EUT: ADF (Automatic Document Feeder) and TPA (Transparency Adaptor)

FCC ID: ITEUECADFILM

ULTIMA ELECTRONICS CORP.

USER'S MANUAL

FEDERAL COMMUNICATIONS COMMISSION

NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection. This equipment generates, uses and can radiated radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

Shielded interface cables (except Power Ourput Cord) must be used in order to comply with emission limits.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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The ScanEZ Application

Introduction

A scanner is a device that can catch an image and translate the image into a digital form that computers can display, edit, store and output. The word "image" refers to photos and pages of characters, graphics and illustrations, or even three-dimensional objects like conis or textile products. Therefore, a scanner can accomplish the following jobs:

- To scan characters into bit identifying software for processing, thereby avoiding the trouble of typing.
- To add graphics or photos into a document.
- To add images into multimedia.
- To produce artistic documents.

The way a scanner catches an image is to shine a light upon the document being scanned. The receptor on the scanner then collects the reflective light. Depending on the intensity of the light reflected by document, the receptor digitizes these data with either "0" or "1". Finally through the scanner's software, it reads these figures to re-organize a computer image file.

The ADFilm, an optional scanner accessory, consists of the TMA and the ADF. The TMA (Transparent Media Adapter) lets you directly scan images from either slides or negatives. With the ADF (Automatic Document Feeder), you can conveniently scan one or several sheets without lifting the scanner cover. The software included is designed with both the beginner and the professional in mind. As a beginner, you can use the ScanEZ application to immediately start using the scanner through ScanEZ's simple one-step interface to scan images and store them to disk or send them out as fax or email. Being a more experienced user, you can use the Scan Utility to take advantage of the full range of the features of our scanner.

With the Scan Utility, you can output your scanned image as a true "what you see is what you get" image. In addition, OCR (Optical Character Recognition) provides a powerful scan function: It transforms your text object into an editable "text" file in word processors. Three scan modes are: Color, Grayscale, and Black & White. The scanned images can be sent to printer, fax, email, file, clipboard, and image editing application. Also you can adjust resolution to match your desired output effect for a variety of applications of your scanned images. The powerful Scan Utility makes your scans easy and efficient

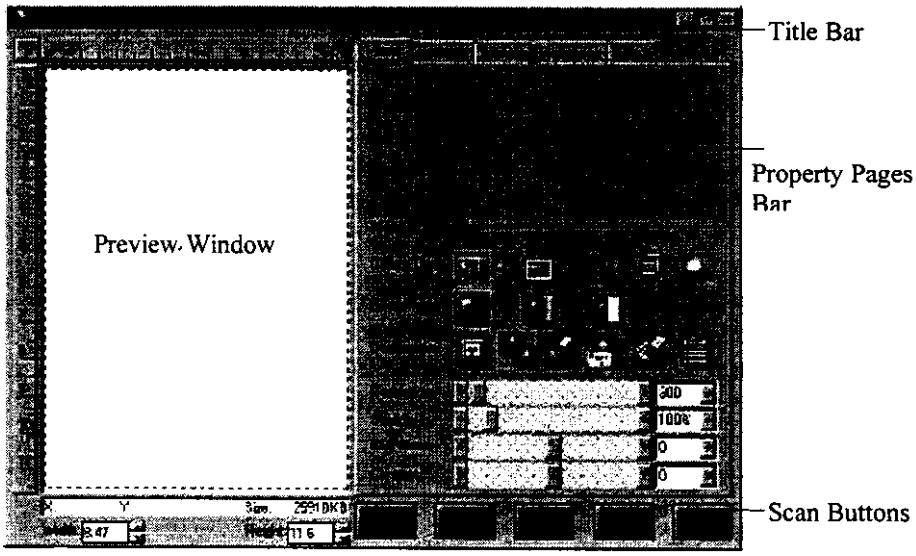
The Scan Utility

The Scan Utility is the graphical interface that is used to control your scanner. The main feature of this interface is the provision of a pre-scan view of the image, which can be manipulated to determine settings to be chosen for the final scan. In this way, a maximal amount of control can be exerted on the output of the scanner to obtain the best results possible.

Starting the Scan Utility

How to make your scanner work? First, install the scanner driver the manufacturer provides to put the scanner work for you. When drivers are installed, the Scan Utility is installed on your computer. There are two ways you can acquire the Scan Utility. It can be called from another application using the File-Import or File-Scan command, and then selecting the TWAIN driver. The title of the TWAIN source is usually the scanner's model name. For more information about how to acquire the scanner in the applications, refer to the user's manual of the software you are using. In addition, you can call up the Scan Utility in a stand-alone mode: Click on Start, select Programs, and point to driver of the scanner installed on your computer.

The Scan Utility is divided into three major parts: Title Bar (on the top), Preview Window (on the left) and Property Pages (on the right).



Title Bar

The window can be positioned on your screen by left clicking in the Title Bar with your mouse and dragging the window to the desired position. The icons on the right of the Title Bar, from left to right, will Minimize, Maximize and Close.

Preview Window

The Preview Area, located on the left of the window, is the vehicle through which all functions of the Scan Utility can be viewed. These images are created using low-resolution scans. This is an important function because it is faster than doing a full scan, allowing the results of any setting changes to be viewed quickly. Selected setting changes are then implemented in the final scan.

Aside from simply viewing previews, the Preview Area can also be used to manipulate them. Once a preliminary scan has been completed, the image can be cropped by positioning the mouse in one corner of the desired area and dragging it to create a rectangular outline. The ruler units can be changed by clicking on the box located at the point where the two rulers intersect. At the bottom of the Preview Area are displays for cursor location and scanned image size.

Width and height input boxes at the bottom of the Preview Area display the size of the currently selected item. To make precise changes to the image size, enter the dimensions manually.

Property Pages

You can flip these property pages by clicking the tags on the top. Their functional details are described in the section for each page. There are five buttons located on the bottom of the Property pages for controlling the Scan Utility's basic scanning operation with one simple click.

Scan Control Buttons

These five buttons located at the bottom right of this window are the Scan Control Buttons.

Preview

Pressing the Preview button creates a low-resolution scan in the Preview Area. This scan can then be manipulated using the various settings and features of the Scan Utility before making the final scan.

Scan

Pressing the Scan button will create a final scan that will then be processed according to the features that have been selected. If File was chosen as the destination you will be prompted for a file name

Reset

If you want to use default settings for your scans, click on Reset button.

Help

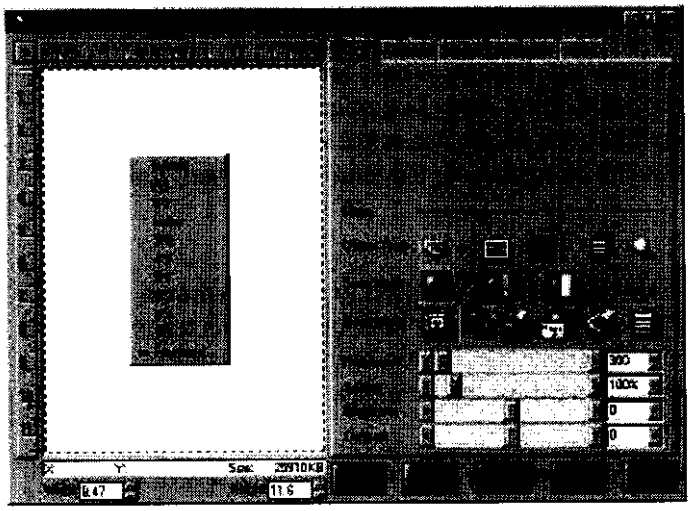
Displays the Scan Utility help file.

Exit

Closes the Scan Utility.

Main Panel

This tab contains the most basic scanning features available to the scanner. If you are a beginner it is recommended that you become familiar with these settings before moving on to the more advanced settings.



Define the scan areas

You can easily adjust the size of the area to be scanned. To define your scan area: First complete your Prescan and then move your cursor to the Preview window. Press the left mouse button and drag a rectangle to surround the pre-scanned material you wish to incorporate in your final scan. Release the mouse button. To define additional scan areas, repeat the same steps. To discard your current selection, simply click the left mouse button anywhere in the Preview Window outside the rectangle.

You can move the entire scan rectangle by placing your cursor inside it. When the cursor changes to a four-way arrow, hold down the left button of your mouse and drag the rectangle to the desired location. You can change the size of the scan area in two ways: 1) When the cursor becomes a two-way arrow at the edge of the scan rectangle, drag any one or more of its four corners to the desired size; or 2) Directly type values in the Width and Height box to set the size. Values are measured in inches, centimeters or pixels, depending on the measurement selected in the Unit box in the upper left corner of the Preview Window.

