

CyberView
for 1800 Film Scanner

User's Guide

Notice

We make no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

We shall not be liable for incidental or consequential damages of any nature resulting from the use of this material.

This document contains proprietary information which is protected by copyright. All rights are reserved. No part of this document may be photocopied, reproduced, or translated to another language without the prior written consent of us

The information described in this document is subject to change without any notice.

Important

Documents that you scan may be protected by the copyright law. The unauthorized use of such documents could be a violation of the rights of the copyright holder. we are not liable for the unauthorized use of copyrighted materials.

Trademarks

The following are trademarks of their respective companies:

Windows of Microsoft Corporation. MAC of Apple Computer Inc. PCL of Hewlett-Packard Co. PostScript of Adobe Systems Inc. IBM, PC and AT of International Business Machines Corp. ImagePals of ULead. Centronics of Centronics Data Computer Corp. ASPI of Advanced SCSI Programming Interface. Epson, Inc. Microtek International, Inc. Tektronix, Inc. Canon, Inc.

Other products or company names are trademarks or registered trademarks of their respective holders.

July 2000
Printed in Taiwan

FCC Statement

Part 15 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 against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee 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:

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

- Re-orient or
- Increase the
- Connect the
which the
- Consult the

Notice: (1) Any changes or modifications not expressly approved by us could void the user's authority to operate the equipment. (2) We delivered Power Adapter must be used in order comply with the emission limits.

Note:

If in any case that the scanner can not work properly (for example ESD, or dielectric damage) please turn off the scanner and then power on once more to reset the scanner and when scanner is ready it may work properly. If not, please check with your scanner cable & your system to see if they are properly connected.

Safety Regulations

The **1800 Film Scanner** is designed to comply with:

UL 1950-D3

CSA C22.2 No. 950-M89

TUV / GS

Warning: For your personal safety, besides the general maintenance mentioned in the manual, do not try to remove any mechanical parts or any electronic devices. If you need service, contact our customer support for reference to an authorized service center in your area.

Electromagnetic Interface

The **1800 Film Scanner** is designed to comply with:

FCC 20781, part 15, class B

Notice: (1) Any changes or modifications not expressly approved by us could void the user's authority to operate the equipment. (2) We delivered Power Adapter must be used in order comply with the emission limits.

Standard Limited Warranty

THIS APPENDIX CONTAINS STANDARD WARRANTY FOR OUR PRODUCTS. THE SPECIFIC RIGHTS AND OBLIGATIONS OF PURCHASERS OF PARTICULAR OUR PRODUCTS SHALL BE GOVERNED BY YOUR WARRANTY CARD.

Warranty: We warrant the enclosed **1800 Film Scanner** hardware to be free from defects in material and workmanship for the period set forth in the warranty card supplied with the products.

Repair Procedures, Exclusive Remedy: We will, at its option, repair or replace products not conforming to this limited warranty at no charge. THIS IS THE SOLE AND EXCLUSIVE REMEDY AVAILABLE FOR BREACH OF WARRANTY OR UNDER ANY OTHER LEGAL THEORY WITH RESPECT TO OUR PRODUCTS. If you find a product to be defective, contact your authorized representative or us. When you receive authorization, return the product as directed, including proof of purchase and purchase date, at your expense and risk. Product repairs not covered by warranty, and product updates, will be provided at a set rate.

Limitations: This warranty is void if the product is damaged by improper or abnormal use or by accident, if the product is altered or modified in any way, or if any attempt is made to repair the product without authorization from us. It is solely the purchaser's responsibility to determine the suitability of these products for each particular application. Our products are in all events not suitable, and are not authorized, for use with systems potentially injurious to life or health. This warranty is not assignable.

No Other Warranties: EXCEPT AS PROVIDED IN THE LIMITED WARRANTY, SET FORTH IN THE WARRANTY CARD SUPPLIED WITH THE PRODUCT HARDWARE, SOFTWARE, AND USER MANUALS ARE PROVIDED AS IS. ALL OTHER WARRANTIES AND REPRESENTATIONS, ORAL OR WRITTEN, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE EXCLUDED AND DO NOT APPLY. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION OF THE FACE HEREOF. Except as required by law, no representative, agent, or employee of us is authorized to make warranties, representations, or obligations inconsistent with or in addition to those set forth in this limited warranty.

No Damages: IN NO EVENT WILL WE BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR UNDER ANY OTHER LEGAL THEORY, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. In no event will we be liable for sums in excess of the purchase price of the product. We are thus not liable for lost profits or goodwill; downtime; damage or destruction of any program, data, equipment, or other property; costs of recovering, reprogramming, or reproducing any program, data, or equipment; personal injury or loss; or any other damages.

Notice: (1) Any changes or modifications not expressly approved by us could void the user's authority to operate the equipment. (2) We delivered Power Adapter must be used in order comply with the emission limits.

Contents

CHAPTER 1	8
<i>Using CyberView</i>	8
<i>Powering Up the 1800 Film Scanner Product</i>	9
<i>Placing the Film</i>	9
<i>Starting CyberView</i>	10
<i>Using Setup</i>	12
<i>Acquire Scanner</i>	13
<i>Scan to file</i>	13
<i>Auto Gamma</i>	14
<i>Color</i>	15
<i>Image Format</i>	15
<i>Load Settings</i>	15
<i>Save Settings</i>	16
<i>Reset</i>	17
<i>Choosing Positive or Negative Film</i>	18
<i>Choosing a Scan Mode</i>	18
<i>Color</i>	19
<i>Gray</i>	19
<i>Choosing an Image Quality</i>	19
<i>Previewing Your Image</i>	20
<i>Using the Rotate Tool</i>	21
<i>Using the MirrorTool</i>	21
<i>Using the Selection Tool</i>	22
<i>The Calibration Tool</i>	24
<i>Using Zoom Tool</i>	26
CHAPTER 2	28
<i>Scanning with CyberView</i>	28
<i>Adjusting the Resolution</i>	29
<i>Adjusting the Scaling</i>	30
<i>Software Interpolation</i>	30
<i>Controls for Enhancing an Image</i>	31

Adjusting Brightness	32
Adjusting Contrast	33
Adjusting the RGB Values	34
Adjusting the CMY Values	35
About the Histogram	36
Using the Highlight and Shadow Sliders	36
Adjusting the Gamma	39
Using the Gamma Control Line	40
Choosing a Gamma Color Channel	41
Setting Basic Gamma	42
Setting Logarithmic Gamma	43
Setting Curve Gamma	44
Setting Line Gamma	45
Setting Freehand Gamma	47
Setting Highlight and Shadow Points	48
Setting Auto Contrast	49
Undo Button	50
Save Gamma Button	50
Load Gamma Button	51
CHAPTER 3	52
Copying with CyberView	52
The Copy Configuration	53
Choosing a Copy Mode	53
Setting up Your Printer Under Windows	54
Choosing a Document Type	54
Printer Setup	55
Setting Page Position	55
Setting Exposure	55
Copy Area	56
Zoom/Fit to Page	56
Copy button	57
Image Enhancing Adjustment Controls	57
Adjusting Brightness	57
Adjusting Contrast	57
Adjusting Color Values	57
Adjusting Gamma	57

CHAPTER 1

Using CyberView

This chapter gives you a quick overview of how to use CyberView to perform scanning. For a more detailed explanation of the available options of each, see the next chapters respectively. In this chapter, you will find information and instructions for:

1. Powering Up the 1800 Film Scanner product
2. Placing the Film
3. Starting CyberView

Powering Up the 1800 Film Scanner Product

1. Switch on your 1800 Film Scanner.
2. Switch on your PC or Macintosh computer system.
3. Load CyberView.

You can load CyberView through your TWAIN-compliant image processing application software.

