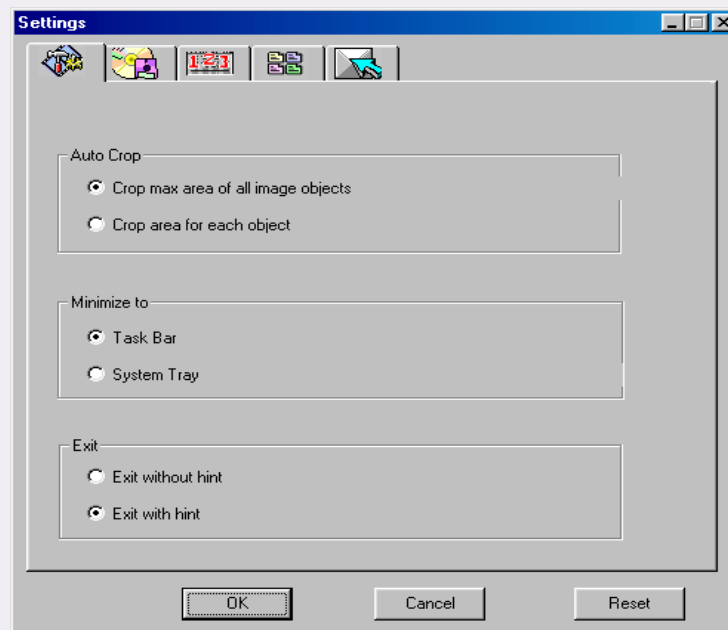
Auto-crop

This item selects how image(s) are cropped after scan. "Crop max area of all image object (default)" crops the maximum area that contains all image objects, while "Crop area for each object" crops each image separately.

Minimize to

Selects whether EPSON Scan Tool will be minimized to "Task bar (default)" or "System Tray" after the Minimize ⬭ button is clicked.

Exit

If "Exit without hint" is selected, a hint dialog will not appear on the screen after the "Exit" button is clicked. The default setting is "Exit with hint".

THE OA TAB
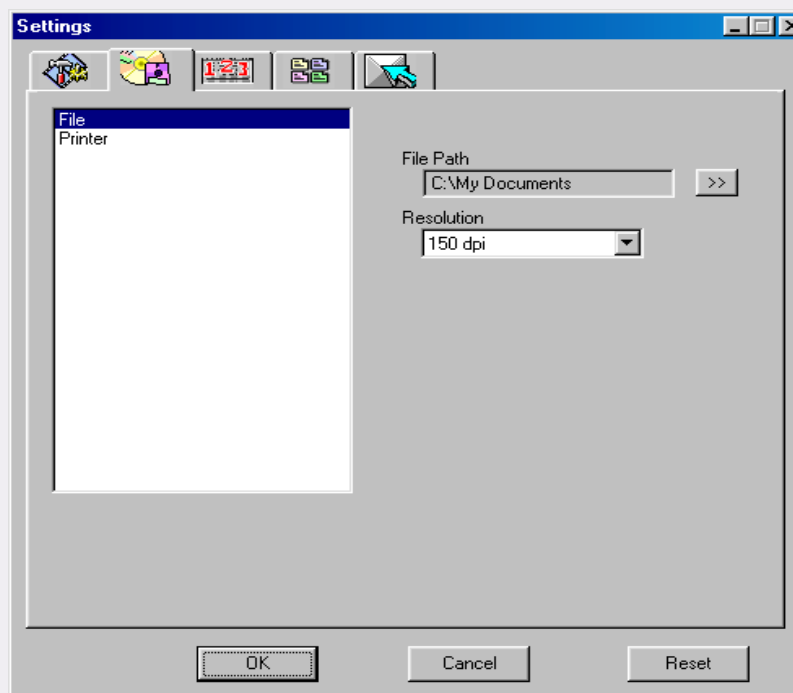
Click an item on the list on the left part of the tab, related sub-items will appear on the right side of the tab.

Options for "Scan to File"

File path

Here you can select a location to save the scanned image file. The default path is "C:\My Documents". There is a "Browse" button to select a new path.

Resolution

Selects scan resolution. Default resolution is 150dpi. Others like 72, 96, 100, 150, 200, 263, 300, 350, 600, 1200 or customized are optional.

Options for "Scan to Printer"

Printer driver

The current printer driver is shown in an editing box.

Resolution

Selects scan resolution. The default resolution is 600dpi. Others like 150, 263, 300, 350, 1200 or customized are optional.

THE PUSH BUTTON EVENT TAB (ONLY SHOWN WHEN SCANNER IS EQUIPPED WITH PUSH BUTTONS)
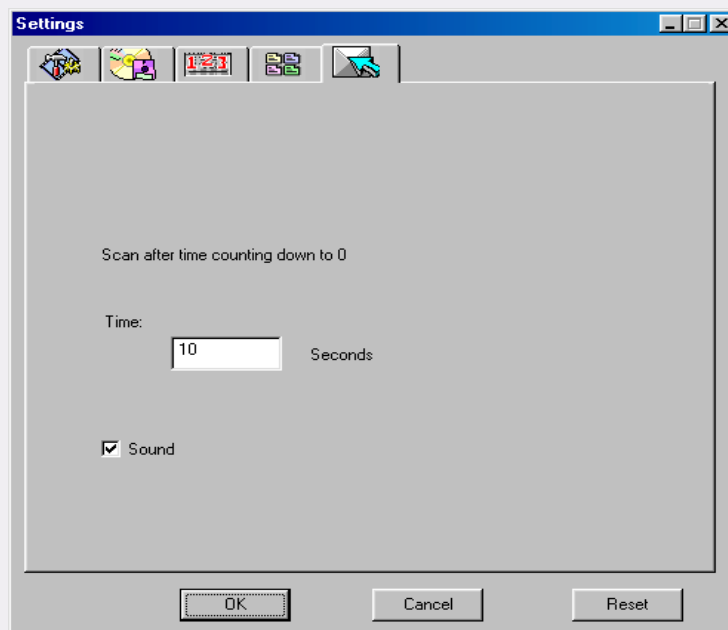
Scan after time counting down to 0

In the editing box, you can set the length of time from pushing the scan buttons on the scanner to actual scanning is executed. In this period of time you can see the preview image in the Console Mode and decide whether actual scan is to be performed or not.

Sound

If this is checked, a sound will be played from the scanner.

THE MACRO TAB
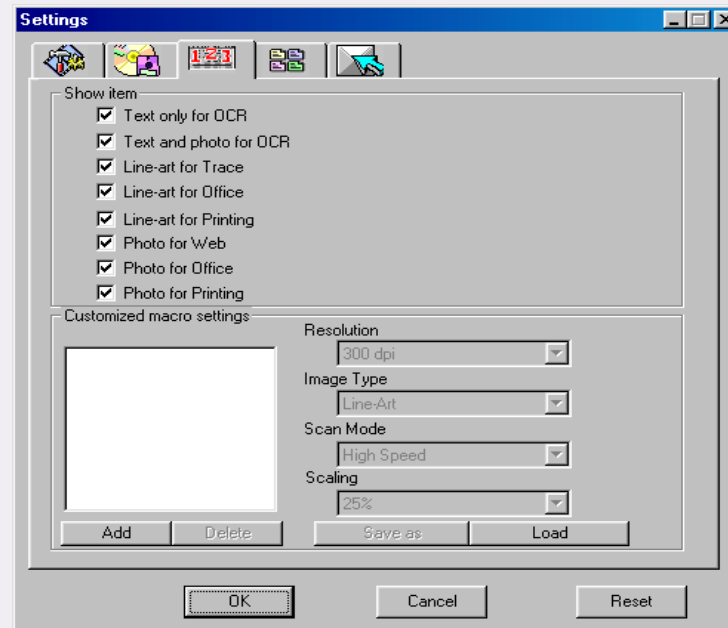
The options contained in this tab:

Show item check boxes

Check the check box beside each item, and the macro will be shown on the scan macros tool bar. /vice versa.

Macro list

Lists out all macros. You can click to choose a macro and click the "Delete" button to delete the selected macro.

Resolution

Selects resolution for customized macro.

Image type

Selects image type for customized macro.

Scan mode

Selects scan mode for customized macro.

Save as

Opens a dialog to save the macro. The file's extension will be *.msf.

Load

Opens a standard dialog to load the macro. The filter is *.msf

Add

Duplicates the currently selected macro as a new one.

Delete

Deletes the currently selected macro.

Customizing your own scan setting macro

To customize your own scan setting macro:

1. Select appropriate resolution, image type and scan mode from the "Resolution", "Image type" and "Scan mode" drop-down list boxes. You can also click the "More" button for more setting options.

2. Click the "Save as" button. A dialogue box will appear asking you to save the macro. Specify the macro name and save the macro.
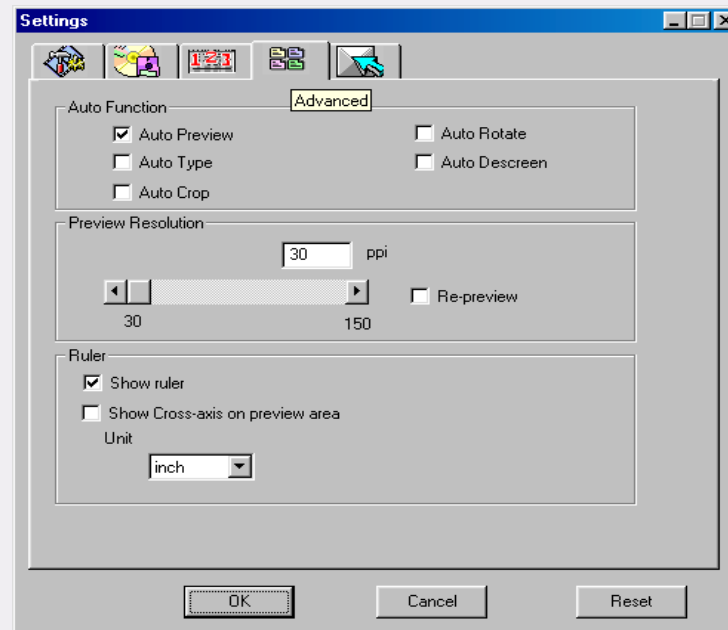
Loading a customized macro

To load a customized macro:

1. Click the "Load" button to browse the macro files.

2. Click to choose the macro you want and then click "OK" to load the macro.

3. Once the macro is loaded, a corresponding customized macro icon will appear on the scan setting macros tool bar.

THE ADVANCED TAB

Several advanced setting options are provided in the Control Window are described below:

Auto functions

Auto preview

If you check this item, EPSON Scan Tool will do a preview when the modes are shifted.