Also right-click your mouse and a scan area setting menu displays. You can select settings matching your desired scan area size.

Object Type

To product good results, different types of media need to be scanned with different settings. The Object Type refers to the type of media being scanned, such as a photographic print or a picture from a newspaper. There are five settings to choose from: Reflective, Transparency/Slide, Film, Auto Document Feeder (ADF), and 3D. The Object Type therefore also controls the use of the Auto Document Feeder. Before the Object Type settings can be explained, the term *Line Screens* will be clarified.

About Line Screens

Line screens, also known as Half-tone screens, are used to produce smooth tones in images when they are printed on a printing press or laser printer. This technique uses a grid of different sized dots to create the illusion of tone, i.e.: large dots are used for shadows and small dots are used for lighter tones. The grid size is measured in lines per inch (lpi).

When images are printed in color on a printing press there are four sets of screens used, one for each color of ink (Cyan, Magenta, Yellow, Black). In order for the eye to see each color, the screens are printed at different angles creating the illusion of full or true color.

Scanners in general have trouble scanning printed images because the scanner tries to recognize every printed dot of each line screen. This causes waves or lines to appear in the images.

Reflective

Media such as photographic prints, newspapers and pages of text are considered reflective media because the scanner reflects light off the object to build the scanned image. The following pre-set options refer to the screen frequency of the original that must be removed to produce a quality image.

- *Normal:* Use this setting when scanning photographic prints, continuous tone images or text.
- *Newspaper:* Use this setting for scanning images from newspapers and other low print quality publications.
- *Catalog/Magazine:* Use this setting for scanning images from most printed publications (e.g.: catalogs, magazines, book covers)

- *Art Magazine:* Use this setting for scanning high print quality publications.
- *User Defined Object:* Use this setting if you know the line screen of the image to be scanned. Input the size in *lpi* directly into the dialog box to remove the print screen from the image.

Transparency / Slide

To scan transparent media your scanner must have a Transparent Media Adapter (TMA) Media such as 35mm slides and film negatives are considered transparent media. Transparent media is scanned by shining a light through the media. The data are then processed by the scanner to build the image. Refer to the Scanning Transparent Media chapter to better understand this operation.

Transparency / Film

Film manufactures use different methods to produce their respective photographic film, and each has their own chemical process for producing the color that is seen in the photograph. All brands of film have an orange cast to them that affects the color when scanning negatives. The degree of this effect differs from brand to brand, so each brand of film must be corrected separately. To deal with this problem, we have added corrective filters specially tailored for all major film manufacturers. Refer to the Scanning Transparent Media chapter for this operation.

Auto Document Feeder

The Auto Document Feeder can hold up to 20 pages for sequential scanning and Optical Character Recognition (OCR). Refer to the Using the ADF chapter to better understand this operation.

3D Object

Clicking on 3D Object button, you can scan three-dimensional objects such as coins, pens and textile materials. Note once you use the ADFilm unit for reflective scans, we suggest that you remove the ADFilm unit to protect the ADFilm glass from damage while scanning three dimensional materials.

Scan Mode

The Scan Mode determines the color mode used to display the final scanned image.

Color Grayscale B&W

The scanner supports the following color modes: Color, Grayscale, and Black & White.

Color

Images scanned in Color mode will be displayed with the RGB (red, green, blue) color model. For images scanned in Color Mode the scanner records three color samples per pixel, one each for red, green, and blue. This method results in images with over a million colors. Older scanners used to make three passes to accomplish this, but our scanner now does it all in a single pass. The RGB color model is the default used for monitors, scanners and low end printers.

Grayscale

The Grayscale Mode uses up to 256 shades of gray to render scanned images. Images scanned in Grayscale will look like black & white photographs. Each pixel is given a brightness value ranging from 0 (black) to 255 (white).

Black & White

Black and White, also known as Line-Art, is the most basic mode for scanning images. Each pixel is either black or white. The threshold (exposure) determines how much of the image will be interpreted as black. When scanning in Black and White mode the Brightness control is used to set the image's threshold. This mode is used when scanning text for OCR.

Destination

The Destination settings control where the Scan Utility sends the scanned image. There are six Destinations to choose from, as outlined below.

Application

Application will be disabled if you call up the Scan Utility in a stand-alone mode. When you select Application from an image application, the scanned image will be opened in the application from which the interface was launched. Note that after

scans are done, you must close the Scan Utility to edit the scanned image in the image application.

File

If this option is selected, the scanned image will automatically be saved to disk. After you click on Scan button, the program will ask you to enter a file name. Please select your desired folder and save the scanned image as a file.

Printer

When Printer is selected, the scanned image will be outputted directly to the default printer. Refer to Preference page to change your default printer.

Email

If Email is selected, the Windows default email software is opened, with the scanned image already attached to a blank email. Our scanner driver supports the Microsoft mail system only. Please follow the on-screen instructions to complete your task. If you cannot activate the Microsoft mail system, please refer to the user's manual of your mail application.

Fax

When Fax is selected, your scanned image will be directly sent to the default fax modem. Note that in order to use this function, you must have fax modem installed on your computer. Refer to the Preference page to change your default fax modem. If you have any problems installing your fax modem, please refer to your fax application user's manual.

Clipboard

When Clipboard is selected, the scanned image is automatically stored in the Windows clipboard for use in another application. Only one image at a time can be stored in the clipboard with newer images overwriting older ones.

Resolution

Image Resolution is measured in dots per inch (dpi).
When setting the resolution for scanning it is important to consider the final purpose of the image. Will it be used on your personal home page, or as the central

graphic for a book cover? As a general rule, the more resolution the better the quality of the image. However, most output methods don't take full advantage of the additional information included in a high resolution scan, and its benefits may be lost. For example, an image scanned at 300 dpi for an internet home page will probably only be viewed at 72 dpi because that is the resolution of most computer monitors. Conversely, an image scanned at 72 dpi for printing would turn out pixilated or blocky because the printing resolution is greater than that of the image.

As a general rule images scanned for the web should be scanned at 72 dpi. Images scanned for print output should be scanned at 1.5 to 2 times the output device's line screen. Black & white or line art images should be scanned at the maximum resolution of the output device.

Scaling

Scaling determines the size of the scanned image in relation to the original image. An image scanned at 100% will be the same size as the original.

Brightness

Brightness is the relative lightness or darkness of color or tone in an image. The brightness for the entire image can be adjusted from -100% (darkest) to +100% (lightest), the default setting is 0%.

Contrast

Contrast refers to the relative intensity or difference between the highlights and shadows in an image. By decreasing the amount of contrast in an image, shadows will become lighter. Conversely, by increasing the amount of contrast in an image, the shadows and mid-tones will become darker while the image's highlights become lighter. Contrast is measured from -100% to +100%, with the default setting being 0%. An image with -100% contrast will be light gray with no shadows or mid-tones, while an image with +100% contrast will consist of only black and white.

Advanced Options

While basic image editing functions are explained on the Main page, this Advanced Tools page covers powerful Image Enhancement Tools that can be used to fine tune or add neat effects to scanned images. In addition, this area covers the useful, timesaving Batch Scan function. With Batch Scan, you can create unique settings for multiple objects or for parts of a larger object, then scan them individually or as a group in a single operation.

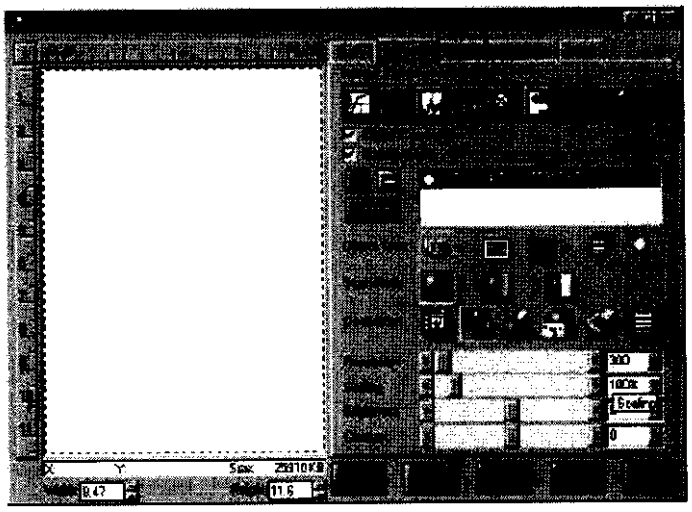


Image Enhancement Tools

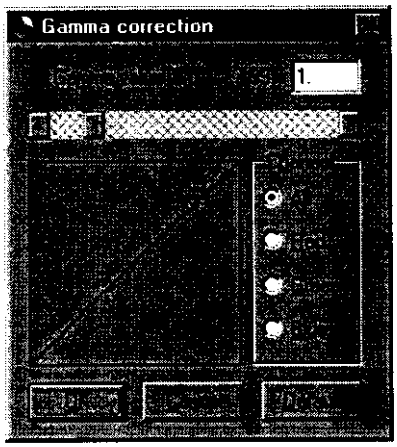
Beauty is in the eye of the beholder. With these powerful Image Enhancement Tools, there are no right or wrong settings. Experiment with various combinations of effects to create an image that's just right for you.

