Avision FB6000 Color Image Scanner

User's Manual

- Installing the Scanner
- Installing the Software
- Editing Your Image
- Maintenance
- Troubleshooting

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Telephone No.:	+1 (510) 739-2369

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1. INTRODUCTION

Congratulations on your purchase of the Avision's A3-sized color image scanner. Avision is one of the leading companies to make high quality color image scanner.

To ensure the optimum performance of the scanner, please take a few minutes to read through this manual before you install and operate the new scanner. The manual contains valuable information on how to unpack, install, operate, and maintain the scanner properly.

Figure 1-1 in below shows how the scanner is packed. Please check if all items are included. If there is any item missing or damaged, please contact your nearest dealer immediately for replacement.

1. Scanner main unit
2. SCSI cable
3. User's manual/CD/SCSI card
4. Power adapter
5. Power cord

Figure 1-1 Scanner Packaging

Note: When you unpack the scanner, retain the packing material and shipping box in case you may transport the scanner in the future.

2. SCANNER INSTALLATION

2.1 PRECAUTIONS

- Keep the scanner out of direct sunlight. Direct exposure to the sun or excessive heat may cause damage to the unit.
- Do not install the scanner in a humid or dusty place.
- Be sure to use the proper AC power source.
- Place the scanner securely on an even, flat surface. Tilted or uneven surfaces may cause mechanical problems.
- Keep the shipping box and the material in case you may need to ship the scanner again.

2.2 UNLOCKING YOUR SCANNER

To protect the scanning unit from damage during transportation, a lock switch is designed at the back of the scanner to keep the scanning unit from moving. To unlock the scanner, move the lock switch up as shown in Fig. 2-1.

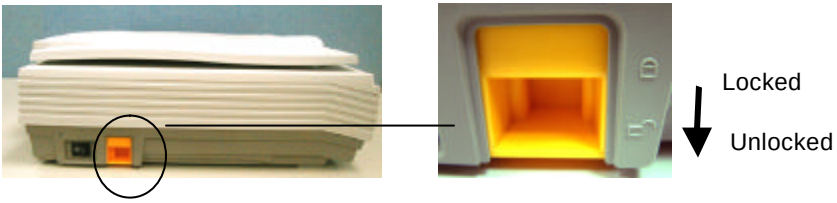


Figure 2-1 Unlocking the Scanner

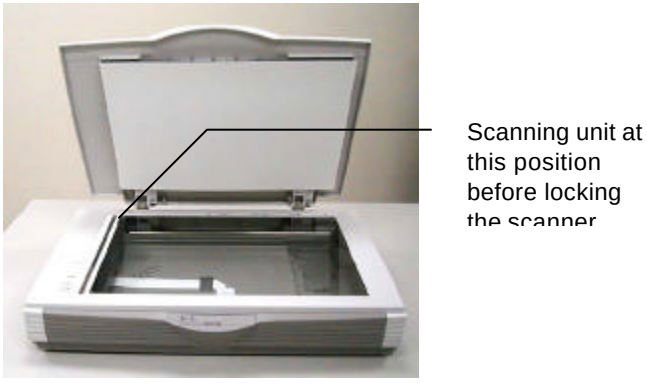


Figure 2-2 Home position

Note: If the scanning unit is not located at the front of the scanner before transporting the scanner, be sure to do the follows:

1. *Turn on the scanner.*
2. *The scanning unit should move to the front of the scanner.*
3. *Press the lock switch down to the "Lock position".*
4. *The scanner is now ready to transport.*