Auto type

If this check box is checked, EPSON Scan Tool will choose an appropriate image type to scan. You can also uncheck the check box and select an image from the drop-down list box.

Auto-crop

Check this check box and EPSON Scan Tool will crop the scanned image to an appropriate size automatically.

Auto-rotate

Check this item and EPSON Scan Tool will automatically rotate the scanned image to a correct position.

Auto-descreen

If you are scanning images from magazines, newspapers or other printed materials, you will find that the scanned image appears to be covered by tiny screen patterns. To eliminate this screen pattern, you can use the options in the drop-down list box. Check this check box and EPSON Scan Tool will descreen the scanned image automatically.

Preview resolution

You can change the preview resolution by inputting a value into the edit box or by dragging the slider.

Ruler

Show ruler

If you uncheck this box, the ruler will not be shown.

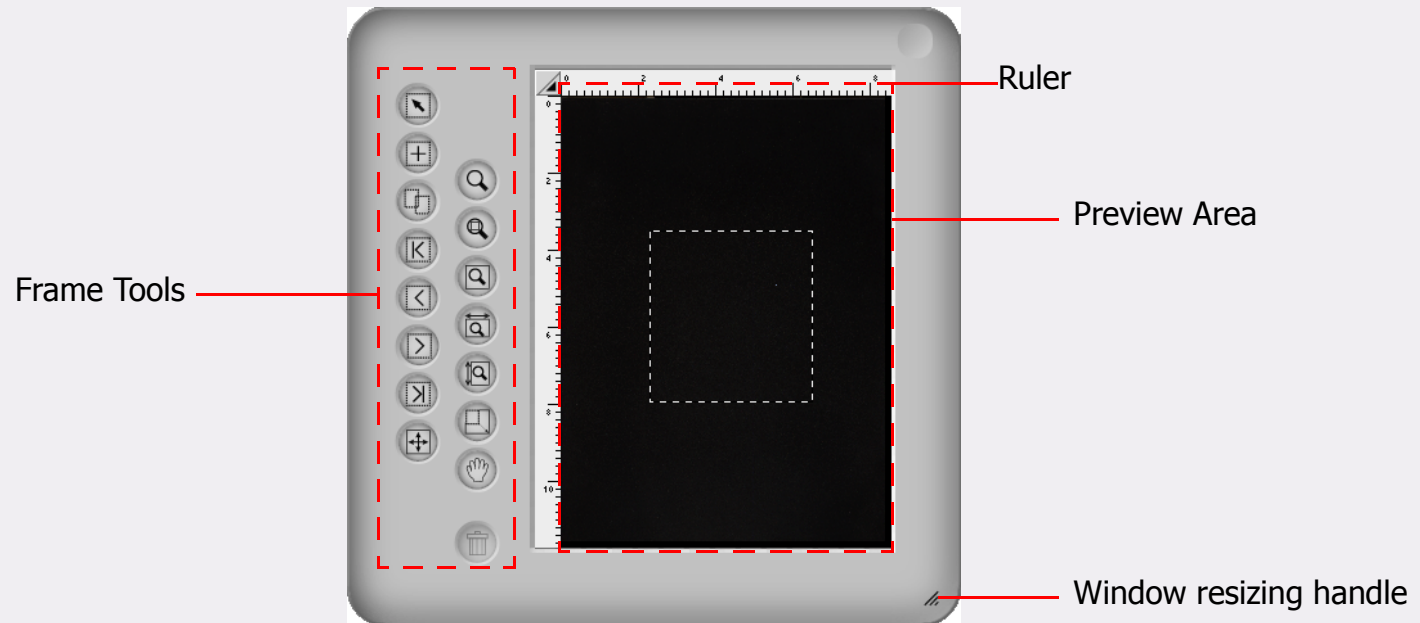**Show cross-axis on preview area**

If you check this box, the cross-axis on the ruler is displayed.

Unit

You can select ruler unit from the drop-down list box.

The Preview Window

Ruler

Preview Area

Frame Tools

Window resizing handle

The Preview Window is located below the Control Window in the Console Mode.

Preview Area

To display and crop image.

Ruler

Shows the image's location.

Frame Tools

Provides the necessary tools for the scan frames in the Preview Area.

Maximize/Restore

Maximizes or restores the window.

Rulers' Operation

You can make changes to the ruler's appearance here. Click the ▨ button at the cross of ruler, a menu pops up for option.

Show Cross Lines: If you click this item and move the cursor back to the Preview Window, crossed lines will appear to help you position the cursor more accurately.

Hide Ruler: If you click this item, the ruler will be hidden and the Preview Window will fit out. If you want to restore the ruler, select the item "Show ruler" in the Settings dialog or in the menu which pops up after clicking the cross.

Unit: selects the unit for the ruler.

Frame Tools

You can use the Frame Tools to define and edit scan areas. Only the image enclosed by the scan areas will be scanned after you click the scan button. The scan areas are represented by dotted frames in the Preview Area. To manipulate these frames, the tools below are provided.

Frame Selection

You can select:

Single frame: Move, rotate, zoom in and zoom out single frame.

Multiple frames: Only move all frames as a whole.

Add New Frame

Click this button to draw a new frame in the Preview window.

Duplicate Frame

Click to select a frame in the Preview Area, and click this button to duplicate the selected frame.

Go to First Frame

Click this button to shift from the active frame to the first frame.

Go to Previous Frame

Click this button to shift from the active frame to the previous frame.

Go to Next Frame

Click this button to shift from the active frame to the next frame. (It is disabled when there are several active frames.)

Go to Last Frame

Click this button to shift from the active frame to the last frame. (It is disabled when there are several active frames.)

Canvas Flip

Click this button to invert the canvas horizontally.

Magnifier

Left click Canvas will be zoomed in. Right click (Alternative+Left) canvas will be zoomed out.

Show Full Preview

Click this button to display the entire previewing material as large as possible.

Zoom to Max

Click this button to magnify active frame(s) as large as possible.

Show Max by Width

Click this button to display the entire previewing file as wide as possible

Show Max by Height

Click this button to display the entire previewing file as high as possible.

Hand Tool

Click this button too display a hand to drag the image when it does not entirely fit in the previewing window.

Zoom Scan

Click this button to display the active frame to fit the Preview Window and view it at the highest resolution.

Trash Can

Click to select a frame, and click this button to delete the selected frame.

The Image Adjustment Window
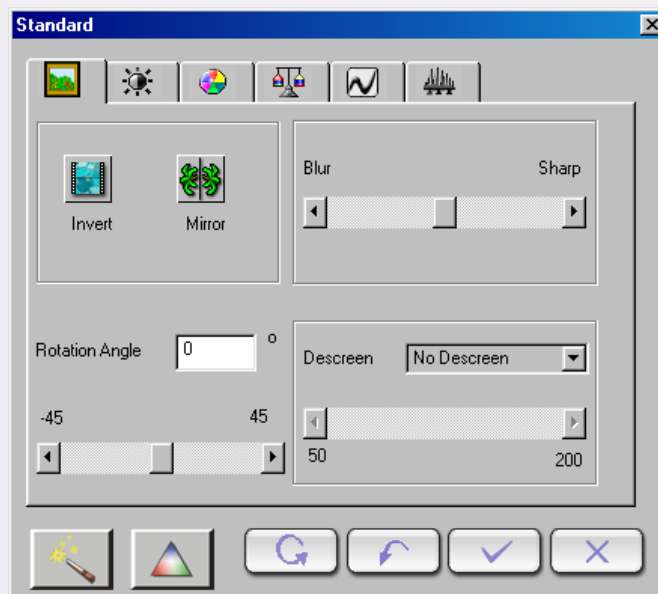
The Image Adjustment Window will appear when you click the ⬛ button on the Control Window. It consists of three modes: Color Wizard, Color Matching and Standard. You can use the tools in these modes to work on negative the image before the final scan is delivered to a file or an application program.

Click the 🔺 button to enter Color Wizard mode. (This mode is disabled if you set the image type to line art.)

Click the 🪄 button to enter Color Matching mode. (This mode is disabled if you set the image type to line art and grayscale.)

Click the 🔲 button to enter Standard mode.

Color Wizard Mode
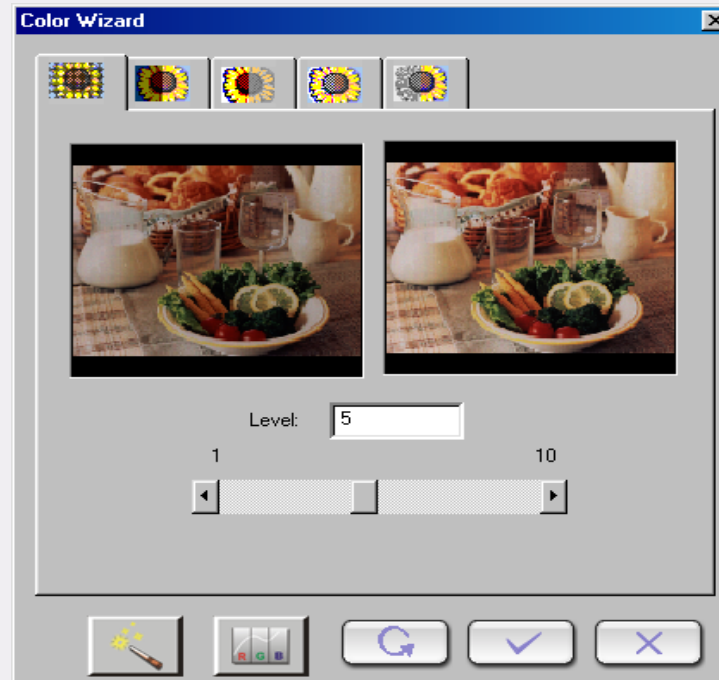
This mode consists of two windows, five tabs and some buttons. All items in the five tabs will automatically change according to the items you select. You also can shift to two other kinds of modes: Color Matching and Standard Mode.

Note: The settings in Color Wizard mode will suppress all settings in Standard Mode.