Placing the Film

For mounted positive slides:

1. Raise the lid of the 1800 Film Scanner.
2. Insert the mounted slide into the film frame.
3. Push the slide all the way in until it stops.
3. Scan either with the lid open or closed.

For negative film strips:

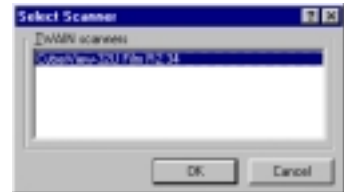
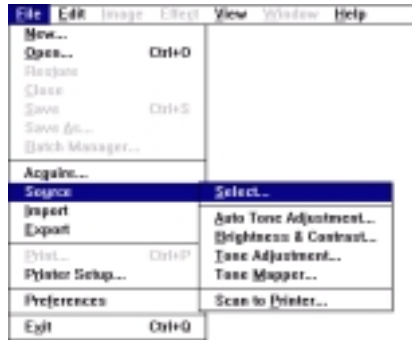
1. Raise the lid of the 1800 Film Scanner.
2. Pull the two switches outward to pop open the film frame.
3. Position the film that you wish to scan in the center of the viewing window.
4. Push down the film frame until it click-locks.
5. Scan either with the lid open or closed.

Starting CyberView

CyberView can be started from any other TWAIN-compliant application software. The following procedures shows an example for starting CyberView. Please note that starting the CyberView within other TWAIN-compliant software follows the same basic procedures.

To start CyberView:

1. If you have more than one scanner connected to your computer or this is the first time you use the 1800 Film Scanner after you installed it, choose **Select Source** from the File menu. Select **CyberView-32U Film** from the options available.



2. From the File menu again, choose the **Acquire** command.

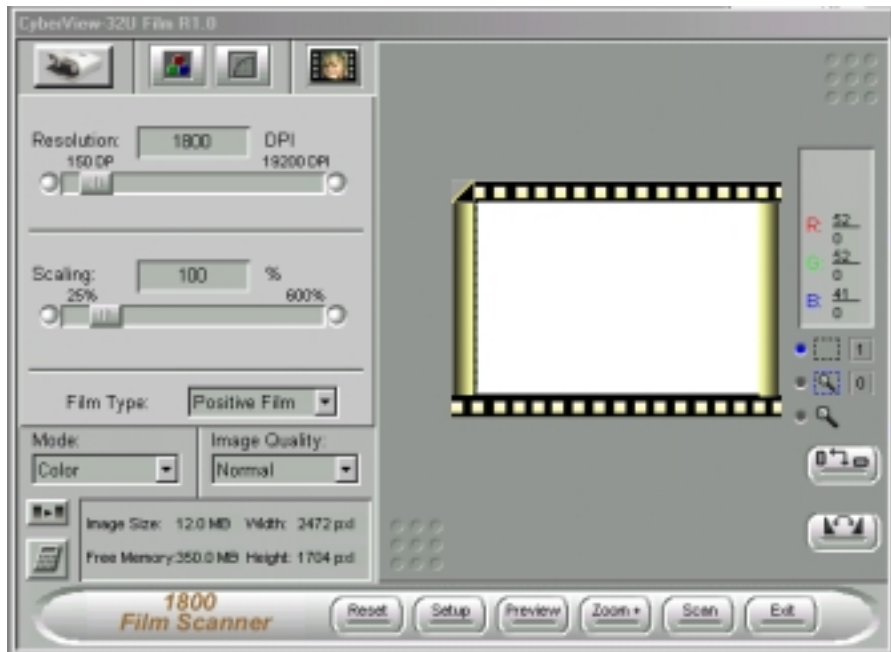


3. The CyberView interface appears.



The CyberView Scan Configuration is displayed.

Parameters such as Color Balance, Gamma, Film Type, Scan Mode, Image Quality, Calibration and Calculator are all available for the scan configurations.



Scan Configuration

Using Setup

Setup has options for:

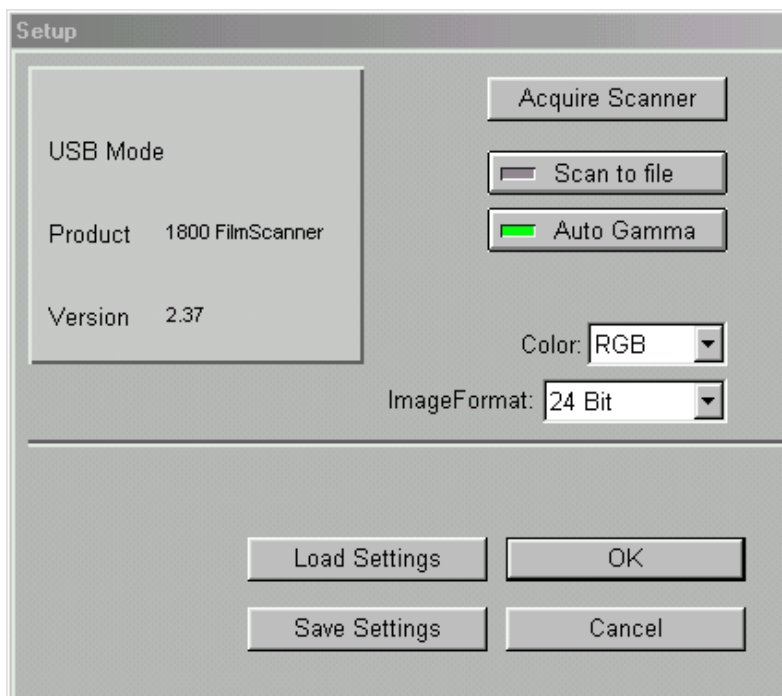
1. Scanning the interface to find the scanner
2. Scanning the image to a file
3. Setting scanning options: auto gamma, and image format
4. Choosing the color mode: RGB or CMY used in the software
5. Saving and loading setting preferences

To use the Setup options:



1. Click on the **Setup** button. The Setup dialog box appears.

If your 1800 Film Scanner is set up correctly, the scanner



Information will display the connection mode, Product name and the Software Version.

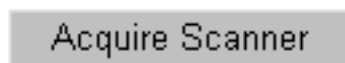


Acquire Scanner

The Acquire Scanner button lets you re-scan the interface to search for the 1800 Film Scanner in case of lost communication between your 1800 Film Scanner and your PC.

To re-acquire the scanner:

1. Click on the **Acquire Scanner** button.



Scan to file

Scan to file gives you the option to save your scanned image

directly to a file. A green light to the left of **Scan to file** turns on when it is active.

To save the scanned image to a file:

1. Click on the **Scan to file** button.



2. A Save to File dialog box appears. Specify the directory and file name to which you wish to save the image. Click **OK**.

Auto Gamma

Auto Gamma lets you use the corrected gamma for the 1800 Film Scanner. This gamma is preset by the manufacturer to enhance the shadow details in the image.

To use the Auto Gamma:

1. Click on the **Auto Gamma** button. A green light to the left of Auto Gamma turns on when it is active.



The image in the preview window immediately updates and shows the change. In the actual scan, this gamma is passed to the 1800 Film Scanner to map the 36 bits of data per pixel to 24 bits.

Color

Color lets you choose either RGB (Red, Green, Blue) or CMY (Cyan, Magenta, Yellow) color space for color adjustment.