1. Gamma
2. HSV
3. Tone Adjustment
4. Mirror
5. Zoom
6. Invert
7. Levels
8. Filter
9. Effect

When the "power" mark appears on the lower right corner of the icon, it means the default settings of such function are changed. See the figures below.

Gamma

Gamma is used to alter the brightness of an image's mid-tones. The gamma for individual color channels (red, blue, green) can be altered individually to improve the overall appearance of the image. This is the best way to change the brightness of an image as the highlights and shadows are maintained.



Gamma values range from 0.01 to 7.99. Changing the gamma value above 1.0 brightens midtones; below 1.0, gamma value changes darken midtones. ALL corrects all image color components (red, green, and blue) to the same gamma value. Red corrects only the red component of the image. Green corrects only the green component of the image. Blue corrects only the blue component of the image. If All is chosen, the selected gamma value is applied to all three channels. Otherwise, a gamma value is applied individually to the red, green, and/or blue channel you select.

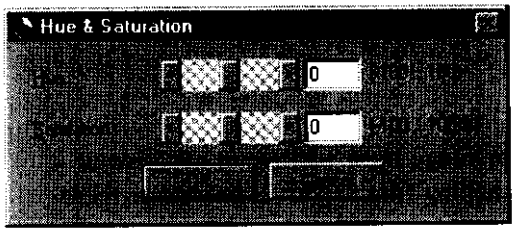
HSV

This is also known as HSB or HSL, which stands for Hue, Saturation and Brightness/Lightness. The Hue and Saturation features are used to change the Hue and Saturation for the entire image.

Hue: Hue refers to the color transmitted from an image, which is determined by the wavelength of the light. It is measured by its position on the color wheel, with each color having a value between 80 degree and 180 degree. Changing the Hue value

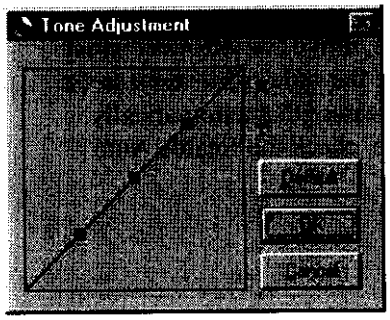
will cause all the colors in the image to shift their locations on the color wheel in relation to each other.

Saturation: Saturation is the strength and purity of a color. It is measured in terms of the amount of gray present in a given color in relation to its hue. Saturation is set between -100 (gray) and 100 (fully saturated). On the color wheel, Saturation is represented by distance from the center of the wheel, with the center having a value of -100 and the outside edge a value of 100.



Tone Adjustment

The Tone Adjustment tool is used to independently change the brightness of an image's highlights, mid-tone and shadow areas. The bottom node represents highlights, the middle node mid-tones and the top node shadows. To change an image's tone, simply "grab" one of the nodes with your mouse. To make an area darker, move the node down. To make it lighter, move the node up. By carefully moving these nodes, details that appear to be "lost" in the shadows can be restored and improved.



To adjust the tone value, use the mouse cursor to reshape the tone curve. Curve-based editing enables you to isolate a problem area and make either minor or major changes to that image area. The Tone curve takes an original pixel brightness value of X as input and Y as a new output brightness value. The resulting curve is a visual representation of the balance between shadows, midtones, and highlights.

Mirror

The Mirror command flips the image along its vertical axis.

Zoom

The Zoom command will increase the magnification of the Preview image. This is useful for viewing small details.

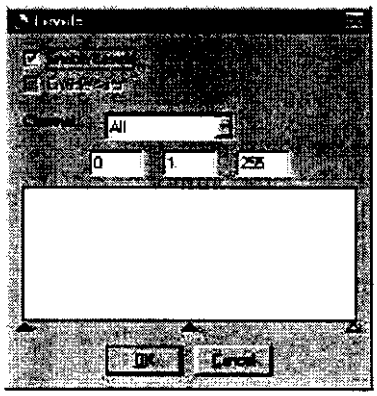
Invert

The invert command changes the colors of an image from positive to negative or vice versa. Use the invert command when scanning film negatives to change them into positive images. Note: To invert a color negative into positive, be sure to select the Film type from the pull down menu. This will automatically compensate for different properties of individual film types.

Levels

The Levels command is used to adjust the overall image's highlights, mid-tones, and shadow values. Also the individual color channels can be adjusted to remove any unwanted colorcasts and improve the overall appearance of the image.

To use Levels to enhance an image, first check the Enable Levels box in the Levels screen. To adjust the mid-tones of an image or color channel, use the mouse to "grab" the middle slider and move it to the left to lighten or to the right to darken the mid-tones. To increase the darkness of the shadows, move the left-most slider to the right; conversely, to lighten the highlights, move the right-most slider to the left. The interface has a powerful automatic Leveling feature that automatically corrects the image's tonal values. To enable this feature, check the Enable Auto check box.



The Levels tool uses a histogram to illustrate the tonal information in an image. The histogram graphs the number of pixels an image contains at each of the 256 brightness levels. This allows the user to quickly see how much information a scan contains as well as its tonal range.

Filter

The Filter feature is used to scan images in only one of the RGB color channels: red, green or blue. This is used to produce advanced dropout effects that are popular in desktop publishing. Note that Filter only functions in Gray and B/W mode.

Effect

The Effect feature is used to change the look and feel of images by sharpening and blurring.

- Blur: The Blur Effect will cause the entire image to look diffused and soft. Use the Blur Effect to reduce the amount of grain or dust when scanning old photographs.
- Blur More: The Blur More Effect is essentially the same as the Blur Effect except that the results are more exaggerated.
- Sharpen: The Sharpen Effect emphasizes the edges, or the differences between adjacent light and dark sample points in an image. This will cause any edges in the scanned image to be displayed with more definition. The Sharpen Effect helps when scanning photographs that are slightly out of focus. It also improves the quality of text when scanning for OCR.
- Sharpen More: The Sharpen More Effect is essentially the same as the Sharpen Effect except that the results are more exaggerated. The Sharpen More Effect should be used with caution because it can cause images to have too much contrast.

Color Correction

The Scan Utility has been programmed with an automatic color correction feature for removing unwanted colors from scans.

What is a colorcast?
A colorcast occurs when one of the three color channels is out of balance with the other two, or is more or less saturated than the others. This will cause the image to appear tinted with an over all color. For example, a photograph with low green and blue saturation would have a red colorcast because the red channel will overpower the other channels.

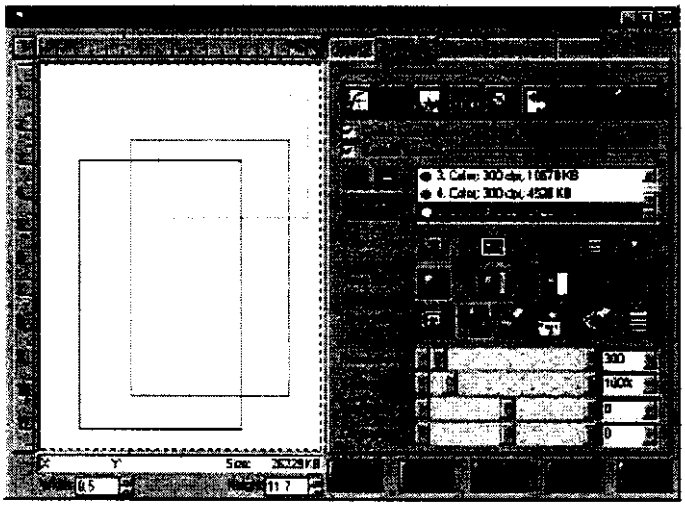
Batch Scan

The Batch Scan feature is a very useful tool. It can make multiple scans of a single image using different settings and/or selections. It can also be used to scan up to 9 slides or negatives at the same time, each with its own individual settings.

To enable the Batch Scan feature, first check the Batch Scan check box and create a preview.