The Original window in this mode shows the primary image, while the Effected window displays the change effect.

To apply the effect, click [✓] button. To reset, click [↻] button. Otherwise, you can click [✕] button to cancel.

DENSITY TAB
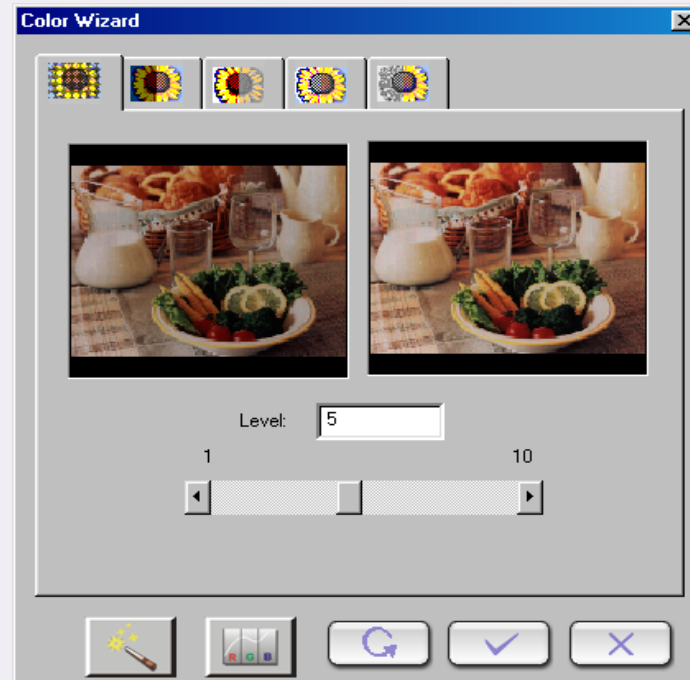
This tab allows you to adjust the density of scanned image. The default density level is 5. The range of density level is from 1 to 10.

If you input a value into the edit box, EPSON Scan Tool will change the position of the scroll bar and refresh the effect.

EXPOSURE TAB
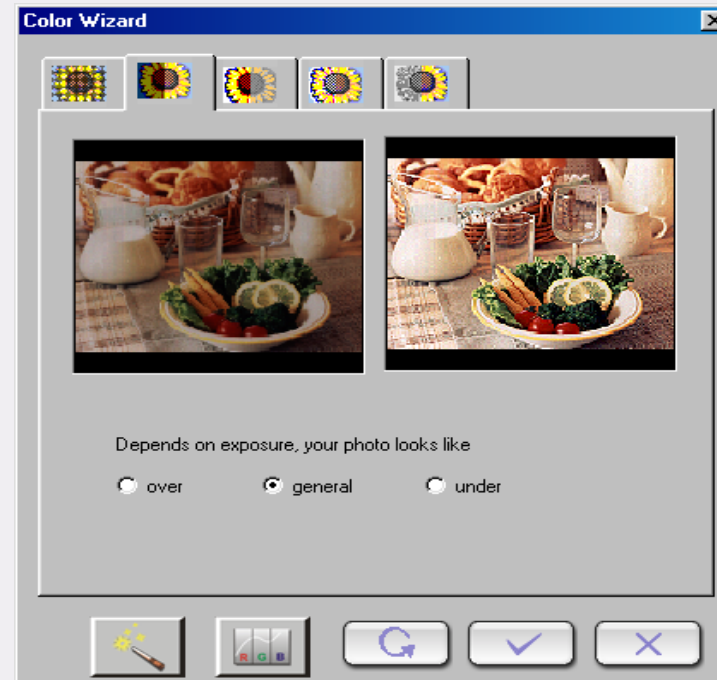
There are three options that allow you to change the exposure effect of the image:

Under: Darkens the image.

General: Extends the color level and sharpens the image.

Over: Brightens the image.

CONTRAST TAB
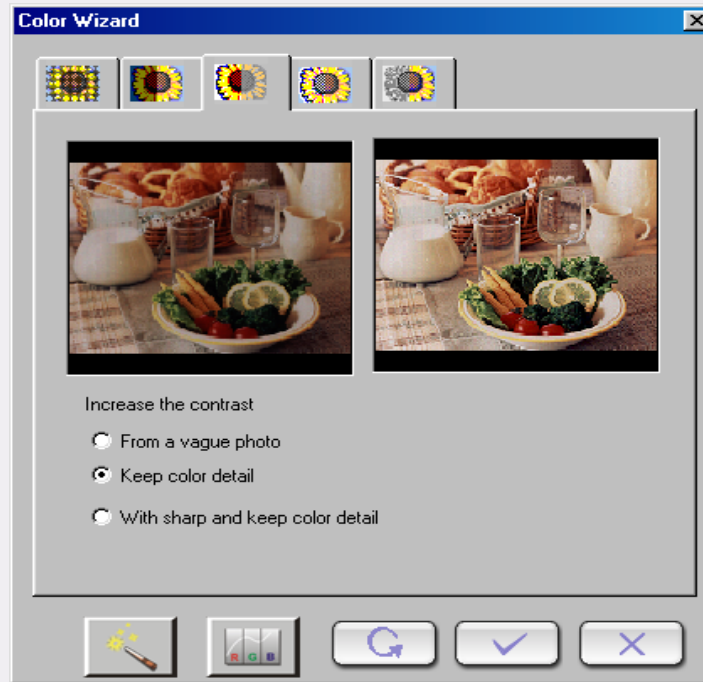
Here you can adjust the contrast of scanned image. Choose from the three radio buttons, namely: "From a vague photo", "Keep color detail", and "With sharp and keep color detail".

SHARPNESS TAB
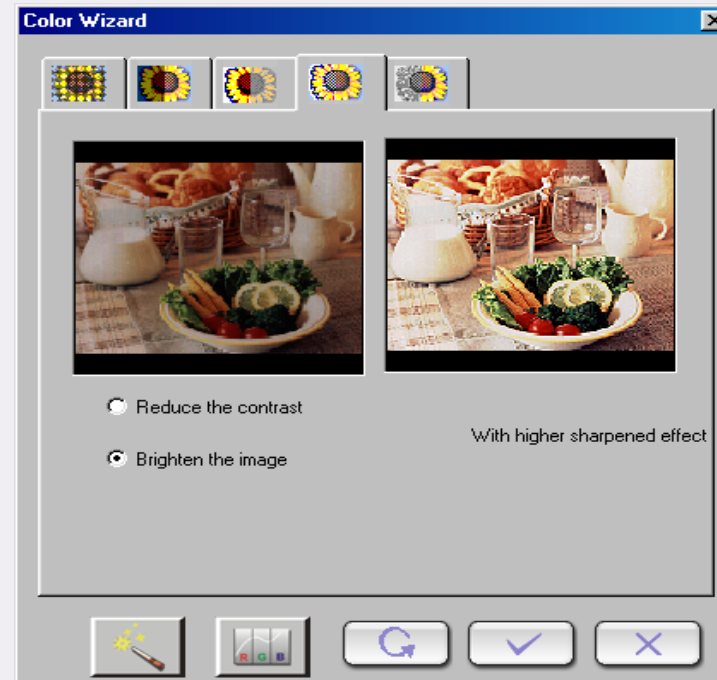
This tab allows you to adjust the sharpness of the image with two different options.

SATURATION TAB
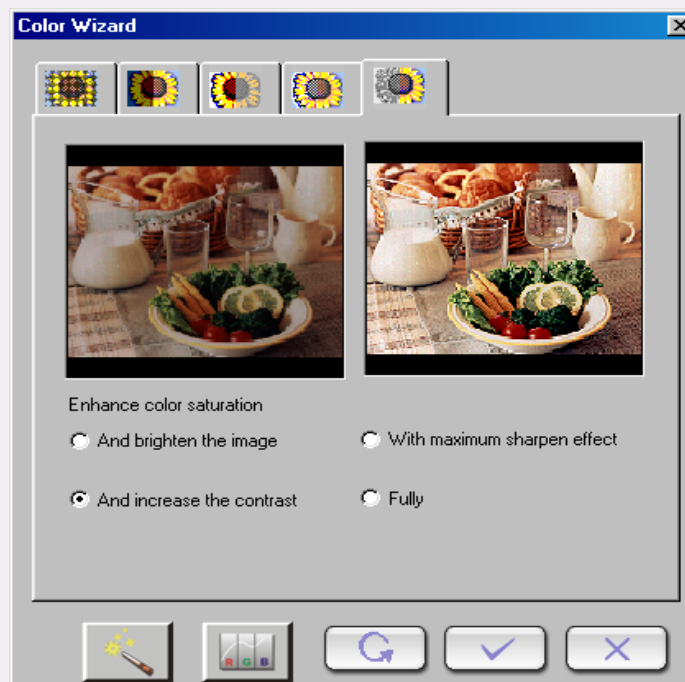
This tab allows you to adjust the color saturation of image in four different levels.

Color Matching Mode

The Color Matching Mode is entered by clicking the [icon] button. This mode contains two sections and some other buttons. The two sections relate to the input device (just reveal a static text about model's name and profile's name) and the output device.

Note: The settings in Color Matching mode will suppress all settings in Standard Mode.

Details on output device

sRGB Color Space

Shows the relative profile name.

Current monitor

Same as above.

Current printer

Same as above.

Other device profile

Change the profile settings.

Output device profile information

Show information of currently selected profile.

Output Intent

Intent	Meaning
Absolute Colormetric	Maintain the white point. Match the colors in their nearest color in the destination gamut.
Saturation	Maintain saturation. Used for business charts and other situations in which undithered colors are required.
Relative Colormetric	Maintain colormetric match. Used for graphic designs and named colors.
Perceptual	Maintain contrast. Used for photographs and natural images.