The CMY color space is not the same as the CMYK used in color separation. The CMY color space is a direct one-to-one translation from RGB color space. The actual scanned image is still encoded in RGB. This tool is useful for people who prefer to work with CMY rather than RGB.

To change color space:

1. Click the arrow at the right of the **Color** box and select either RGB or CMY from the list box.



Image Format

Image Format lets you choose the number of bits per pixel output to the image editing application software. The scanner captures the image with 36-bits per pixel, and CyberView can transfer this image data to the application software in either 36-bits or in 24-bits (truncated). You should only chose 36-bits if the application software (such as Adobe PhotoShop) accepts 36-bit output.

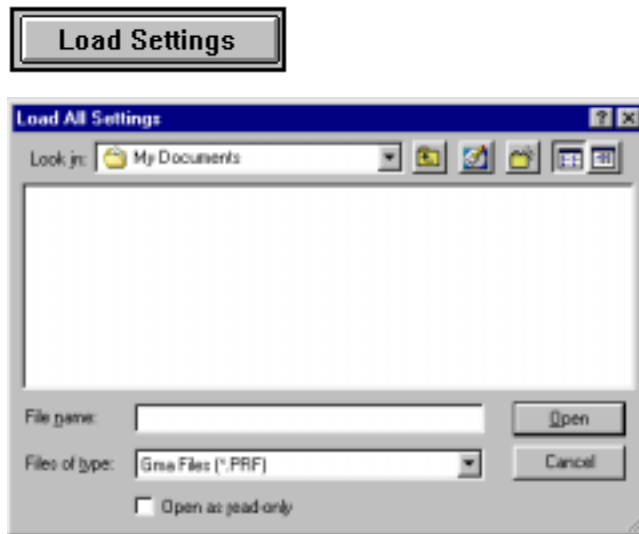


Load Settings

Load Settings lets you recall the resolution, scaling, ruler unit, color balance, and gamma settings you have previously saved.

To load a configuration file:

1. Click on the **Load Settings** button. The Load All Settings dialog box appears.



2. Select a directory from the Directories box containing the file you want to load.
3. Select the file name from the File Name list box, and choose **Open**.

The default file type is *.prf. You can change it to *.GMA for Gamma Settings File.

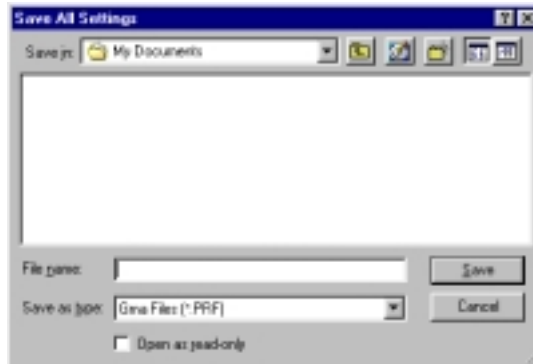
Save Settings

Save Settings lets you save your current resolution, scaling, ruler unit, color balance and gamma settings to a file.

To save the current settings to a file:

1. Click on the **Save Settings** button. The Save Settings dialog

box appears.



2. Select a directory from the Directories box to which you want to save.
3. Type or select a file name from the File Name list box, and choose **Save**.

Reset

Reset lets you reset all the scanning parameters to default settings.

To reset all parameters to default:

1. Click on the **Reset** button.



Choosing Positive or Negative Film

CyberView allows you to scan both positive and negative films.



Positive Film Icon



Negative Film Icon

To select positive or negative film:

1. Select your desired film type by clicking on the icon to toggle between the two modes.

Choosing a Scan Mode

A scanned image is represented in digital form. The Scan Mode you select determines how your 1800 Film Scanner generates the digital form and type of image it creates. CyberView supports two scanning modes: Color or Gray.

The scanning mode can be changed anytime before a preview, zoom, or scan. If a preview is done in color mode, you can switch between color and grayscale mode without discarding the color information.

To select a Scan Mode:

1. Click the arrow at the right of the Scan Mode box to open the drop-down list box and select a mode.



Color

When you choose Color as Scan Mode, your 1800 Film Scanner assigns 8-bit (or 12-bit) for each color. This results in a 24-bit (or 36-bit) image composed of up to 256 (or 4096) levels of each Red, Green, and Blue.

Gray

A Gray mode results in an 8-bit (or 12-bit) image, which contains up to 256 (or 4096) different shades of gray.

Note: You can select either 24-bit or 36-bit output from the Image Format selection in CyberView Setup.

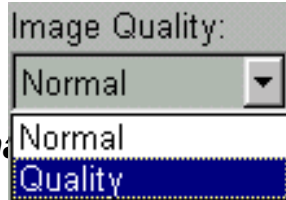
Choosing an Image Quality

Two image qualities are available from the CyberView: Normal and Quality.

The Quality Mode will produce a better image quality. Please note that to generate a better quality image, 1800 Film Scanner scans the original at a slower pace in order to read image data in greater detail. Therefore, selecting the Quality Mode will result in a longer scanning time.

To select an image quality:

1. Click the arrow at the right of the Image Quality box to open the drop-down list box and select a Quality Mode.



Previewing Your Image

To prescan the image:

1. Click on the **Preview** button.
2. The preview window clears, and the preview scan begins.

*To stop a preview in progress, click on the **Cancel** button or press the **ESC** key.*

3. The image is displayed inside the Preview Window.



image when you reopen the software.

Using the Rotate Tool

The Rotate Tool lets you change the orientation of the preview image.

To use the Rotate Tool:

1. Click on the Rotate Tool button.
2. A window will pop up showing all 4 different orientations of the preview image.
3. Click on the desired image, and click OK.



Using the Mirror Tool

The Mirror Tool lets you mirror the preview image.

To use the Mirror Tool:

1. Click on the Mirror Tool button to mirror the preview image.

Using the Quick Zoom Tool

The Quick Zoom Tool lets you quickly zoom in on the preview image for better viewing.



To use the Quick Zoom Tool:

1. Click on the radio button next to the Quick Zoom Tool.



The radio button turns blue when the tool is selected.

2. Move the mouse pointer inside the preview window; the mouse pointer changes to a magnifying glass (with "+" sign to mean zoom in).

3. Click on the preview image where you want to zoom in. The image will immediately enlarge to twice the original size.
4. Vertical and Horizontal scroll bars appear on two sides of the preview window. You can scroll vertically and horizontally to view any part of the enlarged image that exists beyond the borders of the preview window.

To zoom out to the original size:

1. After zooming in, simply click on the preview image with the



magnifying glass (now with a "-" sign) again to zoom out.

Using the Selection Tool

With the Selection Tool, you can select up to 15 frames of a prescan image. This is useful for scanning up to 15 different scanning areas of one single film at the same time.

Only the portion of the image (frame) you selected is captured when the image is scanned.

To activate the Selection Tool:

1. Click on the radio button next to the Selection Tool.



The radio button turns blue when the tool is selected.

With the Selection Tool active, you can create a scanning area frame, or move and re-size an existing frame inside the preview window.

To create a frame:

1. Move the mouse pointer into the preview window. The mouse pointer changes to cross hairs.
2. Drag the cross hairs cursor in any direction to draw a box. Release the mouse button when the box is the size you want.

You may select up to 15 frames by repeating the steps above. The number next to the frame indicates the total number of frames you have created. At least one frame is required to be able to scan the image.