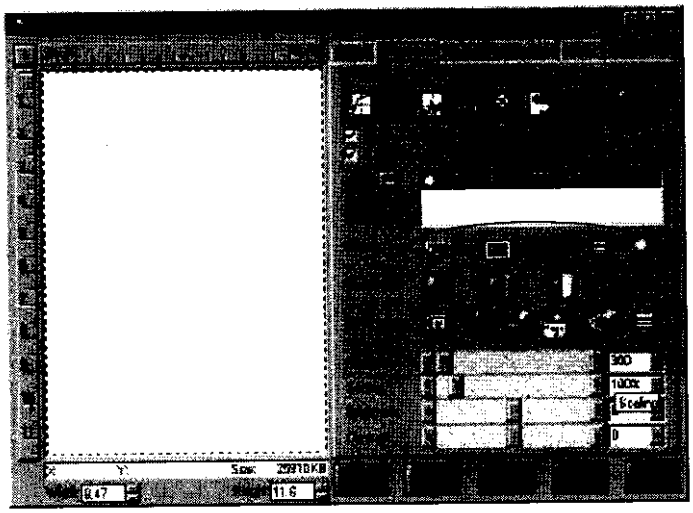
1. In the Preview Area, use the mouse to select the area to be scanned.
2. Define which features and settings are to be used with the scan.
3. Click the "+" button to add scans to the queue, and repeat steps 1 and 2 for each scan.
4. Scan and save the images.

Items in the queue will have a colored bullet next to them. The color of the bullet corresponds to the color of the selection in the Preview area. To change the settings of one of the scans in the queue, highlight it and change its settings. The selected settings will then be used when image is scanned.



Scanning Transparent Media

Use the TMA (Transparent Media Adapter) to scan slides, negatives or other transparent media by shining light through the media. To use the TMA, make sure that the ADFilm unit has been correctly installed and the ADFilm connector must be connected to the scanner base.



After acquiring the Scan Utility, you can see Object Type in the property page section, the Main page or Advance page. Here we will demonstrate how to use TMA in the Advance page.

With the TMA, you can scan slides (positives) and film (negatives).

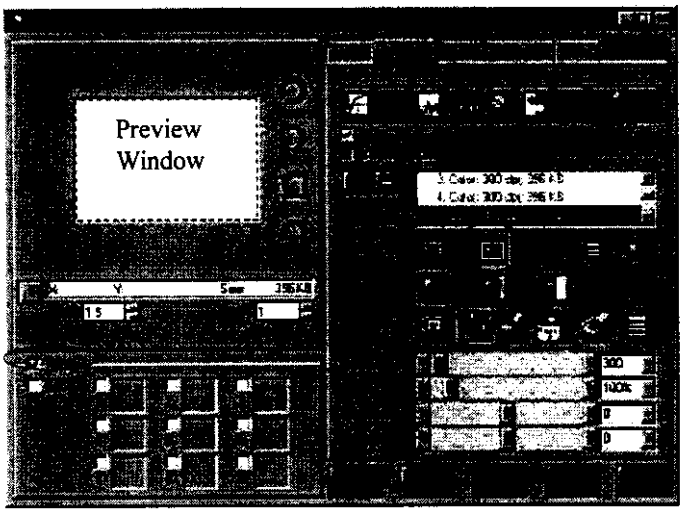
Slide Film

Scanning Slides

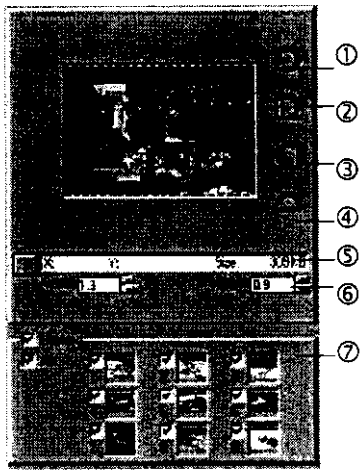
When scanning transparent media, you must use either templates or holders, or you will not be able to proceed scanning. Refer to the ADFilm installation and operation guide to know how to use templates or holders. Templates are for the slides which are not of 35mm standard size, while holders are designed for the standard 35mm mounted slides.

Scan With Holders

After you carefully put your slides on the holder, select Slide as your scan object in the Advance Menu and check Holder. See the figure below.



Press preview button. You will see the Slide page below.



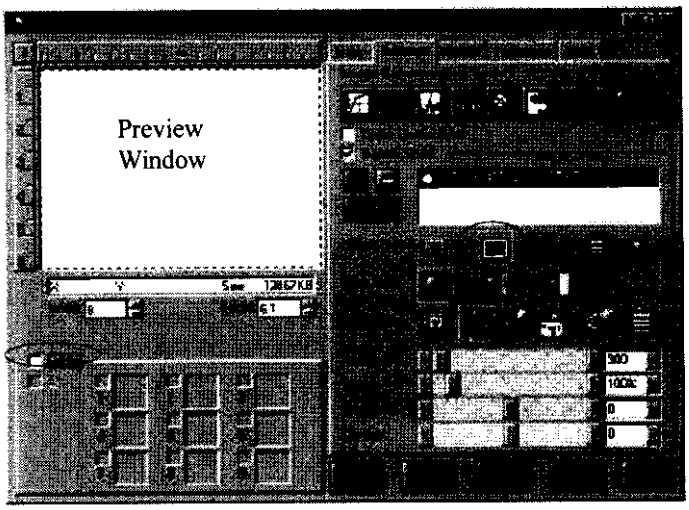
1. Default Direction
2. Rotate left 90°
3. Rotate right 90°
4. Rotate 180°
5. Size shows the size of the image to be scanned.
6. Width and Height show the scan area you define.

7. You can scan nine slides at a time. Check All and nine slides are all selected. When you disable All, you can select your own desired slides. Click on the number box you want to select.

You can also define the scan area for your selected slide and have scan settings for your final scan. Please refer to the previous chapters for those features.

Scan With Template

As mentioned earlier, you can not perform transparent media scanning without templates or holders. If your slides are not of 35mm standard size, place your media freely within the transparency scanning windows. Select Slide and disable Holder. How to edit your slide? All the operation is the same as reflective scans. You can also use Batch Scan to define many scan areas in a single image and have scan settings for your final scan. Please refer to the previous chapters for those features.

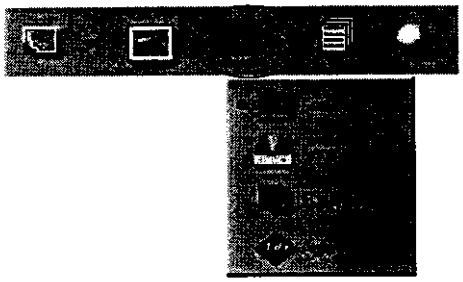


Scanning Film Negatives

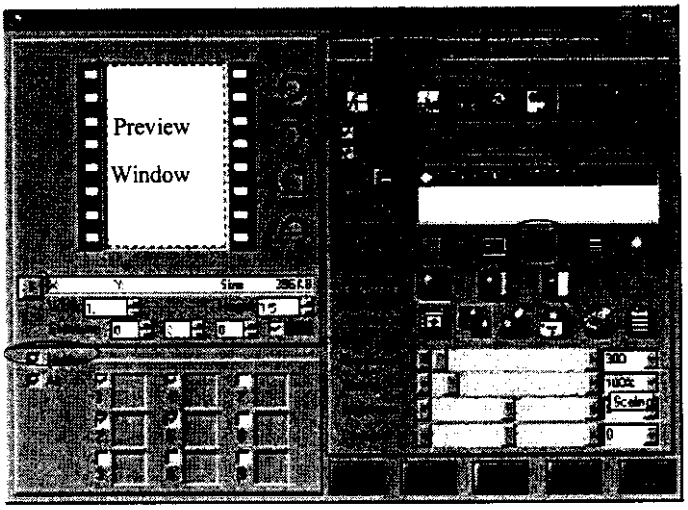
When scanning transparent media, you must use either templates or holders, or you will not be able to proceed scanning. Refer to the ADFilm installation and operation guide to know how to use templates or holders. Templates are for those film negatives which are not of 35mm standard size, while holders are designed for the standard 35mm film negatives.

Scan With Holders

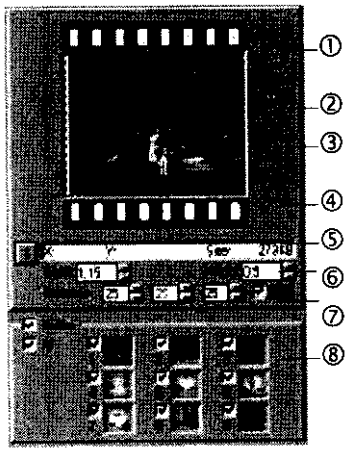
After you carefully put your film on the film-strip holder, select Film as scan object and then film brand you used for your photograph.