Standard Mode
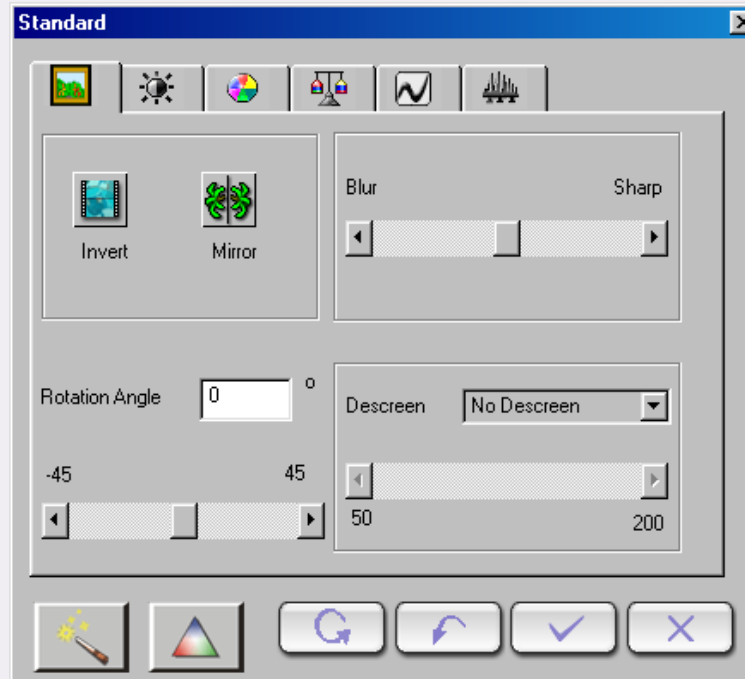
The Standard Mode comprises seven sub-layers. They are, Combo, Brightness and Contrast, Hue and Saturation, Color Balance, Curve, Level and Threshold.

To apply settings made in the mode, click [↶] button. To apply all settings, click [✓] button. To reset, click [↻] button. Otherwise, you can click [✕] button to cancel.

Note: The Hue and Saturation, Color Balance and Threshold tabs will not appear if the image type is set to grayscale. The Threshold tab only appears when image type is set to line art.

COMBO TAB
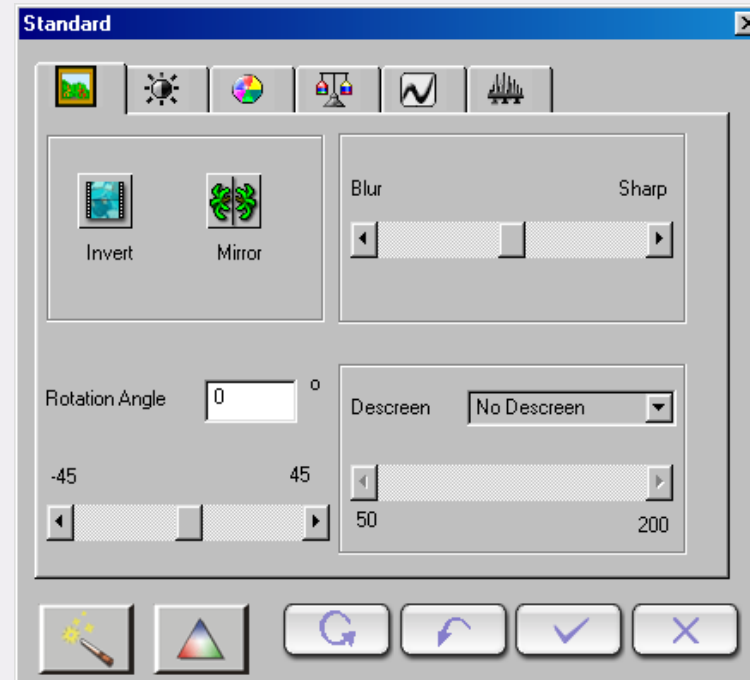
Each item in this tab:

Invert

If you click this button, the current frame will be converted into inverse color. This means the brightness value of each pixel in the channels is converted to the inverse value on the 256-step color-values scale.

Horizontal mirror

This effect is not displayed in the preview area but be realized on the scanning result.

Rotate

You can type a rotating angle into the editing cell or drag the scroll bar.

Blur/Sharpen

You can drag the slider to blur or sharpen the image: drag the slider to the left to blur the image and to the right to sharpen the image.

Descreen

If you are scanning images from magazines, newspapers or other printed materials, you will find that the scanned image appears to be covered by tiny screen patterns. To eliminate this screen pattern, you can use the options in the drop-down list box. You can select an appropriate descreen option according to the original to be scanned from the drop-down list box.

Brightness and Contrast Tab
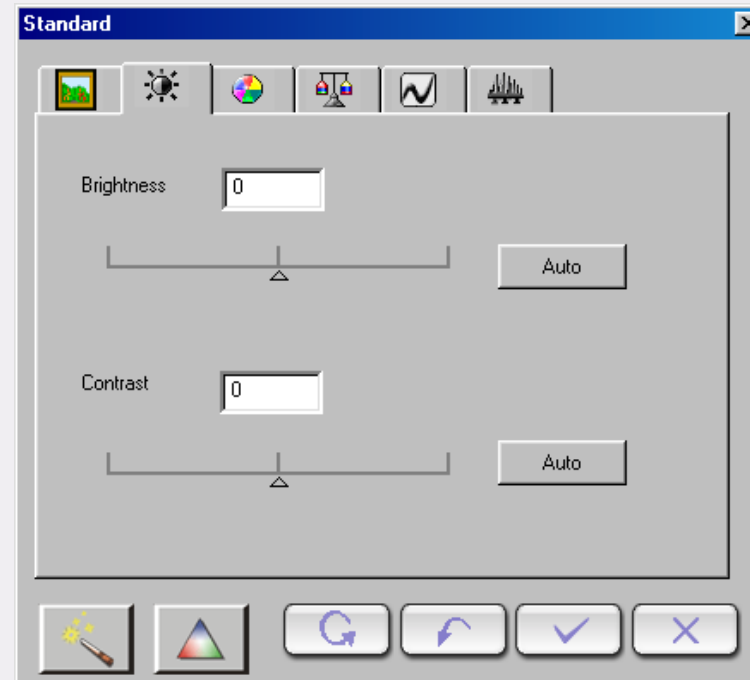
This tab allows you to adjust the brightness and contrast of the scanned image.

You can manually type the values between -127 and 127 (the default is 0) into their text boxes. You can also drag the scroll bar left to decrease or right to increase the effect. We recommend you to click the "Auto" button to let the software adjust the effect automatically.

HUE AND SATURATION TAB
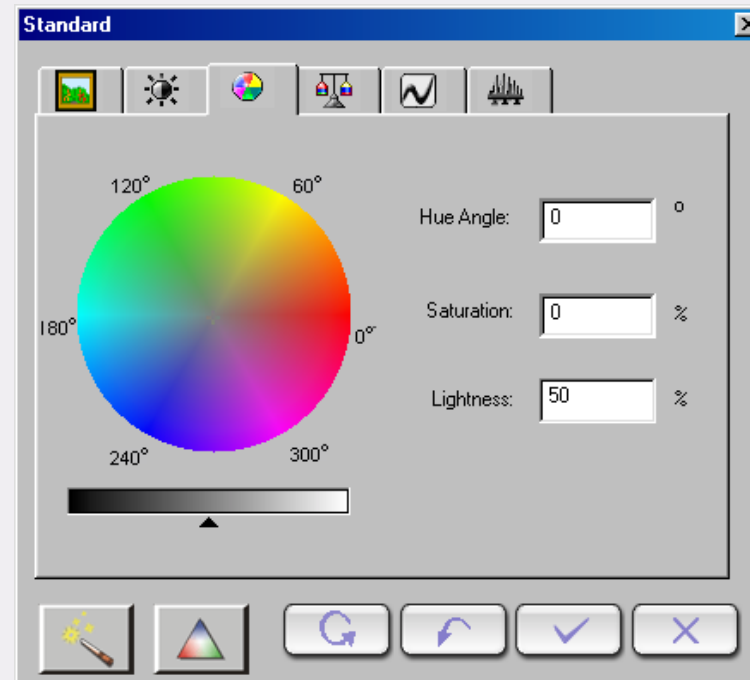
Hue is a characteristic that distinguishes one color from another, while Saturation decides the intensity of a color.
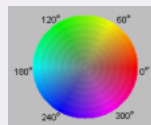
 You can use the **Color Wheel** to specify the hue and saturation of the color you want to use. Move your mouse cursor on the Color Wheel and then click on it. Drag within the Color Wheel to select the hue of the color you want to use. The distance from the center of the wheel decides the saturation of the color: the farther you drag your mouse cursor from the center of the Color Wheel, the higher the saturation.

 You can drag the triangle below the Lightness Bar to adjust the lightness of the color you choose. To increase the lightness, drag the triangle to the right. Otherwise, drag the triangle to the left to reduce the lightness.

Hue Angle:	0	o
Saturation:	0	%
Lightness:	50	%

While you drag within the **Color Wheel** to choose the hue and saturation of color or drag the triangle below the Lightness Bar to specify the lightness of color, the related information will also be shown in the **Entry Boxes**. You can also enter the values here directly.

Default parameters as:

Item	Range	Default value
Hue	0~359	0
Saturation	0~100%	0%
Lightness	0~100%	50%

COLOR BALANCE TAB
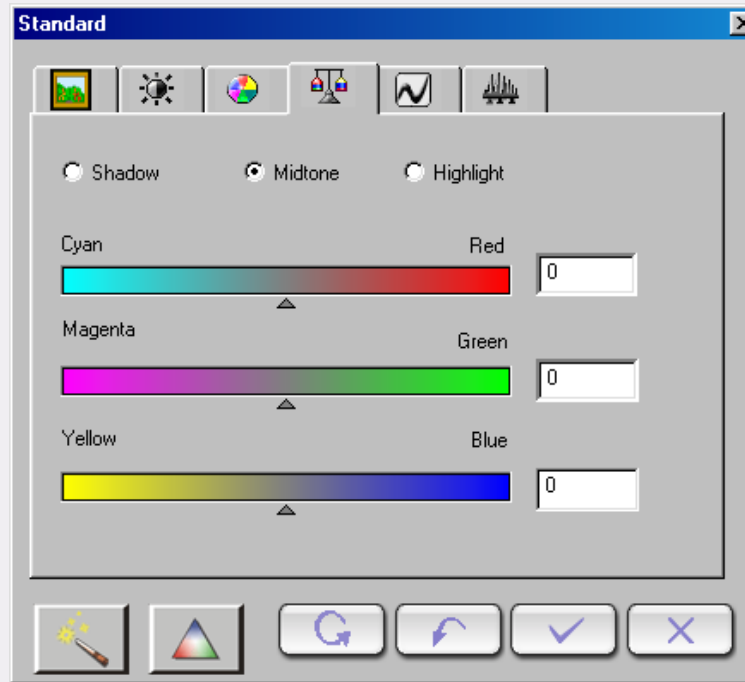
With the Color Balance tool, you can change the mixture of colors of an image and emphasize or diminish certain colors.