To select a frame:

1. Click anywhere inside the frame or press the TAB key to switch frames sequentially. The selected frame is indicated by a flickering border.

To delete a frame:

1. Select the frame you wish to delete.
2. Press the **DELETE** key on your keyboard.

To move a frame:

1. Place the mouse pointer inside the frame. The mouse pointer changes to a hand-symbol pointer.
2. Drag the hand-symbol pointer, the outline of the frame moves with it until you release the mouse button.

To re-size a frame:

1. Point to any border or corner of the frame. The cursor changes to two-head arrow.
2. Drag the corner or border to the size you want, and release.

If you drag a border, the frame size changes only on the side of the border. If you drag a corner, the two adjoining sides that form the corner change size at the same time.

The Calibration Tool

The Calibration Tool, when pressed, calibrates the scanner. The scanner is calibrated automatically in the following cases: before first scan, when film type is changed, when scanning mode is changed. Calibrations are done to ensure good image quality. The Calibration Tool allow user to manually force a calibration if desired.

To activate the Calibration Tool:

1. Click on the **Calibration** button, and the scanner will start the calibration process.

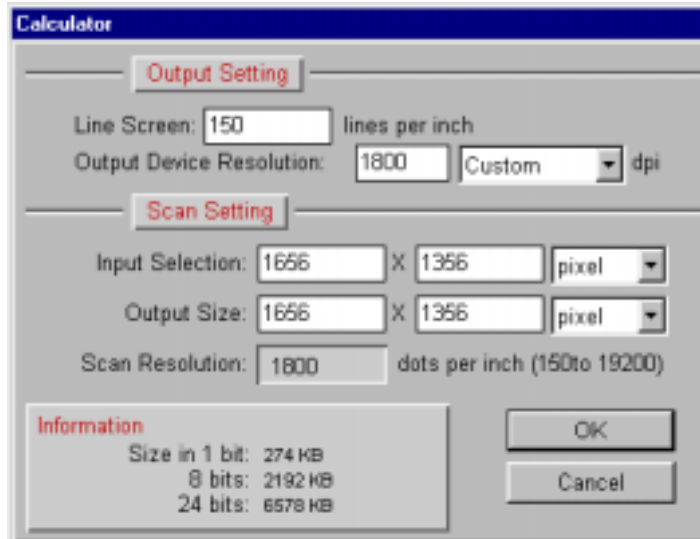


To specify a fixed-size scanning area:

1. Click on the **Calculator** button. The Calculator dialog box appears.
2. Select the settings you want to use. For more information about these options, see the list following this step.



The settings in the Calculator dialog box are used in the



following ways:

Feature	Function
Line Screen	Specify the halftone screen frequency (lines per inch).
Output Device Resolution	Specify the resolution of output device. <i>For printing applications, the resolution should generally equal two times the halftone screen frequency of the output.</i>
Input Selection	Specify the width and height of the current fixed-size selection.
Output Size	Specify the width and height of the output size if you wish to have your final image size different from your scanning size (enlargement or reduction).
Scan Resolution	Specify the scanning resolution.

The Information box in the Calculator dialog box shows the

image size in kilobytes (KB) for your reference. If you are scanning in LineArt/Text mode, refer to the 1-bit size; for Grayscale mode, refer to 8-bit size; and for Color mode, refer to the 24-bit size.



3. Choose **OK**.

The adjustments you make in the Calculator dialog will replace your previous specifications. You can then move the selected scanning area around in the preview window.

TIP *The best way to use the Calculator is to first select the scanning area with either the Selection Tool or the Calculator. Then, specify the resolution of your output device. Finally, specify the output size you desire.*

Using Zoom Tool

Zoom lets you see the details of your image close up before you scan. This feature is different from the Quick Zoom Tool. The Quick Zoom Tool enlarges the image by *software interpolation*, i.e. pixels are created and inserted for the enlargement. The Zoom tool actually calculates the preview resolution based on the selection box (*rectangular frame*) and re-scans the image at the higher resolution.

To use the Zoom Tool:

1. Click on the **Preview** button to display a preview image inside the preview window.
2. Activate the Zoom Selection Tool by clicking on it, and use it



like the Selection Tool to create a rectangular frame (selection box) for the area you want to view.



3. Click on the **Zoom +** button. The preview window clears, and the zoom scan begins.

*Click on the **Cancel** button or press **ESC** key to stop a zoom in progress.*

4. In a moment, the close-up fills the preview window. The image is enlarged to the highest percent possible that fits in the rectangular frame (selection box).

Use the Zoom Tool to check color values, set highlight or shadow points, and adjust resolution, color balance and gamma settings before your actual scan.

After you adjust scanning setting, click the **Zoom -** button to go back to the normal preview image.

CHAPTER 2

Scanning with CyberView

This chapter describes how to scan with CyberView. It includes information and instructions for:

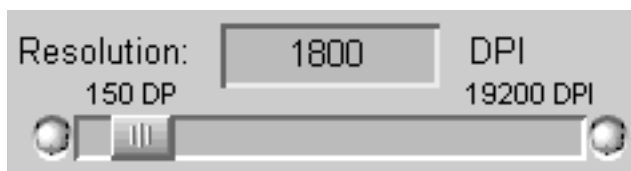
1. Adjusting Resolution
2. Adjusting Scaling
3. Software Interpolation
4. Controls for enhancing an image
5. Adjusting the Gamma

Adjusting the Resolution

Resolution refers to the number of pixels per inch (dpi) that your scanned image will contain. The larger the dpi, the more quality and clarity the scanned image will have. It is important to scan at the right resolution for a good reproduction of details and shades. Scanning at higher resolution requires more time, memory and disk space. Too low a resolution will cause a loss of details and a grainy effect.

To set the resolution:

1. Drag the scroll box left or right, or type a value in the Resolution box.



Depending on your 1800 Film Scanner the resolution options range from 150 dpi to 19200 dpi, in 1 dpi increments. If you type a value beyond the 150 to 19200 dpi range, CyberView will automatically reset the resolution. Resolution and scaling are interdependent. The higher you raise the scaling percentage, the lower the resolution will become.

You can calculate scanning resolution with the equation:

$$\text{Scanning resolution} = (\text{output frequency}) \times (\text{enlargement\%}) \times (\text{screen ruling})$$

For example, to get a 4"x 6" printed image at 133 dpi with a screen of 2:1 from a 1.0"x 1.5" original, you need to set the scanning resolution = 133 x 400% x 2 = 1064 dpi.

Note: The 1800 Film Scanner's scaling range is from 25% to 600%.

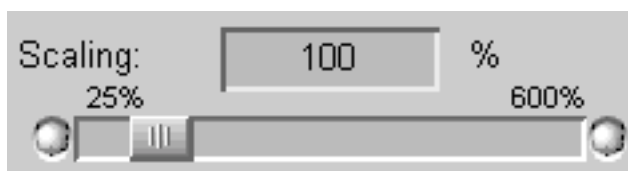
You can use **Save to file** from the Setup dialog box to save your resolution setting, along with all the other current settings.

Adjusting the Scaling

Scaling allows you to change the physical size of a scanned image so re-sizing will be unnecessary later.

To set the scaling:

1. Drag the scroll box left or right, or type a value in the Scaling box.



Your scaling options range from 25% to 600% of the original image, in 1% increments. If you type a value beyond the 25% to 600% range, CyberView will automatically reset the scaling. Scaling and resolution are interdependent. The higher you raise the scaling percentage, the lower the resolution will become.