After these steps, check Holder and you will see the figure below.



Press preview button. You will see the Film page below.



1. Default Direction
2. Rotate left 90°
3. Rotate right 90°
4. Rotate 180°
5. Size shows the size of the image to be scanned.
6. Width and Height show the scan area you define.
7. Exposure lets you correct the abnormally exposed pictures.
8. You can scan nine negative frames at a time. Check All and nine negative frames are all selected. When you disable All, you can select your own desired negatives. Click on the number box you want to select.

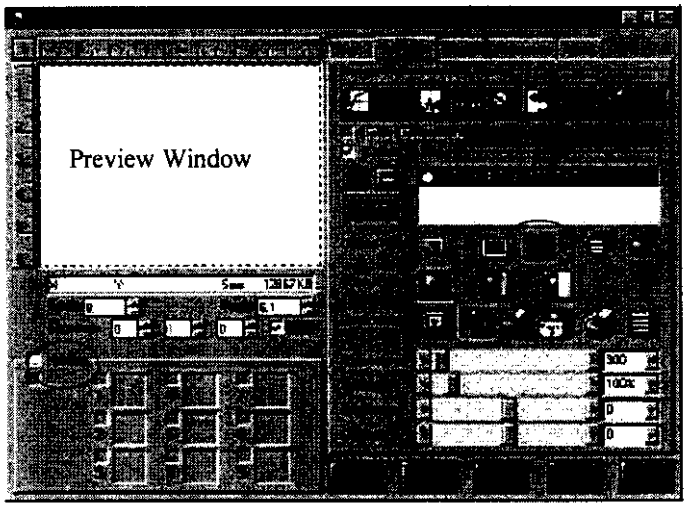
Exposure is the amount of light used to create a picture when a photograph is taken. A correctly exposed picture will be tonally correct. While a picture that is over-exposed will be too light and a under-exposed picture will be too dark. To alter the exposure of the image, first pre-view your film. Increase the RGB value to correct too dark image and decrease the RGB value to correct too light image. You can change the color channels individually (Red, Green and Blue) or checking All to correct your image.

If you are scanning negative strips, note that some images on your film will lie outside the transparency scanning area. The ADFilm unit will only scan three frames of each film strip at a time. To scan the other frames, turn the film strip holder around and scan the second set of nine frames in a second scan pass.

You can also define the scan area for your selected negative and have scan settings for your final scan. Please refer to the previous chapters for those features. Note that the ADFilm unit will only scan three frames of each film strip at once. To scan the other frames, turn the film strip holder around and scan the second set of nine frames in a second scan pass.

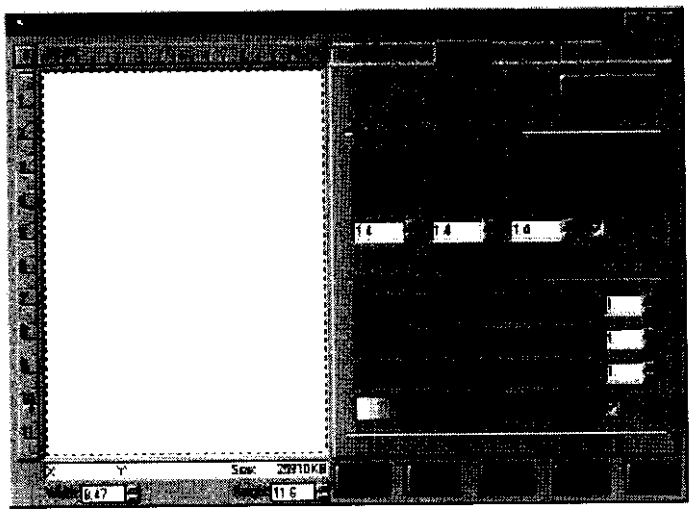
Scan With Template

Remember that you can not perform transparent media scanning without templates or holders. If your negatives are not of 35mm standard size, place your media freely within the transparency scanning windows. Select Film and film brand, and disable Holder. How to edit your negative? All the operation is the same as reflective scans. You can also use Batch Scan to define many scan areas in a single image. Please refer to the previous chapters for operation.



Monitor

Calibrating your monitor is the first step in assuring that the image you see on the screen will be the image that is printed. Making your monitor's grays as neutral as possible will help standardize the way your image is viewed on other monitors and increase the amount that can be seen in an image. Using the Monitor Calibration features will help create higher quality scans and reduce eye fatigue.



Monitor Gamma

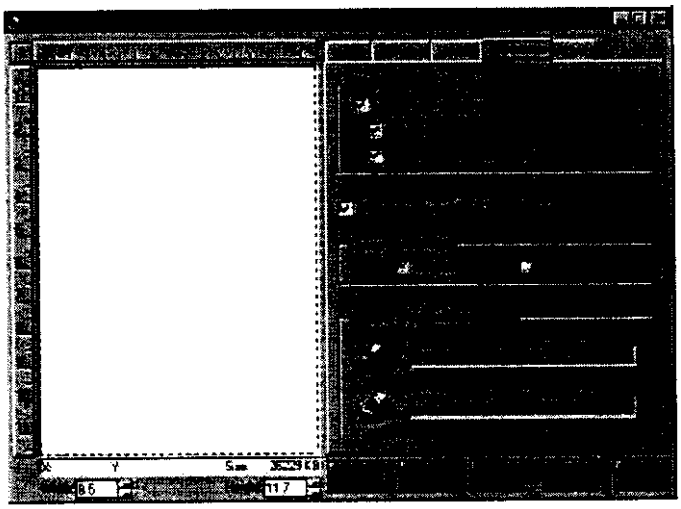
The gamma settings of your monitor define how bright your mid-tones are. Set your gamma by adjusting the sliders until the center box fades into the background. You may adjust the gamma for each color channel (Red, Green and Blue) independently or all at once by adjusting the gamma for the gray box.

Monitor Gain

Calibrating the Gain of your monitor ensures that you are seeing the full tonal range of an image. Set your monitor's Gain by adjusting the slider until there is a smooth transition between the strip's highlight and shadow, ideally you should be able to see all the tonal steps.

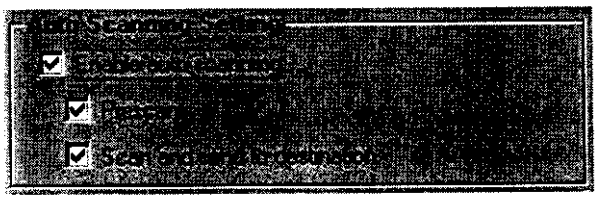
Preference

In this page, you can have some further settings for your scanner to make your scans more efficiently. After clicking on Preference, the Scan Utility displays as follows:



Enable Auto Scanning

Checking the Enable Auto Scanning feature activates the "ScanEZ" button located on the front of the scanner for use with the quick scan feature. You can perform scanning simply by pressing ScanEZ button. If you do not check Enable Auto Scanning, the ScanEZ button will not work. The ScanEZ button also serves as the scanner's power indicator.



Prescan: Checking the Prescan feature enables the Preview area for viewing low resolution scans. These scans can then be manipulated using the various settings and features of the Scan Utility before proceeding to the final scan.

Scan and Send To Destination: Checking the Scan and Send To Destination feature causes the scanned image to be sent automatically to a predetermined program or file.

Prescan Image Area Auto Detection

If Prescan Image Area Auto Detection is checked, the scanner will automatically detect the area of the image scanned and define the actual area of your scanned image in the Preview Window. This defined area will be used for the final scan. If the Prescan Image Area Auto Detection is not checked, the entire Preview Window area will be defined as the scan area.

Color/Gray Depth

Color depth describes how much information the scanner will "see" in an image. Setting the Color/Grey depth to 36/12 bit will increase the amount of detail scanned in an image's shadow, or in a film negative's highlights. Generally this is ineffective with photographic prints but can make a noticeable difference when scanning from film or film negatives. Although 36/12-bit images contain more data than 24/8 bit images they are limited in use and must be converted to 24/8 bit images in use for most other applications.

Note: *We suggest that you check the 24/8 bits option. Some application programs are not capable of processing 36-bit color and 12-bit gray image data. If you select 36/12 bits option, your scanned image may be abnormal or your system may crash. Please determine whether your image processing program supports 36/12 bits image data. For more information about image data, refer to the user's manual of your application program.*

Default Destination

Set the Default Destination to the Printer or Fax to which you wish images to be outputted when using the Scan to Printer and Scan to Fax features. To select your printer or fax modem, click on the printer or fax icon. Note these settings can only be used on systems with a printer or fax modem installed.