The color channel is where you can select the channel to be adjusted.

You can drag the triangles or enter the value (from 0 to 100) in the box directly to adjust.

To adjust the color balance, first, you select the channel you want to adjust, then drag the triangles under the three color bars. You can also enter the desired values directly into the three entry boxes to the right of the color bars to adjust the color balance.

For example, if the color of the brighter area in the original you scan appears to be bluish, you can first choose **Highlight** as the channel, and then drag the triangle below Cyan-Red bar to the right, or drag the triangle below the Yellow-Blue bar to the left to eliminate the bluish effect.

Default parameters as:

Item	Range	Default value
Color channel		Mid-tone
Cyan and red	-100~100	0
Magenta and green	-100~100	0
Yellow and blue	-100~100	0

CURVE TAB
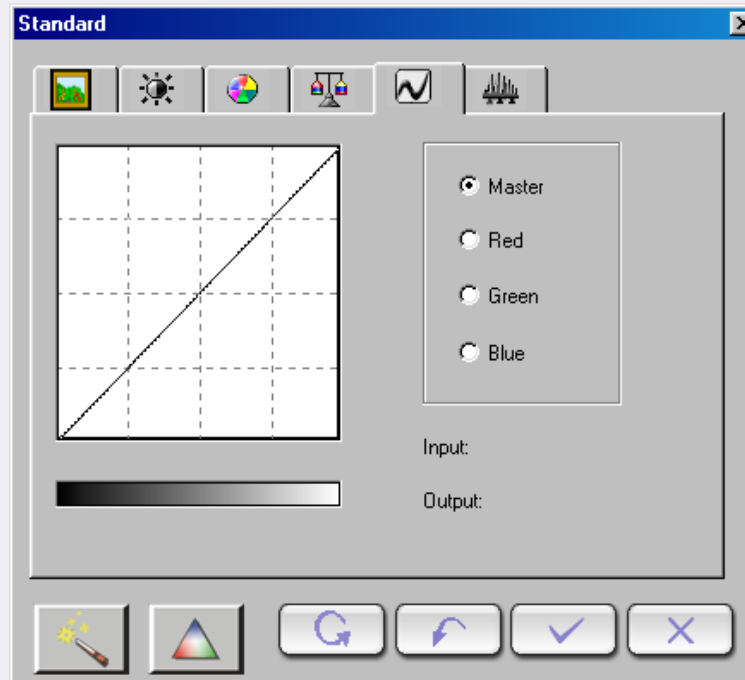
The Curve tool is used to adjust the brightness properties of midtone pixels in an image.
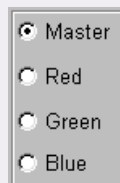
Use the **Color Channel box** to select the color channel to be adjusted. This allows you to adjust the curve property of each color channel respectively.
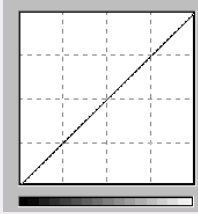
The x-axis in the **Tonal Map** represents the input brightness level of the pixels in an image. The y-axis represents the output brightness level of the image. By clicking and dragging the curve to change its shape, you can adjust the difference between input and output brightness level of an image without extensively modifying the dark and bright areas. If we compare the following images and their Tonal Maps:
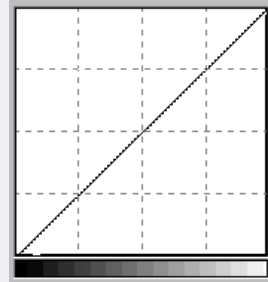
The original image and its Tonal Map.
The curve is straight and diago-
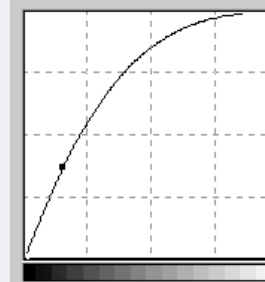
Drag the curve to the left, and the mid-tone area of the image becomes brighter.
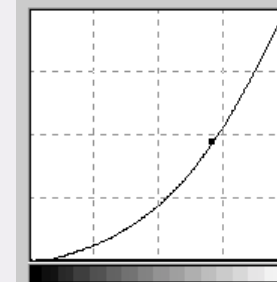
Drag the curve to the right, and the mid-tone area of the image becomes darker.

You can also click the curve to add new points and further change the shape of the curve:
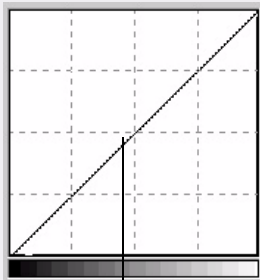
Click to add a new point
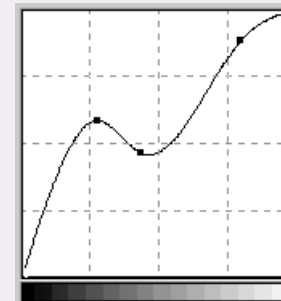
| Input: | 121 |
| Output: | 139 |

You can read the precise input/output value in the **Input/Output Status Area**.

LEVEL TAB
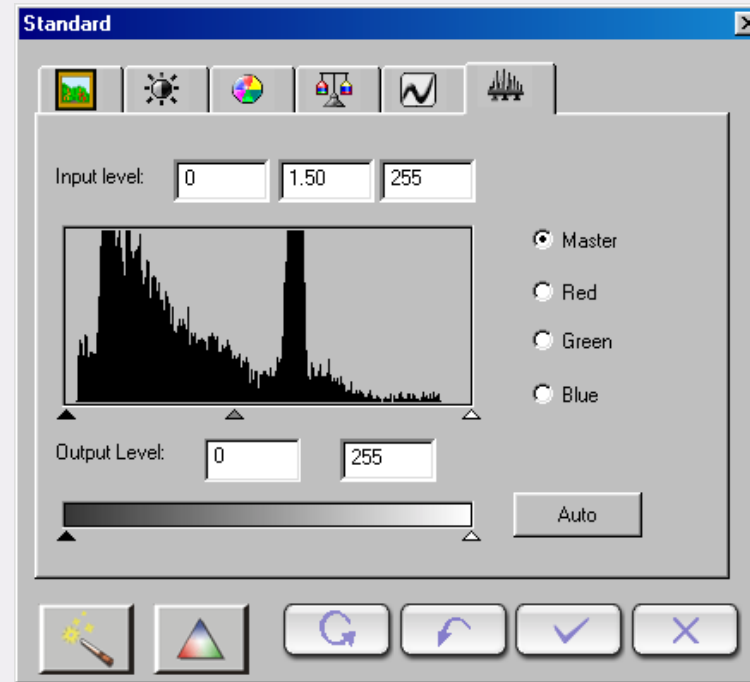
The Color Level dialog box shows the distribution of brightness levels of an image and its values classified into the Input Level and the Output Level.

Use the **Color Channel** box to select a color channel to adjust. This will allow you to adjust the histogram property of each color channel respectively.
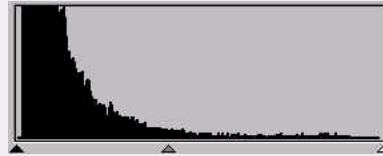
A **Histogram** displays the distributing status of dark and bright pixels in an image. The x-axis is divided into 256 equal portions, representing the brightness level of 0 to 255. The y-axis is used to represent the quantity of pixel in each brightness level. A comparison of two images and their histograms follows:

Brighter images have brighter pixels, therefore the bars in the right are higher than that in the left.
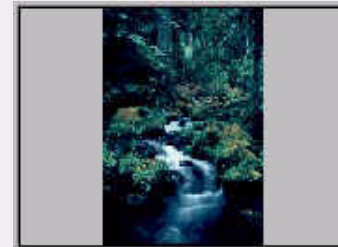
Darker images have darker pixels, there-fore the bars in left are higher than that in the right.

In addition, if we take a look at the two images below:

Image 1

Image 2

We can see that in Image 1, there is a higher contrast between the brighter and darker part of the image. Bright and dark pixels occupy a larger portion of the total image. Therefore, in the histogram there are higher bars in the left (darker side) and right (brighter side), and in the center the bars are relatively much lower, which means that there are only a few midtone pixels in the image.

In image 2, pixels in objects possess greater levels of brightness and darkness. The distribution is more even than that in Image 1 as well. Therefore, the brighter, midtone and darker pixels share evenly the total pixels in the image. This will make the histogram for Image 2 appear smoother.

To adjust level, first choose the color channel. There are four radio boxes for the selection of channels. If you select the Master, the level of all three color channels (red, green and blue) will be adjusted simultaneously. If you select one of the Red, Green, or Blue boxes, then only the selected color channel will be adjusted.

Next, you can adjust the level by dragging the triangle under the diagrams. The Black handle (the left one) is for the adjustment of shadow of input/output level, the gray handle (the middle one) is for mid-tone, and the white handle (the right one) is for highlight. In addition, you can adjust the values by directly entering the desired values in the text boxes. You can also press the "Auto" button to let EPSON Scan Tool automatically adjust the color level according to the color of the whole image.