2.3 SETTING SCSI ID

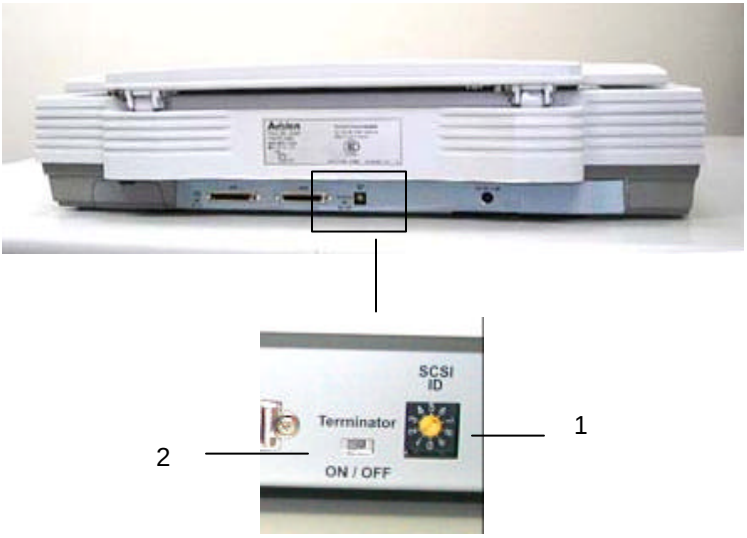
When you have several devices on a SCSI chain, you may have to adjust the SCSI ID selector setting at the back of the scanner(See Figure 2-2). This setting assigns a specific "device ID" to the scanner. If the ID number is duplicated with an existing SCSI device on the SCSI chain, please select a new ID#.

Note: The factory setting for the scanner is ID# 6. Usually, ID# 0 is assigned to an internal hard disk drive, and ID# 7, to SCSI adapter or host. ID# 8 and #9 are not in use.

2.4 SETTING SCSI TERMINATOR

The scanner is equipped with a built-in terminator switch on the rear side of the scanner (See also Figure 2-2). Move the switch to the "on" position to enable the SCSI termination or to the "off" position to disable the SCSI termination. The SCSI termination ensures the electrical signal flow through the SCSI chain properly.

As a result, if the scanner is the only or final device connected to your computer, you should enable your SCSI chain terminates at the scanner by moving the terminator switch to the "on" position. If your scanner is linked between the host computer and other SCSI devices, then the SCSI chain should terminate at the final SCSI device. In the case, disable your SCSI termination on the scanner by moving the terminator switch to "off" position.)



1. SCSI ID Setting
2. SCSI Terminator Switch

Figure 2-2 SCSI ID setting/Terminator switch

2.5 SETTING SCSI SYNC SWITCH

The scanner is designed with a SCSI SYNC switch at the rear of the machine. The default setting is "OFF". If the SCSI card of your computer supports SYNC, please move the SYNC switch at the rear of the scanner to the "ON" position to make the data transmission faster.

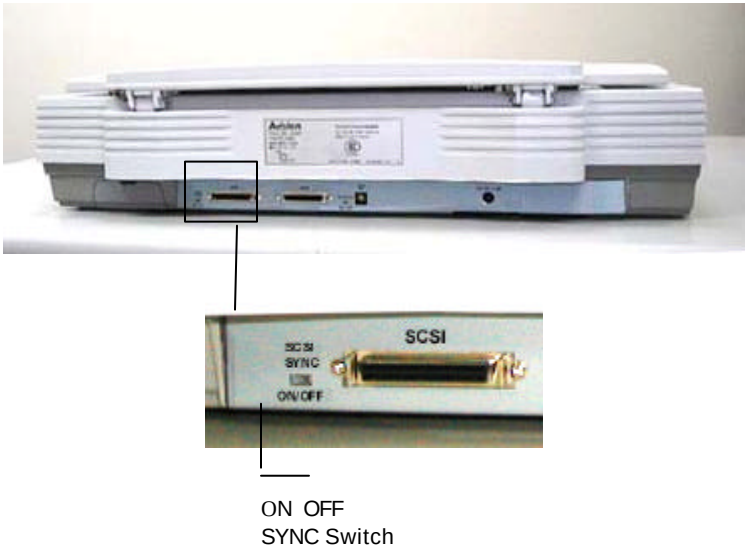


Figure 2-3 SCSI SYNC Switch

2.6 CONNECTING THE CABLES

Be sure the scanner power is switched off.

Connect the power cable and SCSI cable as shown in Figure 2-4.