Using the ADF

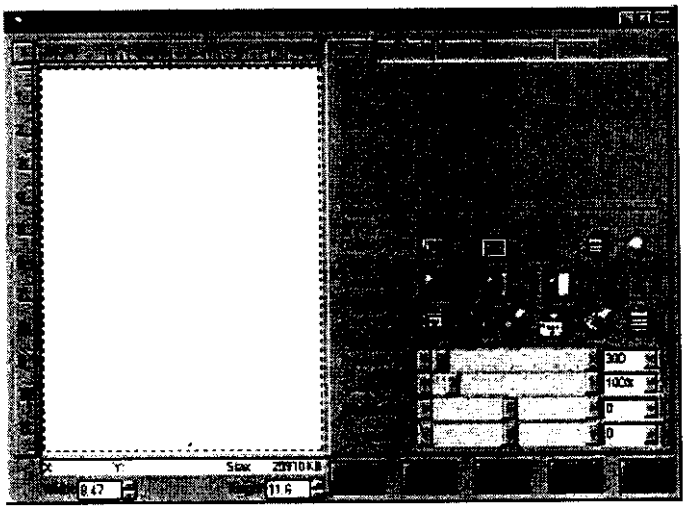
The ADF (Automatic Document Feeder) allows you to automatically scan one or several sheets without lifting the scanner cover. The scanner will automatically read one at a time the sheets you place in the paper tray. Note: The ADF holds a maximum of 20 sheets.

To load, carefully open the paper tray and extend the paper guide extension. Place the documents to be scanned in the paper tray top edge first with the side to be scanned facedown. Arrange pages in the order that best meets your needs. Pages at the bottom of the stack are read first.

The ADF unit accepts legal, letter, A4, B5, and A5 sizes. Adjust paper guides to the width of the documents.

Operating the ADF

Start the Scan Utility.



Select ADF as the Scan Object.

Select the destination for your scan. Tell your computer where the scanned image should be sent after it is scanned. If you select File as the destination, you need to save the first image in your desired folder and the program will automatically save the others in numerical sequence. Note: The Clipboard will only store a single for

pasting into an application. When a new document is added to Clipboard, previous documents are overwritten.

After choosing your scan settings, press the Scan button. Note: the Preview function is unavailable in the ADF mode. For more details on scan settings, refer to previous chapters.

Notes in using the ADF

Do not use the automatic document feeder to scan:

- Documents with ink that might transfer to the rollers or scan window.
- Torn, stained, damp or curled paper.
- Stapled or paper clipped documents.
- Folded or pasted papers.
- Carbons or carbon-backed paper.

While scanning is in progress:

- Do not close the ADF.
- Do not try to adjust the angle of paper being fed to the scanner
- Do not place more than 20 sheets of paper on the ADF at one time.

Do not leave papers or other objects on the scanner base object glass while using the ADF. For more information on the ADF hardware operation and paper jam, refer to the ADFilm installation and operation guide.

Troubleshooting

The EPP interface scanner does not react

- Make sure you have unlocked your scanner.
- Make sure that the power indicator is light. (Turn on the power switch and plug the AC adapter into a proper outlet)
- Make sure the scanner cable is properly connected to the scanner and computer.
- Remove any other EPP device (IOMEGA or Mini SCSI device).
- Check the BIOS to see if the parallel port is set to EPP mode. (While your computer is booting, press "Delete" key.) Refer to the user's manual of your computer main board for details.
- Re-select the scanner's TWAIN source in the application.
- Re-install the scanner driver.
- Re-boot your computer.

The USB interface scanner does not react

- Make sure that you have installed the USB rather than EPP scanner driver.
- Make sure the USB cable is properly connected to the scanner and computer.
- If you use a USB Hub WITHOUT an AC adaptor, you may not get the scanner to work. Please use a self-powered USB Hub if necessary.
- Re-select the scanner's TWAIN source in the application.
- Re-install the scanner driver.
- Re-boot your computer.

The SCSI interface scanner does not react

- If you use PCMCISA SCSI card, make sure it is properly seated in the slot.
- Make sure all the connectors are well secured.
- Make sure the end of the SCSI chain is well connected to the scanner.
- Make sure the total length of the chain does not exceed 20 feet.
- Try to change the cables of the SCSI or other devices.
- Make sure there is no address conflict on the SCSI chain. If conflict occurs, your computer will stop working. Please change the conflicting address settings.
- Even though there is no conflict between port addresses, please change the SCSI address of the scanner. Be sure to turn off the scanner first. Make sure the newly given address will not conflict with the other devices on the SCSI chain.
- The scanner should only be connected as the last device on the SCSI chain.

- Power off all the SCSI devices except for the scanner. This way, you can know whether the problem lies with the scanner or with other devices.
- Make sure that other SCSI devices, including the internal SCSI devices, do not need any special addresses or location.
- If the scanner still does not work, please contact our technical support staff.

What is ScanEZ button?

ScanEZ button is located on the front panel of the scanner. It also functions as the power indicator. Once ScanEZ button is activated, you can proceed to scanning simply by pressing ScanEZ button.

ScanEZ button does not react

- ScanEZ button also functions as the power indicator. Make sure the power is turned on.
- Acquire the scanner user interface and click on "Preference" tab. Make sure that "Enable auto scanning" function is checked.

Printer does not function

- Make sure the scanner cable and the printer cable are properly connected.
- If your scanner communicates with the computer via USB interface, you cannot connect your printer to the scanner's PRINTER port.
- Make sure you have installed the proper printer driver and that your printer's power is on.

Problem with the file "Wnaspi32.dll"

While you are installing the scanner driver under Windows NT, a dialog box asking to replace "wnaspi32.dll" will appear. If you choose YES, Setup will update your original "wnaspi32.dll" to make sure that the scanner can work with the SCSI card we enclose. However, your SCSI devices installed earlier might not work. Please go to the path ":\ winnt\system32." First delete the file "wnaspi32.dll" and then rename "wnaspi32.bak" "wnaspi32.dll." If you choose NO, the scanner may not be able to work. This is because the SCSI card manufacturers do not have a standard protocol. Therefore, your original "wnaspi32.dll" does not support our scanner. If AHA provided your original "wnaspi32.dll," you do not have to replace your "wnaspi32.dll," which has tested compatible with our scanner.

Malfunction of Batch Scan on Windows95 Imaging program

Windows 95's version of "Imaging" does not support the Batch Scan on this or any other scanner tested. Therefore, we suggest that users do not use that version of "Imaging" to perform the Batch Scan function.

The Email function does not work

The scanner driver only supports MAPI, the Microsoft Messaging Application Programming Interface, for client message application developers.

- Make sure that Microsoft mail system (e.g.: Microsoft Outlook Express on Windows 95) has been correctly set up.
- If your mail system is Outlook Express and fails to work, open Outlook Express, click Tools, and select Options. Please check "Make Outlook Express my default Simple MAPI client" in the option dialog box.

The Fax function does not work

In general, the scanner driver does not provide the function of fax modem. Therefore, in order to use Fax function (directly sending the scanned image to someone's fax machine), you must install fax application on your system and the scanner then is able to detect the fax application to activate the fax function in the Destination.

The ScanEZ Application

Introduction

The ScanEZ application is the additional program for our dear users in a hope to help complete scanning in an easy and efficient manner. The ScanEZ button can be customized to perform any of the functions that the scanner can perform. For example, it could be set to perform a scan and fax it to a specified number, all in one touch of a button.

The ScanEZ Interface is a highly intuitive and powerful interface. The ScanEZ interface can be used directly after installation using the default setting you can scan an image and send it by fax.

Even if you have never used a scanner before, ScanEZ comes with the Scan Wizard, which will walk the new comer through all the steps necessary while introducing them to key concept such as resolution and color.

The ScanEZ application truly brings the power of desktop scanning into the home. Its convenient one-touch features make it simple to integrate into your existing work process.

The ScanEZ Interface

Creating high quality scans has never been easier thanks to the user friendly ScanEZ interface. The ScanEZ interface provides all of the scanner's functions in a format that is easy to use. Open the ScanEZ interface by right clicking on the ScanEZ icon located on the Windows Taskbar and selecting Open ScanEZ.

ScanEZ will appear on the upper right-hand corner of your windows after you install the scanner driver. At the same time, you can see a small scanner icon in the Notification area of Taskbar.