You can use **Save to file** from the Setup dialog box to save your scaling setting, along with all the other current settings.

Software Interpolation

The optical resolution of your 1800 Film Scanner's hardware is 1800x1800 dpi. The 1800 Film Scanner can optically resolve up to 1800 pixels per inch in X direction and 1800 steps per inch mechanically in Y direction. When the scanning resolution (resolution x scaling) is greater than 1800 dpi, the additional data is actually generated by software interpolation. In the case of software interpolation, pixels are created and inserted by taking the average of the neighboring pixels.

Controls for Enhancing an Image

You can enhance an image by adjusting color balance, brightness, contrast, highlight, and shadow.

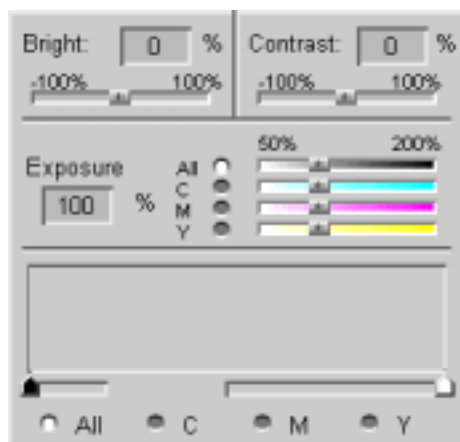
To bring up the controls for enhancing an image:



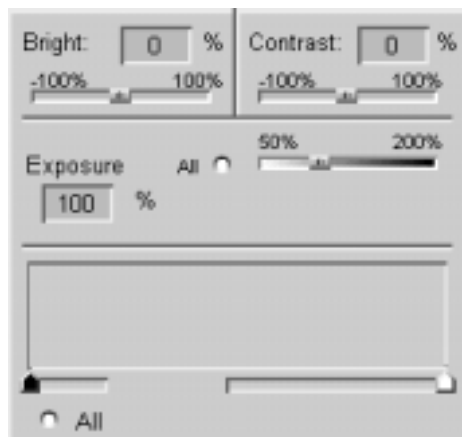
1. Click on the **Color Balance** button. The Color Balance dialog box appears.



Color mode (RGB)



Color mode (CMY)



Gray mode

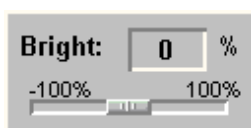
The controls in this group are hardware controls; i.e. when the adjustments are made, the CyberView passes these adjustments to the 1800 Film Scanner hardware and updates the hardware scanning setting before the image is scanned. Therefore, when adjustments are made, there is no change in the preview window to reflect the adjustments. A new preview, zoom or scan is required to show the effects of these adjustments.

Adjusting Brightness

Brightness controls the lightness or darkness of your scanned image. The higher the brightness value, the lighter the image becomes.

To adjust the Brightness value:

1. Drag the scroll box left or right, or type a value in the Bright box.



The brightness level range from -100% to 100%, in 1% increments. If you type a value beyond than the -100% to 100% range, CyberView will automatically reset the brightness.

After adjusting the brightness,

To preview the image again to see the change:

1. Click on the **Preview** button.

To scan the image with the adjustment:

1. Click on the **Scan** button.

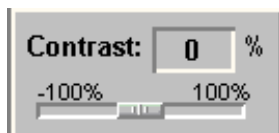
You can use the **Save to file** from the Setup dialog box to save your brightness setting, along with all the other current settings.

Adjusting Contrast

Contrast controls the difference between light and dark pixels of your scanned image. It sharpens your scanned image by increasing the contrast of adjacent pixels. Therefore, the higher the contrast value, the sharper your scanned image becomes. A very low contrast makes colors tend towards a mid-tone gray. Blemishes in your image document or dust particles on the glass plate may also become distinct by applying the contrast control.

To adjust the Contrast value:

1. Drag the scroll box left or right, or type a value in the Contrast box.



The contrast level ranges from -100% to 100%, in 1% increments. If you type a value beyond the -100% to 100% range, CyberView will automatically reset the contrast.

After adjusting the contrast,

To preview the image again to see the change:

1. Click on the **Preview** button.

To scan the image with the adjustment:

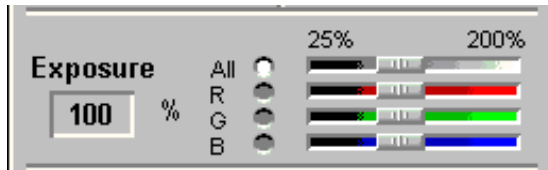
1. Click on the **Scan** button.

You can use the **Save to file** from the Setup dialog box to save

your contrast setting, along with all the other current settings.

Adjusting the RGB Values

Each pixel in your scan represents a mixture of three primary colors: Red, Green and Blue. You can enhance or decrease the levels of these colors individually by clicking on the **R**, **G**, **B** radio button and dragging the slider bars, or by clicking on the **All** radio button and dragging the **All** slider bar to change the RGB color levels simultaneously.



To adjust the color levels:

1. Click on the color radio button next to All, R, G, B.
2. Drag the slider bar left or right, or type a value in the Exposure box.

*If you click on the **All** radio button, the R, G, B levels change simultaneously.*

The RGB color level ranges from 50% to 200%, in 1% increments. If you type a value beyond the 50% to 200% range, CyberView will automatically reset the level.

After adjusting the color levels,

To preview the image again to see the change:

1. Click on the **Preview** button.

To scan the image with the adjustment:

1. Click on the **Scan** button.

You can use the **Save to file** from the Setup dialog box to save

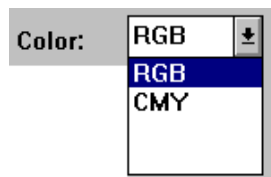
your RGB level settings, along with all the other current settings.

Adjusting the CMY Values

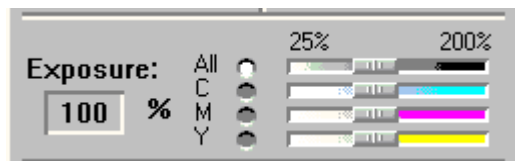
You can change the RGB adjustments to CMY (Cyan, Magenta, Yellow). This tool is useful for people who prefer to work with CMY rather than RGB.

To change color from RGB to CMY:

1. Click on the **Setup** button. The Setup dialog box appears.
2. Click the arrow at the right of the Color box and select the CMY from the list box.



You can enhance or decrease the levels of CMY colors individually by clicking on the C, M, Y radio button and dragging the slider bars, or by clicking on the All radio button and dragging the All slider bar, you can change the CMY color levels simultaneously.



To adjust the color levels:

1. Click on the color radio button next to All, C, M, Y.

If you click on the All radio button, the C, M, Y change simultaneously.

2. Drag the slider bar left or right, or type a value in the Exposure box.

The CMY color level ranges from 50% to 200%, in 1% increments. If you type a value beyond the 50% to 200% range, CyberView will automatically reset the level.

After adjusting the CMY color levels,

To preview the image again to see the change:

1. Click on the **Preview** button.

To scan the image with the adjustment:

1. Click on the **Scan** button.

You can use **Save to file** from the Setup dialog box to save your CMY color level settings, along with all the other current settings.

About the Histogram

A histogram is a graphic representation of tonal distribution (the brightness and darkness levels) in an image. It plots the number of pixels at each level. The Histogram Window represents the total range (0 to 255, after converted to 24 bits from 36 bits). The tonal distribution in an image can dramatically affect the appearance of an image. You can use a histogram to check for optimum brightness and contrast as you make an adjustment.