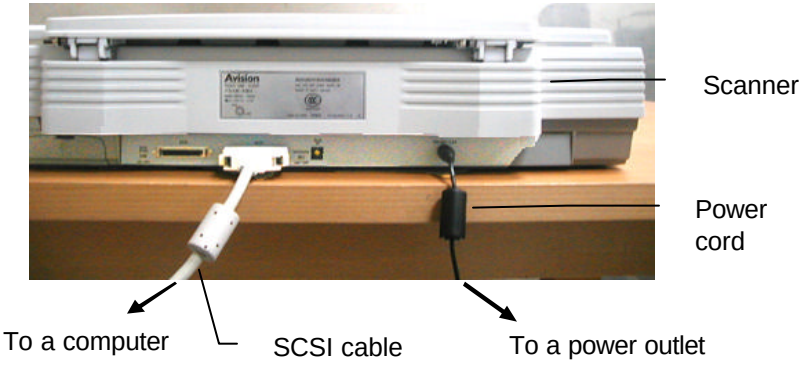
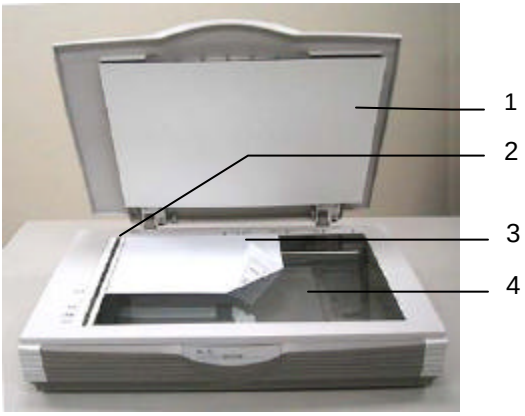


Figure 2-4 Cable Connection

2.7 PLACING YOUR ORIGINAL

Open the document cover then place your original face down on the document glass as shown in Fig. 2-5.

Make sure the top of your original near the document alignment mark.



1. Document cover
2. Document alignment mark
3. Your original
4. Document glass

Figure 2-5 Placing the original

3. SCANNER DRIVER INSTALLATION

3.1 SYSTEM REQUIREMENTS

To run the color image scanner at optimum speed, the following minimum requirements are recommended:

- IBM compatible PC Pentium III 600 or above;
- Windows 95, Windows 98, Windows ME;
- One SCSI card installed one your computer;
- 100M bytes of available hard disk space for installation;
- 128M bytes of RAM or above;
- A video graphics array (VGA) monitor;
- A Microsoft Windows-compatible pointing device (e.g., the mouse);
- A CD-ROM drive.

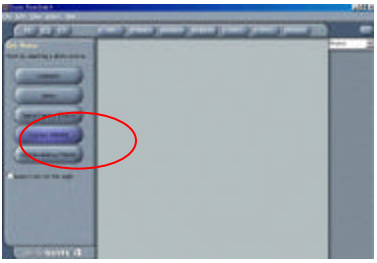
3.2 INSTALLATION STEPS

1. Start Windows 98 / 98SE / Me / 2000 / XP.
2. Insert the supplied CD-ROM into your CD-ROM drive.
3. An installation menu will be automatically displayed. If the installation menu has not been automatically displayed on your screen, please press the "Start" button and choose RUN, type "d:\cdsetup.exe" ("d:" the CD-ROM drive letter in use). Choose "OK".
4. Follow on-screen instructions to complete the installation.

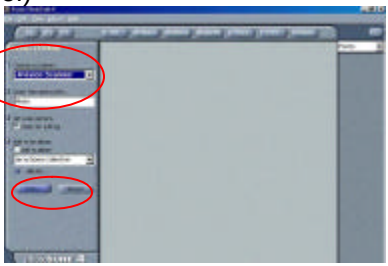
3.3 SCANNING WITH IMAGE EDITING SOFTWARE

The scanner driver is not a stand-alone program, it has to be started from within a TWAIN-compliant or plug-in software application and then the scanner driver is able to scan and load the image to your computer. The command to start the scanner driver may vary due to different software applications.