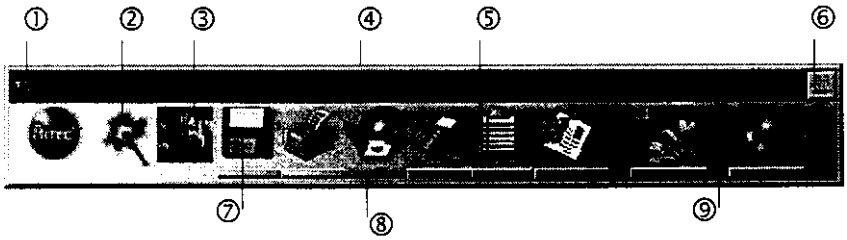
We would like to remind you that the ScanEZ program will reside on your computer. That is, whenever you start your computer, ScanEZ will be automatically activated. If you want to cancel this function, right-click on the Taskbar and select ' Properties.' Then select 'Start Menu Programs' tab and click on 'Advanced.' Select 'Programs' folder under 'Start Menu' and remove ScanEZ program from 'StartUp' folder.

The Operation of ScanEZ

The ScanEZ application is designed to make your scan really easy. Let's have a quick look at its operation and you will get familiar with those one-step features in a few minutes. For you, scanning will be just a piece of cake.

The ScanEZ Interface

Based on easy-to-use design concept, ScanEZ provides you with friendly user interface. After seeing the illustration below, you can know how to operate ScanEZ right away.

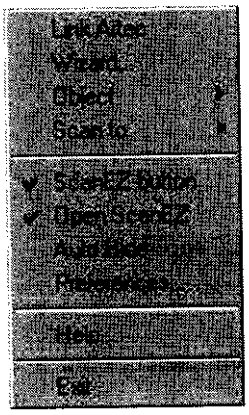


1. Click on this icon to have a smaller ScanEZ.
2. Click on Wizard icon to let it walk you through step-by-step process for scans.
3. Select the scan object Reflective, Slide, Film, ADF or 3D as your scan object.
4. Click and hold down the left mouse button on the title bar and you can move ScanEZ anywhere on the screen.

5. Click on any icon over a bar and scanning starts with such function activated
6. Minimize the ScanEZ interface.
7. Click on any icon over a bar and you see a drop-down list, where you can select the settings for the icon function.
8. The green rectangle means the function and ScanEZ button are active. While you press the ScanEZ button located on the front panel of the scanner, the scanner will start scanning with the icon function activated.
9. Click on the arrow icon and you see a drop-down list, where you can select your desired application or task.

Small ScanEZ Icon in the Notification Area of Taskbar

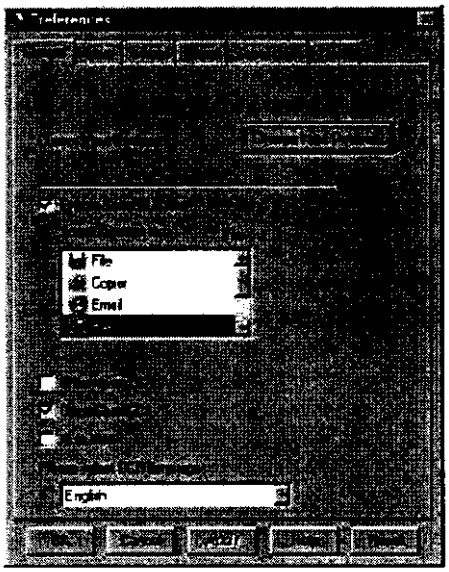
All the scanner's features can be controlled from the Taskbar. To pull up the list of functions, right click on the small ScanEZ icon in the Notification area of Taskbar. While you select "Scan to" and point to the scan destination, the scanner will start scanning after the selection.



1. Link Artec: Link to Artec web site.
2. Wizard: Activate the scan Wizard.
3. Object: Select the scan object Reflective, Slide, Film, ADF or 3D as your object type.
4. Scan to: Perform scanning with destination selected.
5. ScanEZ button: Check to enable the ScanEZ button on the front of the scanner.
6. Open ScanEZ: View the ScanEZ interface.
7. Auto Hide: Hide the ScanEZ interface until the mouse is placed over it.
8. Preferences: Display the Preferences sheet.
9. Help: Display the Help file.
10. Exit: Close the ScanEZ interface.

Preferences Sheet

Preferences sheet displays on the screen while you select Preferences on the drop-down menu by right clicking on the icons. It shows information on your current settings and action. There are some specific options related to the functions of the respective property tab.



In the General sheet, you can do the general settings for the ScanEZ application.

- Change Input Device: Change the scanner by locating the new input device from the list of compatible sources.
- Enable ScanEZ button: Activates the ScanEZ button on the front panel of the scanner.
- ScanEZ button to: Select the destination for scans produced with the ScanEZ button.
- Show driver UI: Checking the Show Driver UI will launch the Scan Utility whenever a scan is made from the ScanEZ interface.
- Open ScanEZ: The function shows the ScanEZ interface. When hidden, ScanEZ can still be run from the small scanner icon from the Taskbar.
- Auto Hide: Auto Hide hides the ScanEZ interface until the mouse is placed over it.
- Please select OCR language: If you want to make your documents scanned as editable text file, you can select your desired language here.

The ScanEZ Icons and Preferences Sheet

The ScanEZ icons are based on the one-step features. All the scan settings are incorporated into a click of the mouse and you can perform scanning simply by clicking on the icon with such function activated. Preferences sheet allows you to do your further settings for scans.

Artec icon

Click on Artec icon, and you will be linked to Artec web site. Right-click the icon and a drop-down list displays. You can select the web site to which you want to link. You can also make your selection in the Preferences sheet.

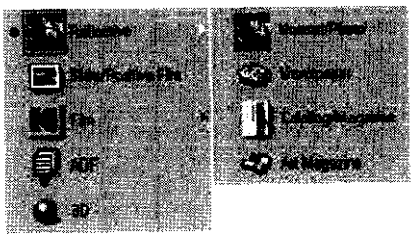
Wizard icon

The ScanEZ interactive Wizard is so powerful that even novice users can produce professional looking scans: It takes the user through a step by step process, resulting in a finished scan. The Wizard's settings can be saved for later access from the Task menu. Follow the instructions on screen and let the Scan Wizard guide you by steps to scanning with great ease. Scanning starts after the final step is completed.

Click on Wizard icon, and you will activate scan wizard. Right-click on Wizard icon, and a drop-down list displays. If you disable options on the list, their function step will not be run in the scan wizard procedure. You can also make your selection in the Preferences sheet.

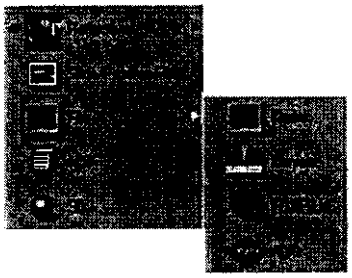
Scan Object icon

Click on Scan Object icon, and you can select the scan object for your scanning. The Reflective scan object is for scanning reflective media such as papers or photographs. You can select the type of material for further optimizing your scanning results. For more information about reflective material, refer to the Main page chapter.



The Slide/Positive Film scan object is for scanning positive transparent media. If you are scanning mounted slides, use the slide holder.

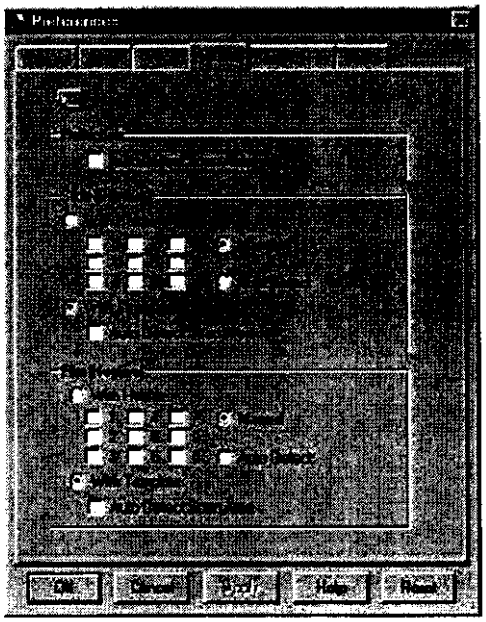
The Film scan object is for scanning negative transparent media. Please select the brand of film you used for your photograph to appropriately correct the film base color



The ADF (Automatic Document Feeder) is used to make a reflective scan of one or several papers without lifting the scanner cover.

The 3D scan object is for scanning three dimension materials such as pens, coins or books.

Right click on the Scan Object icon and you can have an access to the Preferences sheet.