Histogram Window (Color mode)

Histogram Window (Gray mode)

TIP *The histogram only appears when there is an image in the preview window. For your reference, there are two vertical dotted lines to represent the previous highlight and shadow settings.*

Using the Highlight and Shadow Sliders

CyberView features a powerful graphical solution to assist you in maximizing the graphic information of your scanned image. Below the histogram are two scroll bars with Highlight and Shadow delimiters. These two sliders define the range of the histogram.

To adjust the range of the histogram:

In RGB Color mode:

1. Click on the color radio button next to All, R, G, B.
2. Drag the Highlight and/or Shadow sliders left or right.

If you click on the All radio button, the R, G, B change simultaneously.

To adjust the range of the histogram:

In CMY Color mode:

1. Click on the color radio button next to All, C, M, Y.
2. Drag the Highlight and/or Shadow sliders left or right.

If you click on the All radio button, the C, M, Y change simultaneously.

To adjust the range of the histogram:

In Gray, LineArt/Text, or Halftone mode:

1. Drag the Highlight and/or Shadow sliders left or right.

TIP In case the tonal distribution has too much saturation at highlight and/or shadow, drag the Highlight and/or Shadow sliders outward to the range. If the range is already at maximum, i.e. the two sliders are at the end of the respective scroll bars, you can further expand the range by reducing the contrast using the Contrast controls.

After adjusting the Highlight and/or Shadow delimiters,

To preview the image again to see the change:

1. Click on the **Preview** button.

To scan the image with the adjustment:

1. Click on the **Scan** button.

You can use the **Save to file** from the Setup dialog box to save your Highlight and Shadow delimiters settings, along with all the other current settings.

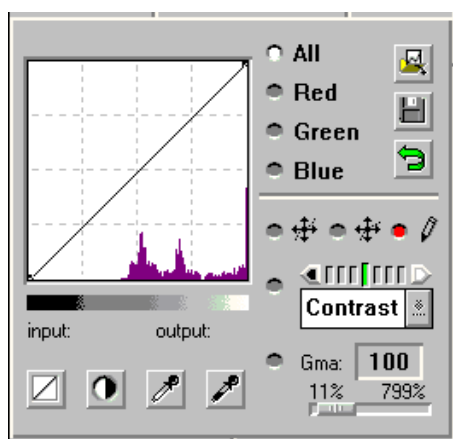
Adjusting the Gamma

You can make an image enhancement by adjusting the Gamma controls.

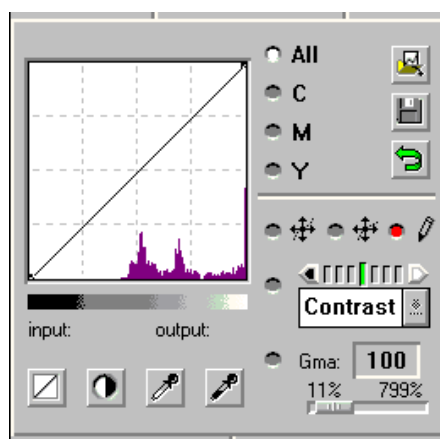
To bring up the Gamma controls for adjusting an image enhancement:



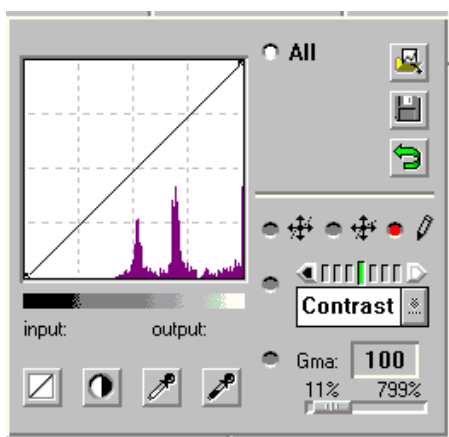
1. Click on the **Gamma** button. The Gamma dialog box appears.



Color mode (RGB)



Color mode (CMY)



Gray mode

Gamma is basically the level of contrast affecting the mid-grays or mid-tones of an image. The gamma controls let you lighten or darken each color value in an image independently.

The gamma controls are the most powerful feature in the CyberView. The 1800 Film Scanner captures 10/12 bits of information per channel (Red, Green, and Blue). These controls let you decide how the 10/12 bits (1024/4096 colors) per channel are converted to 8 bits (256 colors) per channel that your computer uses.

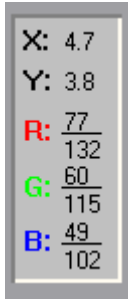
The controls in this group are software controls; for example, when the adjustments are made, the CyberView processes the image in the preview window and shows the result of the adjustments. The processing in the preview image is done in 24-bit mode. Therefore, the histogram may appear to have "gaps" (missing data) when adjustments are made. In the final scan, however, the CyberView passes these adjustments to your 1800 Film Scanner hardware, and your 1800 Film Scanner uses these adjustments to map the scanned 30-bit (or 36-bit) image to 24-bit image, which will eliminate any gap in the histogram. Because the final scanned images are acquired from 30 (or 36) bits of data per pixel, image quality is preserved even after mapping to 24 bits.

Using the Gamma Control Line

On the graph in the gamma control display, the horizontal axis represents the input colors (the scanned 10/12 bits per channel), and the vertical axis represents the output colors (8 bits per channel sent to the computer). The lower left corner is black (output value = 0), and the upper right corner is white (output value = 255). When you move the cursor over the graph, input and output values for the point under the cursor are displayed below the graph.

The gamma control line shows the relationship between the input colors and output colors. As you adjust the gamma controls, the gamma control line changes to display the new settings. A straight 45 degree line from lower left to upper right indicates no

changes in the color values. Moving any portion of the line up will lighten those colors. Moving any portion of the line down will darken those colors.



X/Y, Color value box

Any change in the gamma control line defines a new 30-bit (or 36-bit) to 24-bit mapping. The color values next to the preview window show the original color values (top) and the mapped color values (bottom).

If the gamma control line is in the default setting, the top/bottom values are the same. If the gamma control line is adjusted, the value at the top of each color channel indicates the original color values, and the value at the bottom indicates the mapped color values.

Choosing a Gamma Color Channel

In Color mode, when adjusting the gamma, you can apply the changes to Red, Green and Blue color channels simultaneously, or to a single color channel independently.

In Color mode:

To adjust the gamma of all colors simultaneously:

1. Click on the radio button next to All.
2. Adjust the gamma with one of the five different controls: basic, logarithmic, curve, line, and freehand.

To adjust the gamma for a particular color channel only:

1. Click on the radio button next to R, G, or B.
2. Adjust the gamma with one of the five different controls: basic, logarithmic, curve, line, and freehand.

If you are using the CMY color mode other than the RGB, the channels will be CMY instead of RGB.

Setting Basic Gamma

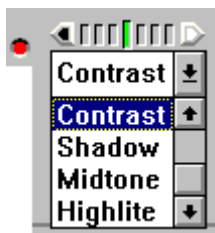
You can adjust the gamma with basic gamma controls. The basic gamma controls let you control the brightness, contrast, highlight, mid-tone, and shadow of the image.

To use the basic gamma controls:

1. Click on the basic gamma radio button.



2. Click the arrow at the right of the basic gamma box to open the list box.
3. Click the up or down scroll arrow, or drag the scroll box to the item you want to select.



4. Click on the level indicator left or right to adjust the gamma control line.

For Brightness control:

Click on the right indicator to brighten the image; click on the left indicator to darken the image.