1. Start a TWAIN compliant software application such as Roxio PhotoSuite 4 SE which is bundled in the CD.
2. Click **Get**>**Scanner (TWAIN)**.



3. Choose **FB6000** as your scanning source. (You only need to do this once.)

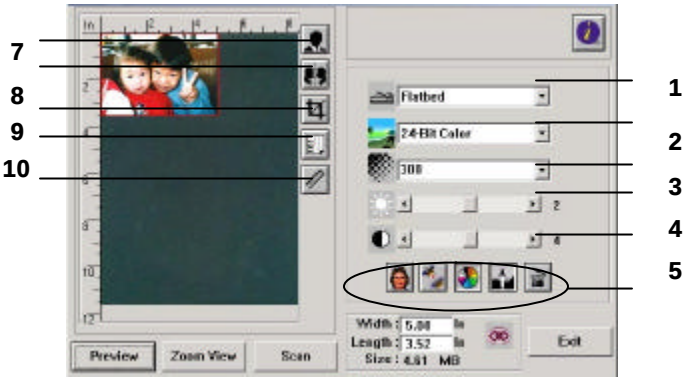


4. Place the document **FACE DOWN** on the document glass.
5. Click the **Scan** button to prompt the TWAIN user interface.
6. Click **Preview** to get an initial scan of your document. Allocate your scanned area and choose **Scan** button to scan the document.

7. Click **Exit** to return to the main screen and click **Open Library** and **Photos** at the upper-right corner to open your scanned image.

1. Preview
2. Zoom View
3. Scan
4. Exit
5. Photos

3.4 A GLANCE OF THE USER INTERFACE



1. Original Source	**Choice:** Flatbed
2. Image Type	**Choice:** Black & White, Halftone, 8-bit Gray, 8-bit Color, 24-bit Color.
3. Resolution	**Choice:** 50, 72, 100, 144, 150, 200, 300, 600 (dpi).
4. Brightness:	Adjust the brightness level from –100 to +100.
5. Contrast	Adjust the contrast level from –100 to +100.
6. Further Tools	Descreen, Sharpen, Color Adjustment, Auto Level , Advanced Settings (From left to right).
7. Invert	Reverse the color of your scanned image.
8. Mirror Function	Flap your image.
9. Crop	Resize your scanned area.
10. Paper Size	Select your paper size from Card 4”x2.5”, Photo 5”x3”, Photo 6”x4”, A5, B5, A4, Letter, Legal, or scanner maximum.
11. Measuring Unit	**Choice:** cm, Inch, and Pixel.

4. EDITING YOUR IMAGE

4.1 USING THE BASIC FEATURES

4.1.1 CHOOSING YOUR SCAN METHOD

1. Scan Method

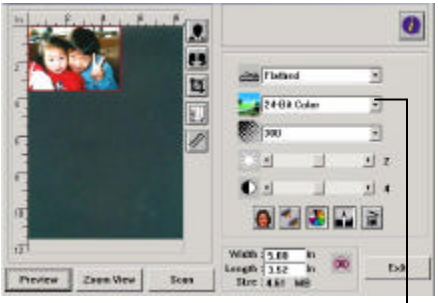
Choice:

Flatbed: Chose this mode to scan your document or photo.

4.1.2 SELECTING A PROPER IMAGE TYPE

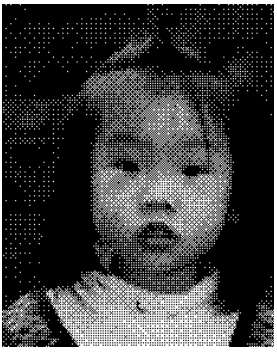
1. Image Type

Please see following table for a choice of an ideal image type.



Black & White	Choose B&W if your original contains only B&W text, pencil or ink sketch.
Halftone	Halftones are reproduction of image that gives the illusion gray. An example of halftone imaged would be the pictures you see in newspapers.
8-bit Gray	8-bit Gray images contain actual shades of gray.
8-bit Color	8-bit Color image provides 256 levels of color hues.
24-bit Color	Choose 24-bit Color if you wish to scan a color image.