Below is an example of using the histogram tools to enhance the image and add detail:
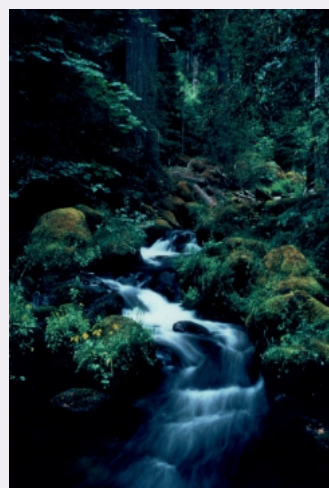
Before adjustment
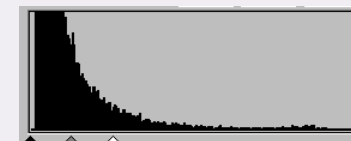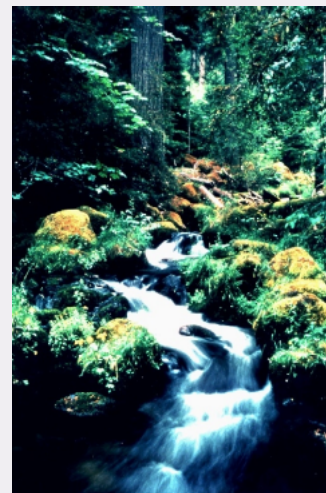
After adjustment

Default parameters are:

Item	Range	Default value
Input level max	Input level min+2~255	255
Input level min	0~input level max-2	0
Gamma	0.1~9.9	1.5
Output level max	0~255	255
Output level min	0~255	0

THRESHOLD TAB
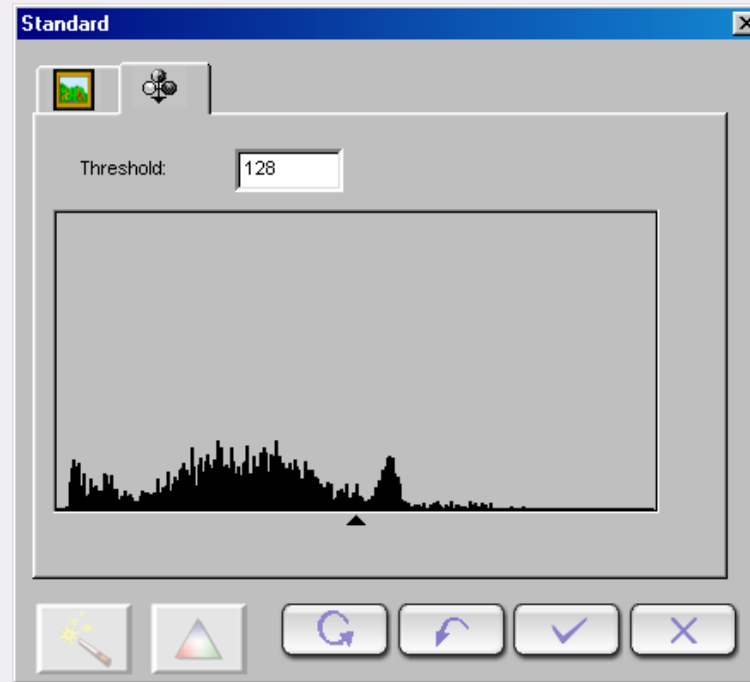
The Threshold tool is very useful when you scan line-art images or scan documents for OCR use. You may use this function to adjust the quality of line art images or eliminate unwanted dots in the document to improve the accuracy of recognition.

Note: This function is only applicable when you select Line Art as the Image Type.
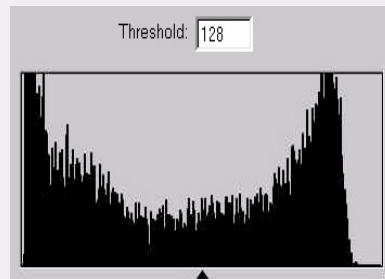
The x-axis in the histogram represents the brightness level of the pixels in the image (from 0 to 255, from left to right). The y-axis represents the quantity of pixels.

To adjust the threshold value, drag the triangle below the histogram or enter the threshold value in the Threshold entry box directly. For example:

Image 1 below is the original scanned image, while in Image 2 the threshold value is changed into 70.
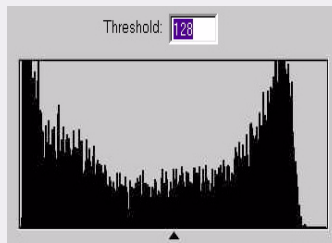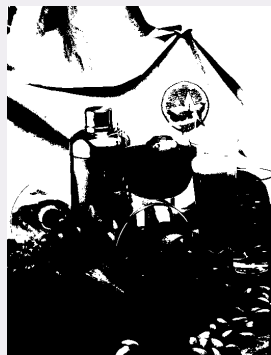
Image 1
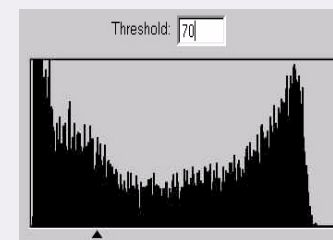
Image 2

This means that pixels in the image with a brightness level below 70 will all be cut into black, and those with a brightness level above 56 are all turned into white. Therefore, you will find that by setting a lower threshold value, some details are lost in the new image. However, if there are many unwanted dots in an image, you can eliminate them.
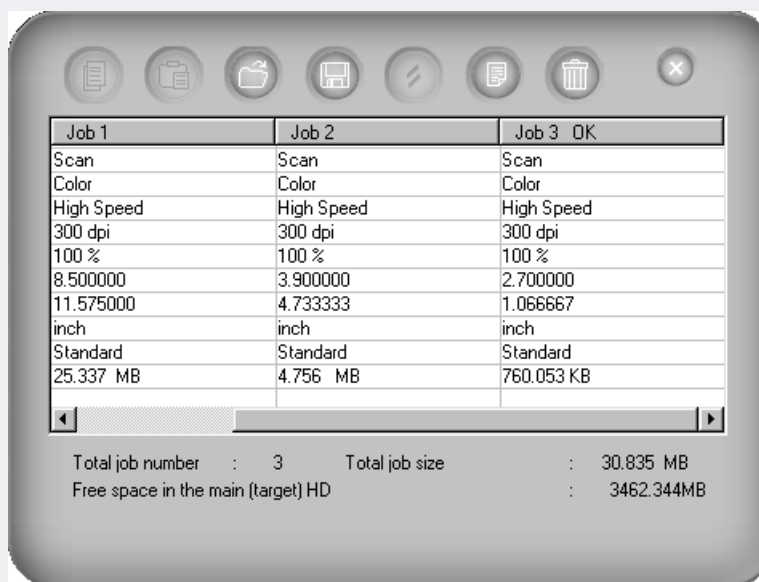
To set a value you can drag the triangular slider or input a value in the text box.

Default parameters are:

Item	Range	Default value
Threshold	0~255	128

The Jobs List window

Do you want to supervise all the jobs in Job List as an administrator? EPSON Scan Tool offers a table for an administrator to inspect, set and browse overall operations. This table comprises a Jobs Sheet, Button Bar and Status Bar.

Jobs Sheet

Scan state

If you don't want to scan this job, uncheck the check box.

Image Type

Chooses image type as Color, Gray, or Line-art.

Scan Mode

Chooses scan mode.

Resolution

When resolution unit is dpi or ppi, several default values are offered as 72, 96, 100, 150, 263, 300, 350, 600, 1200, 2400, 4800, 9600.

If you select "Customize", another dialog box will pop-up in which you can drag a wheel or a key in a value directly to define the resolution. Even resolutions for the X and Y axises are offered.

Scaling

Some default ratios or definitions are pre-rooted in a drop down-list:10%, 25%, 50%, 75%, 90%, 100%, 121%, 150%, 200%, 400%, 800%, 1600%, 3200%, Max to B5, Max to B5(R), Max to A4, Max to A4(R), Max to Screen and Max to PDA.

Width

The default unit of width is the same as the ruler's. However, you can choose other units as pixel, cm or inch and the values of width will automatically refresh.

Height

Same as above.

Image Control

You can do adjustment in Image Adjustment Window.

File Size

Shows the file's size.

Operations on the Jobs Sheet

Change job settings

Under each job, click to highlight an cell. Click the right part of the cell again and the cell will either turn into a radio button, drop-down list or a editing box for you to make selections.

Click to highlight a cell.	Click the right part of the cell. A drop-down list box appears.	Make selection from the drop-down list box.	

Select all settings under a job

Click the job name on the list, and all cells will be selected.

Click a job name.	All cells under the job will be selected.

Copy and paste job settings

1. Click to select a cell (or all cells) under a job, and click the [icon] button.

2. Click to highlight a cell (or all cells) under another job, then click the [icon] button.

Button Bar

[icon] **Copy**

Click to select a cell (or multiple cells) on the Job Sheet, and click this button to copy the parameters onto a clipboard.

[icon] **Paste**

Click to select a cell (or multiple cells) on the Job Sheet, and click this button to paste the parameters from the clipboard.

[icon] **Load**

Click this button to load scan parameters from a file.

[icon] **Save**

Click this button to save selected or all parameters as a file.

[icon] **Reset**

Reset all parameters to system default values.

[icon] **Add**

Click this button to add a new scan job in the Jobs sheet.

[icon] **Delete**

Click to select a job and click this button to delete it.

Status Bar

Displays information about the number of total jobs, total size of files and remaining space disk. A warning will be shown if not enough disk space remains.

Getting Help

To help you better understand and operate EPSON Scan Tool, you can access the Help system provided in the Button Mode. Click the Help ⊘ button on the Control window and a submenu with the following items will appear. You can also press the "F1" key on the keyboard.

What's this?: The mouse cursor will change to a "question mark" for you to inquire object, then relative page will be shown. You can also press the "Shift" and "F1" keys on the keyboard.

Scanner Information: Show scanner's information in a dialog which includes "Scanner Model", "Firmware version", "Driver version", "Device Manager", "USB Info", "Max resolution", "Max Scan area" and an "OK" button. Before you ask for technical support, please have these information ready.

About: Pop-up a message box which includes driver version and license information.

Shortcuts

EPSON Scan Tool provides the following shortcut hot keys to quickly execute frequently used commands:

Hot Keys	Action
Alt+F4	Exit
Ctrl+F	Open Settings dialog box
Ctrl+P	Preview
Ctrl+S	Scan

Problems and Solutions

Installation and uninstallation problems

Installation Problems

How to install EPSON Scan Tool?

First check the System requirements. When you first install the program, we recommend the following installation sequence:

Step 1: Insert the scanner software CD on the CD-ROM drive.

Step 2: The EPSON Installation Program dialog box appears. Select your preferred language and Click ⊡ .

Note: If the EPSON Installation Program dialog box does not appear, double-click the MY Computer icon. Click the CD-ROM icon, then select Open from the File menu. Then double-click Setup.exe.

Step 3: Welcome dialog box appears. Click Next.

Step 4: Then follow the on-screen instructions until the software is installed. When a message appears informing you that installation is complete, click Finish.

Though I followed the above steps the installation was not successful. What should I do?