For Contrast control:

Click on the right indicator to increase the contrast of the image; click on the left indicator to decrease the contrast of the image.

For Highlight, Mid-tone, and Shadow control:

Click on the right indicator to lighten the highlight, mid-tone, or shadow portion of the image; click on the left indicator to darken the highlight, mid-tone, or shadow portion of the image.

With each adjustment, the gamma control line changes, and the preview image will change immediately to reflect the adjustment.

Setting Logarithmic Gamma

You can adjust the gamma with logarithmic gamma controls. The logarithmic gamma controls let you control the logarithmic gamma curve that lightens the shadows and mid-tones more than the highlights.

To use the logarithmic gamma controls:

1. Click on the logarithmic gamma radio button.



2. Drag the slider bar left or right, or type a gamma value in the Logarithmic Gamma box.

Logarithmic gamma control is an intermediate control that gives you a wide range of adjustment from 11% to 779%. (uncorrected gamma is 100%)

With each adjustment, the gamma control line changes, and the preview image will change immediately to reflect the adjustment.

Setting Curve Gamma

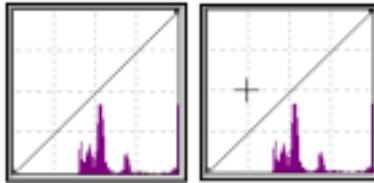
You can adjust the gamma with curve gamma controls. The curve gamma controls let you insert control points on the gamma control line and create variable curves in the gamma control line.

To use the curve gamma controls:

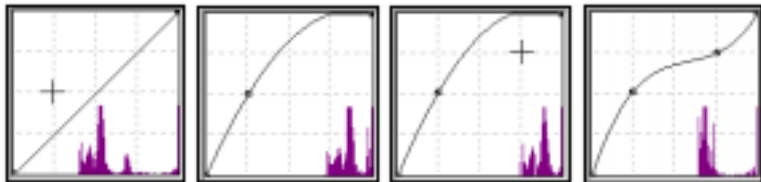
1. Click on the curve gamma radio button.



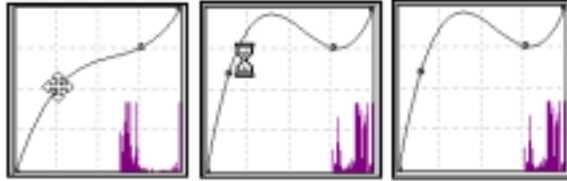
2. Move the cursor onto the graph. The cursor changes to cross hairs.



3. Click anywhere on the graph to set a control point. The line curves to include that point in the gamma correction. You can set a total of 10 points on the curve.



4. Once you have set a control point, you can drag the curve to adjust it. Move the cursor onto any control point so that the cursor changes from cross hairs to cross-arrows. Drag it in any direction to modify the curve. The preview image will change immediately to reflect the adjustment.



5. To remove a control point from the gamma line, move the cursor onto that control point, and drag it out of the gamma graph. Once the control point is removed, the gamma curve refits itself onto the rest of the points to form a new curve, and the preview image will change immediately to reflect the adjustment.

Setting Line Gamma

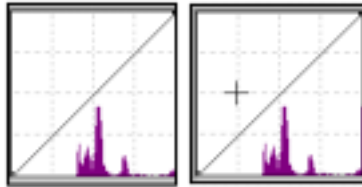
You can adjust the gamma with line gamma controls. The line gamma controls let you insert control points on the gamma control line and create variable line segments in the gamma control line.

To use the line gamma controls:

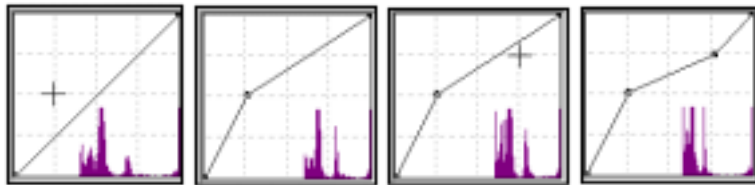
1. Click on the line gamma radio button.



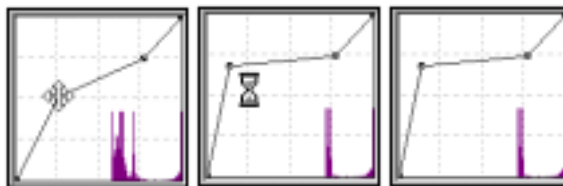
2. Move the cursor onto the graph. The cursor changes to cross hairs.



3. Click anywhere on the graph to set a control point. The line moves to include that point in the gamma correction. You can set a total of 10 points on the line.



4. Once you have set a control point, you can drag the point to adjust it. Move the cursor onto any control point so that the cursor changes from cross hairs to cross-arrows. Drag it in any direction to modify the line. The preview image will change immediately to reflect the adjustment.



5. To remove a control point from the gamma line, move the cursor onto that control point, and drag it out of the gamma graph. Once the control point is removed, the gamma line refits itself onto the rest of the points to form a new line, and the preview image will change immediately to reflect the adjustment.

Setting Freehand Gamma

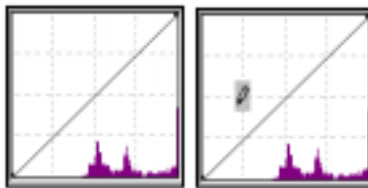
You can adjust the gamma with freehand gamma controls. The freehand gamma controls let you draw any shape of gamma.

To use the freehand gamma controls:

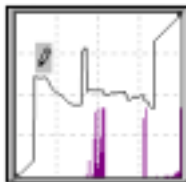
1. Click on the freehand gamma radio button.



2. Move the cursor onto the graph. The cursor changes to a drawing pen.



3. Drag the pen anywhere on the graph to draw the gamma. The preview image changes immediately to reflect the adjustment.



Setting Highlight and Shadow Points

Use highlight and shadow points to override 1800 Film Scanner's calibration and to set certain color values in the image to white and black. You can set these points on any preview or zoom display.

To set a highlight (white) point:

1. Click on the **Highlight Point** button. The cursor changes to highlight eye-dropper.



2. Move the highlight eye-dropper to the spot on your image, either inside or outside the scanning area that you want to set white point.
3. Click to set white point. The preview image changes immediately to reflect the adjustment.

Setting a white (highlight) point lightens the image. The pixel where the point is set becomes white (color values 255). All pixels with a color value equal to or higher than the original value under the white point are mapped to white. The other pixels are re-mapped to corresponding lighter values. Setting your white point on too dark a color can cause loss of detail in the highlight areas of an image.

To set a shadow (black) point:

1. Click on the **Shadow Point** button. The cursor changes to shadow eye-dropper.



2. Move the shadow eye-dropper to the spot on your image, either inside or outside the scanning area that you want to set black point.

3. Click to set black point. The preview image changes immediately to reflect setting black point.

Setting a black (shadow) point darkens the image. The pixel where the point is set becomes black (color value 0). All pixels with a color value equal to or lower than the original color under the black points are mapped to black. The other pixels are re-mapped to corresponding darker values. Setting your black point on too light a color can cause loss of detail in shadow areas of an image.

TIP Use the color values box next to the preview window to check the value of the pixel under the cursor before setting a white (highlight) or black (shadow) point.

Setting Auto Contrast

If you are not sure where to set your highlight and shadow points, the CyberView can help you set the highlight and shadow points automatically with the auto contrast button.