Black & White



Halftone

Gray

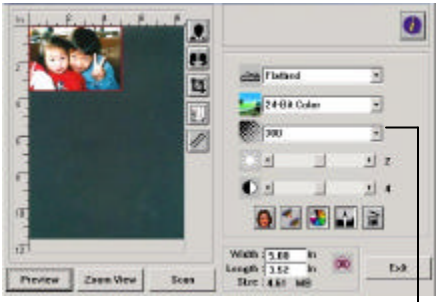
8-bit Color

24- bit Color

4.1.3 DETERMINING A PROPER RESOLUTION

1. Resolution

A proper resolution reproduces a clear image with good details. The resolution is measured by dots per inch (dpi).



Resolution: 50 dpi

Resolution: 100 dpi

Note

For your information, an A4 size color image scanned at 300 dpi at True Color mode consumes approximately 25 MB of disk space. A higher resolution (usually means over 600 dpi) is only recommended when you need to scan a small area at True Color mode.

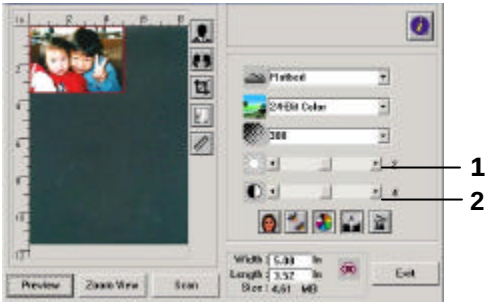
4.1.4 ADJUSTING THE BRIGHTNESS AND CONTRAST

1. Brightness

Adjusts the lightness or darkness of an image. The higher the value, the brighter the image.

2. Contrast

Adjusts the range between the darkest and the lightest shades in the image. The higher the contrast, the bigger the different grayscale.



Decrease Brightness

Normal

Increase Brightness

Decrease Contrast

Normal

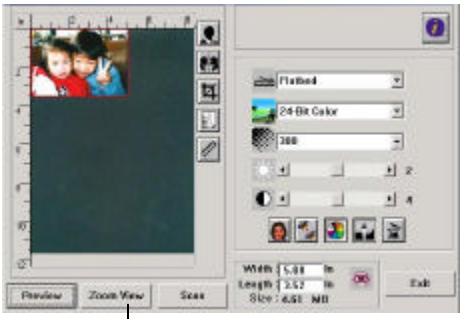
Increase Contrast

4.1.5 ENLARGING PREVIEWED IMAGE

1. Zoom View

Enlarge your previewed image to the max. of the preview window.

Note this function only enlarging your preview image. This does not enlarge your real image.



1

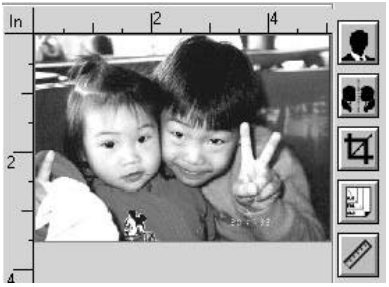
Before Zoom

After Zoom

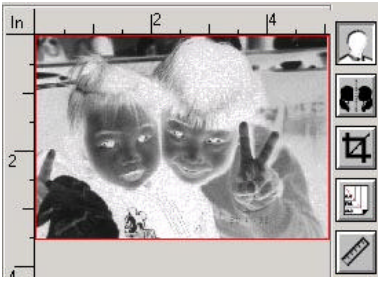
4.1.6 INVERTING AND SELECTING YOUR IMAGE

1. Invert

The invert command reverses the brightness and the color in the image. For color images, each pixel will be changed into its complementary color at the command of Invert.



Before Invert



After Invert

2. Mirror Function

Reverse the right and left side of your image.