If all of the above actions fail, then there are five possibilities:

Causes	Solution
There's something wrong with the Windows 95 system in your PC.	Format the hard drive and install Windows 98. Windows 98 has much better compatibility to support USB.
There is a hardware conflict.	There is no solution unless you repair the hardware.
Disk space error (insufficient)	Clear the Disk or choose another Disk which has enough space. See System requirements.
RAM error (Too tiny RAM to run Setup)	Add RAM or appoint enough virtual RAM. See to System requirement.

During installation scanner was not found?

Please make sure to move the lock switch located at the bottom of the scanner. If you are sure the lock is already moved, check the scanner as follows:

• Power on the scanner.

• The white lamp inside the imaging carriage should come on.

• The imaging carriage moves forward a little and back.

• During the movement of the imaging carriage, the light indicator (green or red) at the front of the scanner blinks for about 15 seconds.

• Then, the indicator should stay lit. If the indicator blinks periodically, then the scanner is out of order.

And: Is the USB port in your PC active? Windows supports USB, but please make sure to activate the USB ports from the BIOS. If "Universal serial bus controller" is shown under "Start -> Setting -> Control Panel -> System -> Device Manager", the scanner will be installed successfully.

Can I setup EPSON Scan Tool in Windows NT?

No, because Windows NT does not support USB. Please read System Requirements carefully before installation.

There's something wrong with my scanner after I have connected a USB CD-RW. What should I do?

If the problem happened after you set up the USB CD-RW, then an unknown software conflict may have happened. Try to disconnect the USB CD-RW and re-install the program.

Uninstallation Problems

How to uninstall EPSON Scan Tool?

Follow the steps below to uninstall EPSON TWAIN. For Windows Me or 98 users, see For Windows Me or 98 users. For Windows 2000 and XP users, see "For Windows 2000 and XP users" below.

For Windows Me or 98 users

1. Unplug your scanner and disconnect it from the computer.

2. Click Start and point to Settings, then select Control Panel.

3. Double-click the Add/Remove Programs icon in Control Panel.
   The Add/Remove Programs Properties dialog box appears.

4. Select EPSON Scan Tool from the list, then click Add/Remove.

5. The confirming dialog box appears. Click Yes to continue.

6. When a message appears informing you that EPSON Scan Tool will be removed, click Next.

7. Click Finish to complete the uninstallation.
   In some cases, a message may appear to prompt you to restart the computer;
   make sure "Yes, I want to restart my computer now is selected" and then click Finish.

For Windows 2000 and XP users

You need to remove your EPSON Perfection 660 from the Scanners and Cameras dialog box first

and then uninstall EPSON Scan Tool. Follow the steps below.

1. Make sure your scanner is plugged in and connected to your computer.

2. For Windows 2000 users, click Start and point to Settings, then select Control Panel.
   For Windows XP users, click Start and select Control Panel.

3. Switch to Classic View if necessary, then double-click the Scanners and Cameras icon and remove your
   scanner from the list of installed devices.

4. Unplug the scanner and disconnect it from the computer.

5. Double-click the Add/Remove Programs icon in Control Panel.

6. Select EPSON Scan Tool from the list, then click Change/Remove.

7. Follow the instructions described in "For Windows Me or 98 users" (steps 5 to 7) above.

Why can't I uninstall EPSON Scan Tool?

Several possibilities:

Cause	Solution
System error: You did not uninstall EPSON Scan Tool before you setup the operating system again. So in the new system, there's an error in regedit file.	Import the former system's regedit or delete all EPSON Scan Tool files manually.
The uninstallation file is corrupt.	Delete all files in the folder and "EPSON Scan Tool" references in the regedit manually.
The last uninstallation is unsuccessful.	Delete "EPSON Scan Tool" as described in "How to uninstall EPSON Scan Tool" .

Troubles in starting EPSON Scan Tool

Why can't I start up EPSON Scan Tool?

As for our experience, we list out possible causes and solutions:

Cause	Solution
Installation is blocked or bothered accidentally	Uninstall it or delete all files manually, then reinstall it.
File is destroyed	Copy intact file or do as above
Shortcut is changed	Redefine shortcut's path
Pirated software	Purchase authorized software

Why the procedure to start EPSON Scan Tool is too slow?

RAM and virtual RAM are very important to image processing program, EPSON Scan Tool need large RAM to undertake complete image processing. It is better for you to equip the computer with more than 128MB RAM. We urge you to close other programs before open EPSON Scan Tool, so that its speed will be fast.

I've been using my scanner for a while with no problems, but recently something strange occurred and my system locked up. Now every time I try to acquire the scanner, I can't find it. Sometimes I get into EPSON Scan Tool and the crop box and the select box will not move.

EPSON Scan Tool stores your last settings in its resource file. If your computer locks up while you are using the scanner, it's possible for these settings to have been corrupted. Try holding down the Alt key when you Acquire EPSON Scan Tool. This will reset the defaults in our software and you will be able to use it. If you still cannot get into your software, simply reload EPSON Scan Tool software from the original disk.

How to set scanner as one can be used by all users in Windows2000?

During the installation of the scanner driver, the installer will modify some system files, and only "Administrator" is authorized to do so in Windows 2000.

Please follow step to authorize all user to access the scanner:

• Click "Start -> Settings ->Control Panel -> System"

• Click "User Profiles -> Copy to"

• Click "Everyone -> OK"

Where do the files go, after finishing "Scan to File", "Scan to Printer"?

After activating the "Scan to File", "Scan to Printer" operation, the files are sent to the appropriate application, such as Microsoft Word. But if something goes wrong during transfer, you can retrieve the files in a temporary folder: c:\windows\temp\. See File's default settings.

Operation problems

Why can't I set preview action under Auto Function?

If all check boxes in Auto Function Settings Dialog are unchecked, it will be disabled. You can check any of the boxes in that dialog to activate it.

Why the button of Auto-function doesn't work?

If all of sub-items of it in Advanced settings are unchecked, it is disabled. To check any of them, button will work.

Why the buttons of "Add" and "Duplicate" in preview window don't work?

If frames' or jobs' number in preview window is more than 28, it will be disabled.

How to change EPSON Scan Tool's default settings to meet my special demand?

Please carefully read references to change settings in How to make Settings in Console Mode. And see to How to improve image's quality.

When I scanned material, its background would be scanned and printed. How to prevent?

• Crop the wanted scanning area in the preview window. The black background will not scanned.

• Place a white A4 paper and stick it on the inner side of the top cover of the scanner. Then the background color will become white.

Additional tips on improving image quality

How to enhance image's definition and verisimilitude?

As you know, resolution is used to measure an image's definition, but definition and size contradict each other. In order to enhance image definition and reduce file size, we recommend the following methods:

• Classify material into corresponding scanning type, such as color, line-art, reflective.

• Choose the smallest and efficient resolution.

• Choose the right scanning destination.

• Use default settings unless you are an advanced user.

• Use pre-defined macros to optimize operation.

• Adjust image adequately.

How to darken or brighten an image?

You can simply adjust an image's brightness and contrast to reach the desired effect. For details see Brightness and Contrast.

How to enlarge or diminish image?

Do as follows:

Involved item	Enlarge	Diminish
Color	more than 16 bits	less than 16 bits or art-line.
Resolution	more than 300 dpi	less than 150 dpi
scaling	scaled	not scaled
Crop area	full area	only desired area
file format	BMP	JPG or GIF
compress	uncompressed	Winzip or others

How to sharpen or blur an image?

For simple changes you just need to drag the slider left or right in the Combo Tab in Standard Mode (path: Console Mode - > Color Wizard - > Shift to Standard Mode - >Combo). See detailed explanations in the Standard Mode of Image Adjustment.

How to change the color balance?

You can adjust the color balance (red/blue/green) in Hue and Saturation, Color Balance and Level Tabs (click hyperlinks to see more).

How to rotate image?

You can click in the Preview window to rotate an image clockwise or counterclockwise .

How to apply advanced skills?

Please carefully read the chapters about Image adjustment and Settings, because they are quite complicated.

Contacting Customer Support

If your EPSON product is not operating properly and you cannot solve the problem using the troubleshooting information in your product documentation, contact customer support services for assistance. If customer support for your area is not listed below, contact the dealer where you purchased your product.

Customer support will be able to help you much more quickly if you give them the following information:

• Product serial number
  (The serial number label is usually on the back of the product.)

• Product model

• Product software version
  (Click About, Version Info, or similar button in the product software.)

• Brand and model of your computer

• Your computer operating system name and version

• Names and versions of the software applications you normally use with your product

For users in the United Kingdom and the Republic of Ireland

http://www.epson.co.uk

Visit our Internet home page for a full list of support and warranty services including:

• Register your product on-line

• Free access to the latest EPSON software drivers

• Easy access to frequently asked questions

• Interactive web based support tool to help you quickly resolve support issues

• Chat directly with a support technician on-line

• Email Technical Support

Support Via Telephone

UK	08701 637 766
The Republic of Ireland	01 679 9015

Pre-Sales Enquiries, Literature Requests and Nearest Dealer

Home Page:	http://www.epson.co.uk
Email:	info@epson.co.uk
Telephone:	UK 0800 220 546
	The Republic of Ireland 1 800 409 132
Fax:	UK 01442 227271
	The Republic of Ireland 00 44 1442 227 271

For users in the Middle East

Some of these services may be available in English only.

http://www.epson.com

Select your country from our Internet home page for a full list of support and warranty services including:

- Register your product on-line

- Free access to the latest EPSON software drivers

- Easy access to frequently asked questions

- Interactive web based support tool to help you quickly resolve support issues

- Chat directly with a support technician on-line

- Email Technical Support

Technical Support Via Email and Telephone

Email: epson_support@compubase.co.ae
Telephone: +971 4 351 7777
Fax: +971 4 351 6617

Pre-Sales Enquiries, Literature Requests and Nearest Dealer

Select your country from our Internet home page at
http://www.epson.com.