- Auto Detect Scan Area: Check to let the program detect and define the actual area of the scan object. Without this function checked, the maximum scan area will be defined as default scan area.
- With Holder: Whenever you are scanning transparent media (slides or negatives), you must use a film-strip or slide holder for standard size media to obtain the best results.
- With Template: Whenever you are scanning transparent media (slides or negatives), you must use a template for the media which is not of standard size. Note that you can not perform transparent media scanning without holders or templates placed on the object glass of the scanner.
- Manual: Check to scan the selected slides (negatives). Please select your desired slides (negatives) by clicking in the number box.
- Auto Detect: Check to let the program detect the slides (negatives) placed on the holder for you.

 **File icon**

Click on File icon, and you start scanning with scanned images saved as a file. Right-click on the icon, and you will see a drop-down list, where you can select scan mode according to your desired image presentation. While Customize is selected, the Scan Utility displays for your further settings. Note that you can not use batch scan or select destination. Click on OK to return back to the ScanEZ interface. If you want to change your file name or need the system to remind you before overwriting, please check these functions. You can also do the same settings in the Preferences sheet.

 **Copier icon**

Clicking on the Copier icon will print scanned images directly to a predetermined printer. Right click the icon and you see a drop-down list, where you can select scan mode according to your desired image presentation. While Customize is selected, the Scan Utility displays for your further settings. Note that you can not use batch scan or select destination. Click on OK to return back to the ScanEZ interface.

Click on Chang Printer to change your default printer. Besides, you can decide on the number of copies, paper size, and ratio. Note that you can not perform scanning while printing. You can also do the same settings in the Preferences sheet.

 **Email icon**

Click on Email icon, and you start scanning with scanned images directly sent by email. Follow the on-screen instructions to complete sending. Note our program supports Microsoft default mail system only. If you have any problems setting up

the mail system, refer to the user's manual of the mail program.

Right click the icon and you see a drop-down list, where you can select scan mode according to your desired image presentation. While Customize is selected, the Scan Utility displays for your further settings. Note that you can not use batch scan or select destination. Click on OK to return back to the ScanEZ interface.

"Send OCRed image as content" is to be checked for scanning the documents , being OCRed as email text content and directly sent by eamil after scanning. "Send scanned object as attachment" is to be checked for scanning the images, being attached to the email and directly sent by email after scanning. If you check both of them, you will have two copies of your scanned object. One is text as email content, and the other is image as an email attachment.

In the Preferences sheet, you can see your attachment is untitled. Click on Change File Name to name the attachment file. Checking "Delete after transfer" will delete the file after the email being sent.

Fax icon

Click on Fax icon, and you start scanning with scanned images directly sent by fax. Note that you must install your fax modem before performing this function. If you have any problems setting up your fax modem, refer to the user's manual of your fax modem.

Right click the icon and you see a drop-down list, where you can select scan mode according to your desired image presentation. While Customize is selected, the Scan Utility displays for your further settings. Note that you can not use batch scan or select destination. Click on OK to return back to the ScanEZ interface.

Click on Change Fax to change your default fax.

Clipboard icon

Click on Clipboard icon, and you start scanning with the scanned image temporarily stored on the computer system and you can paste it onto your desired application after scanning.

Right click the icon and you see a drop-down list, where you can select scan mode according to your desired image presentation. While Customize is selected, the Scan Utility displays for your further settings. Note that you can not use batch scan or select destination. Click on OK to return back to the ScanEZ interface.

You can have your scanned object OCRed (Text) or imaged (Image). Check your desired output format.

Text Applications icon

Click on "Text Applications" icon, and you start scanning with scanned documents "OCRed" and directly sent to a predetermined word processor. Note the "Text Applications" icon will change with different applications selected.

Right click the icon and you see a drop-down list, where you can select scan mode according to your desired image presentation. While Customize is selected, the Scan Utility displays for your further settings. Note that you can not use batch scan or select destination. Click on OK to return back to the ScanEZ interface.

Click on the arrow icon next to "Text Applications", and select your desired word processor on the list. ScanEZ will send the scanned documents to your selected application.

In the Preferences sheet, you can add or delete the word processors on the arrow icon list. Click on Add and Browse to find the path of the application on your computer system, and then type the name for the application.

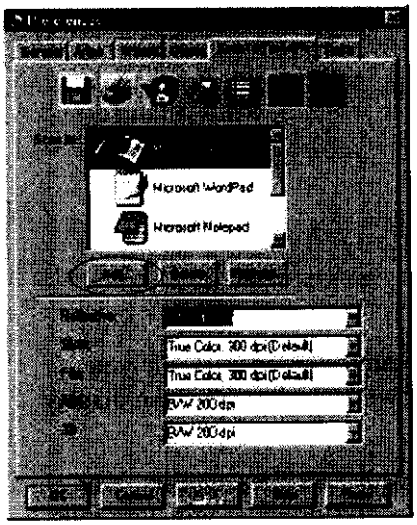


Image Applications icon

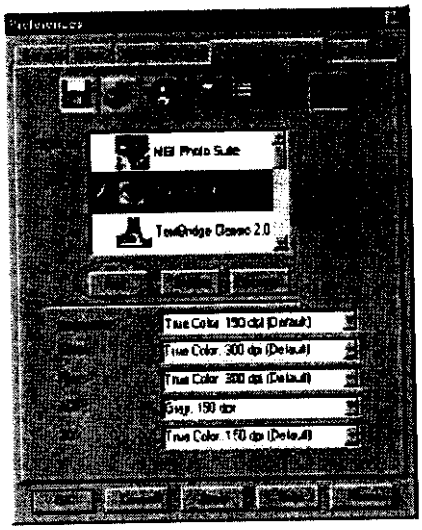
Click on "Image Applications" icon, and you start scanning with scanned images directly sent to a predetermined image processing application. Note the "Image Applications" icon will change with different applications selected.

Right click the icon and you see a drop-down list, where you can select scan mode according to your desired image presentation. While Customize is selected, the Scan Utility displays for your further settings. Note that you can not use batch scan

or select destination. Click on OK to return back to the ScanEZ interface.

Click on the arrow icon next to "Image Applications", and select your desired image processing application on the list. ScanEZ will send the scanned images to your selected application.

In the Preferences sheet, you can add or delete the image applications on the arrow icon list. Click on Add and Browse to find the path of the application on your computer system, and then type the name for the application.



Task icon

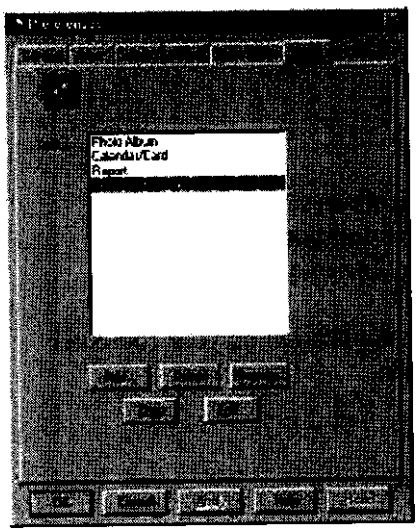
Click on Task icon, and you start scanning with the features of the Task file you select. Right-click on the icon, and you see a drop-down list, where you can display the Preferences sheet to manage your Task file.

When you click on the arrow icon, a drop-down list with Task files appears. You can select one of them to be your scanning setting. ScanEZ provides you with four common task files. You can select your desired task file as you desire. ScanEZ will scan your images with the settings of the selected task.

Task 1: Photo Album
Task 2: Calendar / Card
Task 3: Report
Task 4: Windows Wallpaper

In the Preferences sheet, you can add, delete, copy, and edit these task files. Click on Add and scan Wizard will display. All your settings in the scan Wizard procedure can be saved as a task file. This task file will appear on the task arrow

drop-down list. That is, you can take great advantage of these files to do some repeated scans.



Troubleshooting

If ScanEZ fails to operate normally, please check the following problems and solutions to get the program to work.

Can't find the application on the list.

If you can not find any applications in the Text Applications or Image Applications, you need to add the applications on your computer to ScanEZ.

1. Right click on Text or Image Applications depending on your need.
2. Select Preferences.
3. Click on Add and Browse to find the path of the application on your computer system, and then type the name for the application.

ScanEZ can't work.

Shut down all the programs and restart your computer.

ScanEZ button can't work

ScanEZ button serves both as a one-touch button to scan and a power indicator.

1. Go to the Preferences sheet and select General tab.
2. Check whether the active scanner is the selected model. If not, lick on "Change Input Device" to select your current scanner model (TWAIN source).
3. Check whether "Enable ScanEZ button" is enabled and the green LED is on.

When you are scanning the second word document, a message " The specified text file could not be associated!" pops up. Or can't find the newly-scanned document.

Please save the previously scanned document as a new file. Note that you can not save it as "scantask.txt." Then close the file and go on your scan work.