Before Mirror

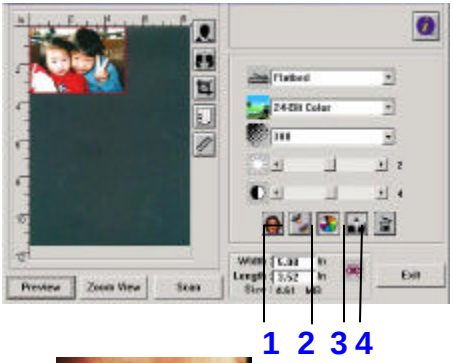
After Mirror

3. Auto Select Image

Automatically set the whole image as your scan area. (Or you may resize the area by "drag and drop" diagonally.)

4.1.7 ENHANCING YOUR IMAGE

1. **Descreen**
   Eliminates the ***moire patterns**** commonly found in printed matter.
2. **Sharpen**
   Sharpen the scanned image.



Before Descreen

After Descreen

Before Sharpen

After Sharpen

***Moire pattern:** An undesirable pattern in a color printing resulting from incorrect screen angle of overprinting halftone.*

3. Color Adjustment

Adjusts the color quality of the image so that it comes close to the original. This function uses default parameters to adjust the image.

Normal

After Color Matching

4. Auto Level

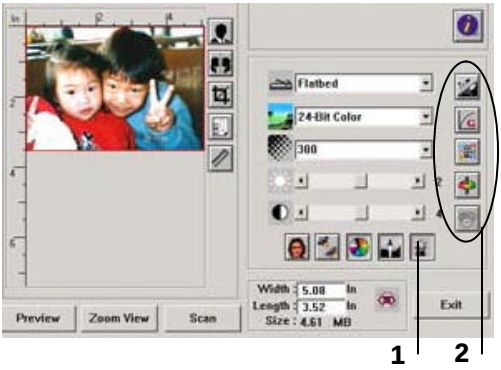
Automatically adjusts the highlight and shadow areas of the scanned image to optimize your image.

Normal

After Auto Level

4.2 USING THE ADVANCED FEATURES

4.2.1 THE SWITCH BUTTON

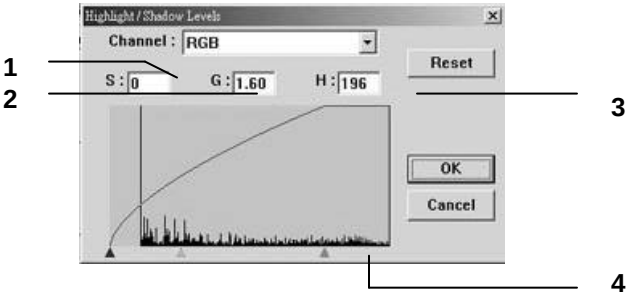


1. Click the button to pop up the advanced settings bar at the right side. The advanced settings include Highlight/Shadow, Hue/Saturation/Lightness, Curve, Color Balance, Color Drop-out.

2. The Advanced Settings bar

4.2.2 ADJUSTING HIGHLIGHT/SHADOW LEVELS

Highlight refers the lightest point in a scanned image while shadow refers the darkest point. Using Highlight and Shadow tool together allows you to extend the range of color and reveal more details in a gray or color image.



1. **Shadow:** The darkest point of an image.
2. **Gamma:** The midtones of the image.
3. **Highlight:** The lightest point of an image.
4. **Pointer:** Move the pointer to change the value.

When the value of gamma changes, the image changes accordingly.

Gamma Value: 1.0

Gamma Value: 1.4

Gamma Value: 2.0

When the value of highlight and shadow change, the image changes accordingly.

Highlight: 255/Shadow: 0(Normal)