For users in Scandinavia

Some of these services may be available in English only.

http://www.epson.com

Select your country from our Internet home page for a full list of support and warranty services including:
• Register your product on-line

• Free access to the latest EPSON software drivers

• Easy access to frequently asked questions

• Interactive web based support tool to help you quickly resolve support issues

• Chat directly with a support technician on-line

• Email Technical Support

Support Via Telephone

Denmark	80 88 11 27
Finland	0800 523 010
Norway	800 11 828
Sweden	08 445 12 58

Pre-Sales Enquiries Literature Requests and Nearest Dealer

Denmark	Home Page:	http://www.epson.dk
	Telephone:	38 48 71 37
Finland	Home Page:	http://www.epson.fi
	Telephone:	0981 710 083
Norway	Home Page:	http://www.epson.no
	Telephone:	231 62 124

Sweden	Home Page:	http://www.epson.se
	Telephone:	08 519 92 082

For users in South Africa

Some of these services may be available in English only.

http://www.epson.co.za

Visit our Internet home page for a full list of support and warranty services including:

- Register your product on-line
- Free access to the latest EPSON software drivers
- Easy access to frequently asked questions
- Interactive web based support tool to help you quickly resolve support issues
- Chat directly with a support technician on-line
- Email Technical Support

Support Via Telephone

Telephone:	(011) 444-5223 or 0800 600 578

Pre-Sales Enquiries Literature Requests and Nearest Dealer

Home Page:	http://www.epson.co.za
Telephone:	(011) 448-2736 or 0800 005 956

For users in Australia

EPSON Australia wishes to provide you with a high level of customer service. In addition to your product documentation, we provide the following sources for obtaining information:

Your Dealer

Don't forget that your dealer can often help identify and resolve problems. The dealer should always be the first call for advise on problems; they can often solve problems quickly and easily as well as give advise on the next step to take.

Internet URL http://www.epson.com.au

Access the EPSON Australia World Wide Web pages. Worth taking your modem here for the occasional surf! The site provides a download area for drivers, EPSON contact points, new product information and technical support (e-mail).

EPSON Faxback Service

EPSON Faxback service will fax you the latest specifications for most EPSON products offered in Australia. Phone (02) 9903 9075 and the system will guide you through a number of choices before faxing the information to your fax machine.

EPSON Helpdesk

EPSON Helpdesk is provided as a final backup to make sure our clients have access to advise. Operators on the Helpdesk can aid you in installing, configuring and operating your EPSON product. Our Pre-sales Helpdesk staff can provide literature on new EPSON products and advise where the nearest dealer or service agent is located. Many types of queries are answered here.

The Helpdesk numbers are:

Phone: 1300 361 054
Fax: (02) 9903 9189

We encourage you to have all the relevant information on hand when you ring. The more information you prepare, the faster we can help solve the problem. This information includes your EPSON product documentation, type of computer, operating system, application programs, and any information you feel is required.

For users in Singapore

Sources of information, support, and services available from Epson Singapore are:

World Wide Web (http://www.epson.com.sg)

Information on product specifications, drivers for download, Frequently Asked Questions (FAQ), Sales Enquiries, and Technical Support via e-mail are available.

Epson HelpDesk (Phone: (65) 586 3111)

Our HelpDesk team can help you with the following over the phone:
• Sales enquiries and product information

• Product usage questions or problem

• Enquiries on repair service and warranty

For users in Thailand

Contact for information, support, and services are:

World Wide Web (http://www.epson.co.th)

Information on product specifications, drivers for download, Frequently Asked Questions (FAQ), and e-mail are available.

Epson Hotline (Phone: (66)2-670-0333)

Our Hotline team can help you with the following over the phone:

• Sales enquiries and product information

• Product usage questions or problem

• Enquiries on repair service and warranty

For users in Indonesia

Contacts for information, support, and services are:

World Wide Web (http://www.epson.co.id)

• Information on product specifications, drivers for download

• Frequently Asked Questions (FAQ), Sales Enquiries, questions through e-mail

Epson Hotline

• Sales enquiries and product information

• Technical support

Phone	(62) 21-572 4350
Fax	(62) 21-572 4357

EPSON Support Center

Jakarta	Wisma Bisnis Indonesia 3rd floor Jl. Letjen S.Parman Kav. 12, Slipi-Jakarta Phone/Fax: (62) 21-5357159
Bandung	Lippo Center 8th floor Jl. Gatot Subroto No.2 Bandung Phone/Fax: (62) 22-7303766
Surabaya	Gedung Koko Perdana 3rd floor Jl. Jend. Basuki RakhmatNo. 105- 107 Surabaya Phone/Fax: (62) 31-5458562
Yogyakarta	Hotel Natour Garuda Jl. Malioboro No. 60 Yogyakarta Phone: (62) 274-566353/22-143

For users in Hong Kong

To obtain technical support as well as other after-sales services, users are welcome to contact EPSON Hong Kong Limited.

Internet Home Page

EPSON Hong Kong has established a local home page in both Chinese and English on the Internet to provide users with the following information:

• Product information

• Answers to Frequently Asked Questions (FAQs)

• Latest versions of EPSON product drivers

Users can access our World Wide Web home page at:

   http://www.epson.com.hk

Electronic Bulletin Board System

An electronic bulletin board system (BBS) is also available to obtain product information and the latest versions of product drivers. You can log on to the following number for the BBS service:

   BBS: (852) 2827-4244

Technical Support Hotline

You can also contact our technical staff at the following telephone and fax numbers:

   Phone: (852) 2585-4399
   Fax: (852) 2827-4383

For users in Malaysia

Contacts for information, support, and services are:

World Wide Web (http://www.epson.com.my)

• Information on product specifications, drivers for download

• Frequently Asked Questions (FAQ), Sales Enquiries, questions through e-mail

Epson Trading (M) SDN. BHD

Head Office.

   Phone: 603-56288288
   Fax: 603-56212088

Epson Helpdesk

• Sales enquiries and product information

  Phone: 603-56288222

• Enquiries on repair services & warranty, product usage and technical support

  Phone: 603-56288333

For users in India

Contacts for information, support, and services are:

World Wide Web (http://www.epson.co.in)

Information on product specifications, drivers for download, Frequently Asked Questions (FAQ), Products Enquiry, and Technical Query are available.

Epson India Head Office - Bangalore:

Phone: 5321 266-70
Fax: 5581799/5321095

Epson India Regional Offices:

Mumbai	Phone: 8261516-17
	Fax: 8257287
Delhi	Phone: 6447201-06
	Fax: 6447205
Chennai	Phone: 8203940/41
	Fax: 8272463
Kolkata	Phone: 2871355/56
	Fax: 2871357
Hyderabad	Phone: 6329335/36
Cochin	Phone: 361638/362677
	Fax: 352940
Pune	Phone: 4335460-ext 214
	Fax: 4330881
Ahmedabad	Phone: 6407176/77

Help Desk

Nine City Help Line -9622 037766, available at Vadadora, Bangalore, Chennai, Hyderabad, Cochin, Mumbai, Pune, Delhi and Kolkata.

For users in the Philippines

To obtain technical support as well as other after sales services, users are welcome to contact the EPSON Philippines Corporation at the telephone and fax numbers and e-mail address below:

Phone: (63) 2-813-6567
Fax: (63) 2-813-6545
E-mail: customersupport@epc.epson.com.ph

World Wide Web (http://www.epson.com.ph)

Information on product specifications, drivers for download, Frequently Asked Questions (FAQ), and E-mail Enquiries are available.

Epson Helpdesk (Phone: (63) 2-813-6567)

Our Hotline team can help you with the following over the phone:

• Sales enquiries and product information

• Product usage questions or problems

• Enquiries on repair service and warranty

Technical Specifications

System Requirements

Before installing the scanner software, make sure that your system meets the following requirements.

System	Microsoft® Windows® 98 pre-installed Windows Me pre-installed or upgraded from Windows 98 pre-installed Windows 2000 Professional pre-installed or upgraded from Windows 98/Me pre-installed Windows XP pre-installed or upgraded from Windows 98 pre-installed Note: This system operates only when the USB interface is used in full speed mode.
Interface	USB port (TYPE A receptacle) on PC
Display	VGA or higher resolution monitor 640 x 480 screen resolution (800 x 600 or higher recommended), and 65,000 colors (or higher) Note: Color and tone reproduction are subject to the display capability of your computer system, including the video card, display monitor, and software. See the product documentation for details.

Scanning

Scanner type	Flatbed, color
Photoelectric device	Color CCD line sensor
Effective pixels	5056 x 6960 pixels at 600 dpi, 100%
Document size	214 x 294 mm (8.4 x 11.57 inches)
Scanning resolution	600 dpi (main scan)
	1200 dpi (sub scan)
Output resolution	50 dpi to 9600 dpi
Color separation	RGB color filters on CCD
Zoom	10 to 3200%
Image data	16 bits per pixel per color internal
	8 bits per pixel per color external
Brightness	Gamma correction controls Brightness
	Density level 1 to 10
Line Art settings	Threshold Range 0 to 255
Gamma correction	Tone adjustment by Gamma control tool
Color correction	Monitor (sRGB, user setting)
	Printer (user setting)
	Device profile
Interface	USB (Type B Receptacle Connector)
Light source	White cold cathode fluorescent lamp
Reliability	30,000 cycles of carriage movements (main unit MCBF)
Dimensions	Width: 278 mm (10.9 inches)
	Depth: 432 mm (17.0 inches)
	Height: 80 mm (3.1 inches)
Weight	Approx. 4.0 kg (8.8 lb)

Electrical

Electric Character of AC Adapter:	
Input voltage range	230 V ± 10%, 240 V ± 10%
Rated frequency	50 Hz
Rated current	0.15 A
Power consumption	Approx.25 W (operating)
	Approx. 7.5 W (stand-by)
Output Voltage Rating	16 V
Output Current Rating	0.9 A

Note: Check the label on the back of the scanner for voltage information.

Environmental

Temperature:	
Operation	10 to 35° C (50 to 95° F)
Storage	-25 to 55° C (-13 to 131° F)
Humidity:	
Operation	20 to 85%, without condensation
Storage	20 to 85%, without condensation
Operating conditions:	Ordinary office or home conditions. Extreme dust should be avoided. Operation under direct sunlight or near a strong light source should be avoided.

Note: Specifications are subject to change without notice.

Standards and Approvals

European model:

EMC Directive 89/336/EEC	EN 55022
	EN 55024

USB Interface

Interface type: Universal Serial Bus Specification Revision 1.1
Electrical standard: Full Speed mode(12 Mbit/s) and High Speed mode (480 Mbit/s)
                       of Universal Serial Bus Specification Revision 2.0.
Connector type: One receptacle (Type B)

Initialization Methods

The scanner can be initialized (returned to a fixed set of conditions) in the following ways:

Hardware initialization   The AC adapter is plugged in.
                                 The USB cable is unplugged from the USB port on the scanner.

Appendix

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