To set the highlight and shadow points by the auto contrast:

1. Click on the **Auto Contrast** button. The preview image changes immediately to reflect the adjustment.



The CyberView performs auto contrasting by analyzing the histogram and sets the highlight and shadow points so that there is slight saturation (<1%) at both highlight and shadow areas.

Undo Button

During the gamma adjustments, Undo button lets you go back to the previous adjustment.

To go back to the previous gamma adjustment:

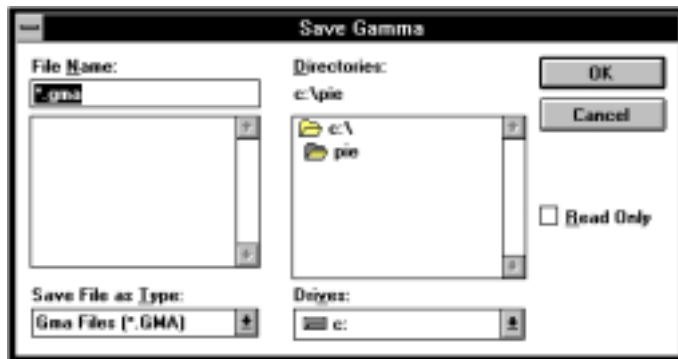
1. Click on the **Undo** button. The preview image will change immediately to reflect the previous adjustment.



Save Gamma Button

To preserve your gamma correction:

1. Click on the **Save Gamma** button. The save gamma dialog box appears.



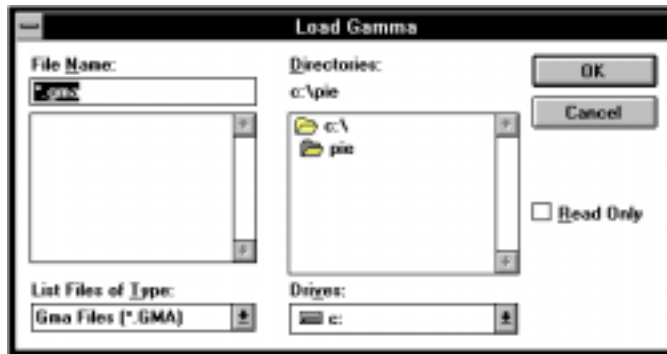
2. Select a directory from the Directories box you want to save.
3. Type or select a file name from the File Name list box, and choose **OK**.

*The default Save File as Type is ***.GMA** for Gamma Files. Your gamma correction is saved separately. To save all your settings, including your current gamma correction, use the Save option in the Setup dialog box.*

Load Gamma Button

To restore a gamma correction you have previously saved:

1. Click on the **Load Gamma** button. The load gamma dialog box appears.



2. Select a directory from the Directories box containing the gamma file you want to load.
3. Select a file name from the File Name list box, and choose **OK**.

*Note: The default Load File as Type is ***.GMA** for Gamma Files.*

CHAPTER 3

Copying with CyberView

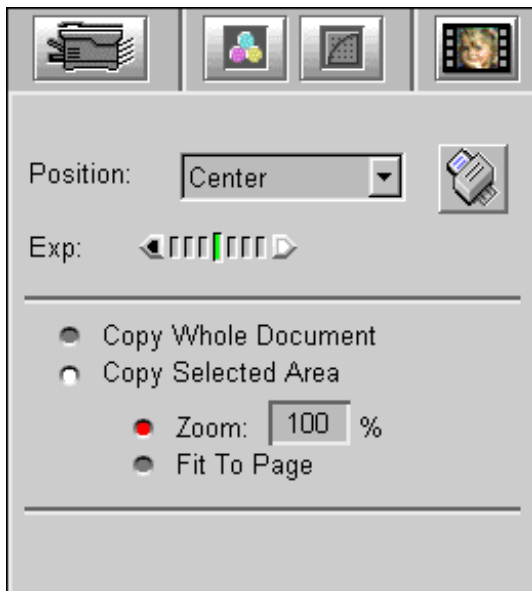
Through the Copy Configuration, you can make copies in Color or Grayscale Mode. Once you click on the **Copy** button, the printed copies will print out directly from the printer that is connected to your host computer.

The Copy Configuration



To open the user interface for Copy Configuration:

1. Click on the Scan/Copy **Configuration** button until the copy icon and the Copy Configuration screen appears as follows:



Choosing a Copy Mode

To select a copy mode:

1. Please refer to the *Choosing a Scan Mode* section in the chapter, "Using CyberView".

Setting up Your Printer Under Windows

To configure your printer under Windows:

1. Double-click on the Print Manager icon in the Main program group.
2. Choose the Printer Setup command from the Options menu.
3. Select an Installed Printer from the list box, or click on **Add** to add a new Printer-Module.
4. Choose Connect to bring up the Connect dialog box.
5. Select the right printer port as the port you want to assign the printer to.
6. Choose **OK**.

Choosing a Document Type

The CyberView also allows you to copy reflective documents and transparencies.

If your 1800 Film Scanner is connected to the optional Auto Document Feeder, you can make multi-page copies.

To select the type of image document that you want to copy:

1. Please refer to the *Choosing a Document Type* section in the chapter, "Using the CyberView".

Printer Setup



The Printer Setup button provides access to the printer options. If you would like to change any of the printer specifications or options (i.e. printer type, number of copies, print range), select this button.

Setting Page Position

Position allows you to choose where your image is placed on a printout. This function can be useful if you want to print an image on a piece of paper that already has another image on it. For example, if you have two different images from two different files, and you want to print them on the same piece of paper, you can set the Position to fit them both on the same page.

To select image output position:



1. Click on the down arrow button for a drop down list of position options.
2. Click on the option to select it.

Setting Exposure

Exposure is the simplest density control to use when copying transparent documents from Positive Film or Negative Film.

To adjust the Exposure time:

1. Click on the left or right arrow on the level indicator to adjust the exposure time. The left arrow reduces the exposure time while the right arrow increases it.

Exp: 

TIP Because the Exposure value controls the amount of time the target is exposed to light, the higher the Exposure value, the lighter the end result. If your film is dark, you should set a high Exposure.

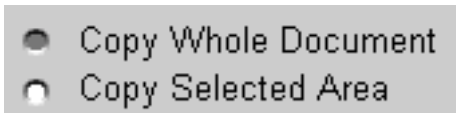
Copy Area

You can either copy the whole image or copy a selected area (*frame*) of the image.

Note: When you choose to copy the whole image, the printable area is predefined by the printer type you connected to the computer.

To copy the whole image:

1. Click on the radio button next to Copy whole document.

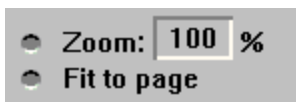


To copy a selected area of the image:

1. Click on radio button next to Copy selected area.

Zoom/Fit to Page

Once you have enabled the **Copy selected area** function, you can proportionately scale the selected area to print as large as possible on the output page by selecting either **Zoom** or **Fit to page**.



Note: Zoom/Fit to Page options are available only when you choose the Copy selected area option.

Copy button

To start the copy process:



1. Click on the **Copy** button. 1800 Film Scanner scans the document and prints directly to the printer that is connected to your computer.

Image Enhancing Adjustment Controls

Adjusting Brightness

Please refer to the chapter, "Scanning with CyberView".

Adjusting Contrast

Please refer to the chapter, "Scanning with CyberView".

Adjusting Color Values

Please refer to the chapter, "Scanning with CyberView".

Adjusting Gamma

Please refer to the chapter, "Scanning with CyberView".