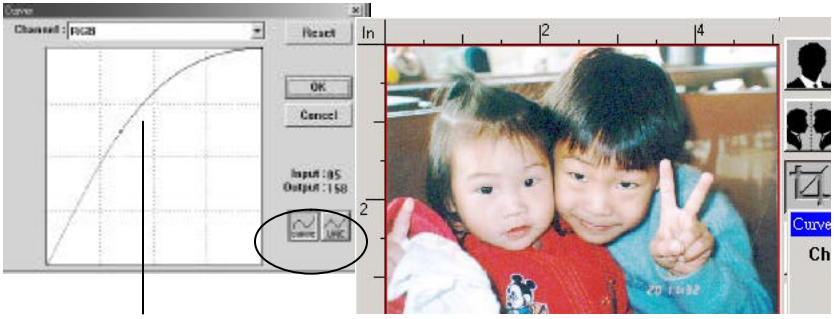
Highlight: 210/Shadow:10

Highlight: 200/Shadow:0

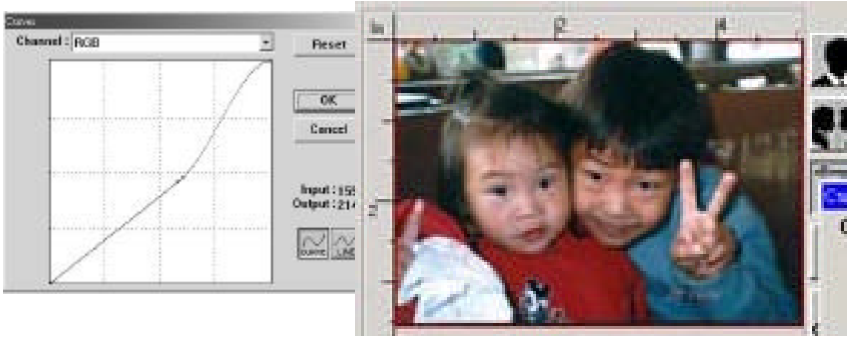
Highlight: 255/Shadow: 50

4.2.3 ADJUSTING THE BRIGHTNESS CURVE

Adjusts the midtones of the image without dramatically altering then lightest and the darkest areas.

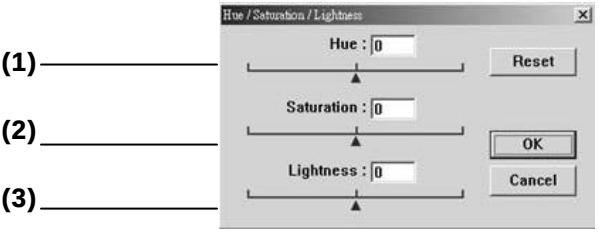


When the curve is moved up or down, the image turn brighter or darker.

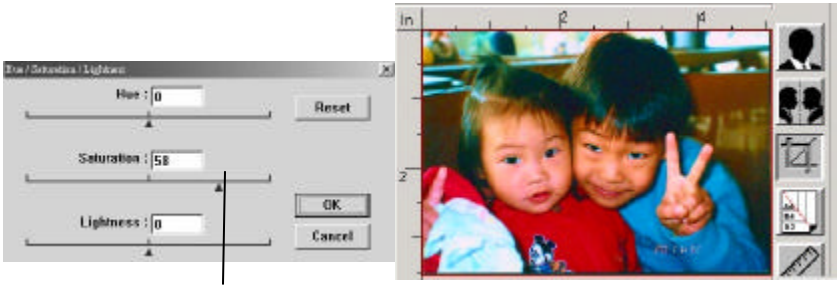


4.2.4 CHANGING COLOR HUE/SATURATION/LIGHTNESS

Improve your image by changing the level of hue/saturation/lightness.



(1). Hue	Adjust the hue by moving the triangle to the right or left. (Note the level of intensity for the color will be changed simultaneously when the hue adjustment is made).
(2). Saturation	Move the triangle to the right to increase the saturation level or to the left to decrease the level. The level of saturation decides if the color is pale or rich.
(3). Lightness	Increase the lightness by moving the triangle to the right or to the left to decrease the lightness.

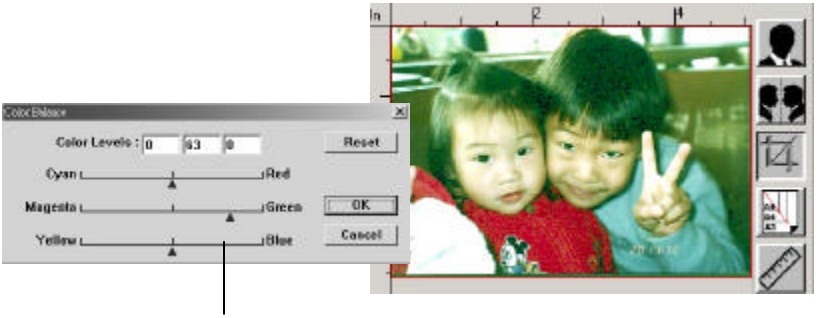


Move the Saturation pointer to the right, the color turns rich.

4.2.5 USING COLOR BALANCE

The Color Balance allows you to obtain an optimal image quality.

Move the pointer toward Red, the image turns into a reddish hue.

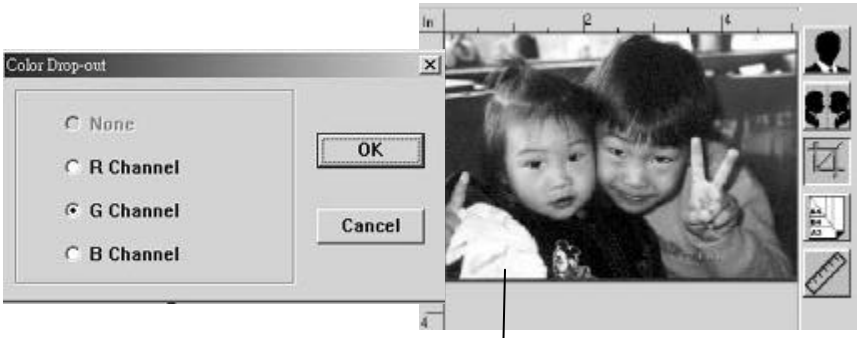


Move the pointer toward Green, the image turns into a greenish hue.

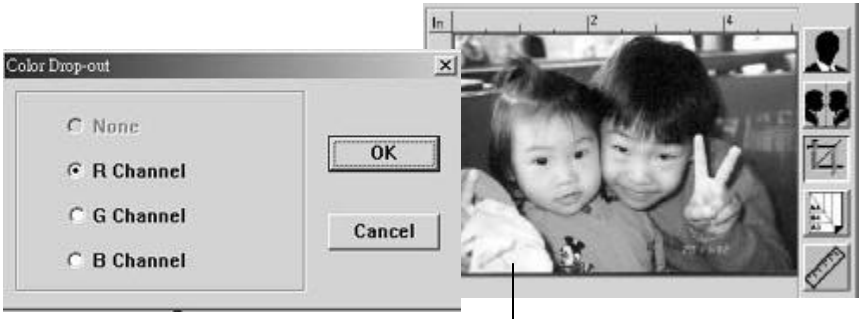
4.2.6 COLOR DROP-OUT

Click the button and a dialog box in below will be displayed. This dialog allows you to remove one of the R (Red), G (Green), or B (Blue) color channel. This function is particularly useful when you need to convert text using OCR software.

Note that this function supports only black & white and gray image. Therefore, be sure to choose any black & white or gray image type while applying this function.

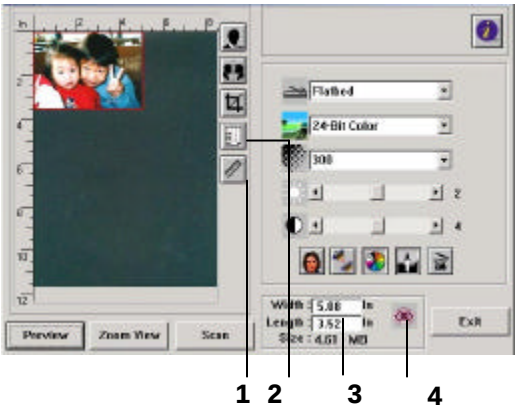


The effect on image after removing the G channel.



The effect on image after removing the R channel.

4.3 USING OTHER TOOLS



1. Measuring Unit	A reminder of the measuring system in use. By clicking the button, you can change the measuring unit. **Choice: Inch, cm, Pixel.**
2. Paper Size	Provide frequently scan sizes. **Choice: Card 4”x2.5”, Photo 5”x3”, Photo 6”x4”, B5, A5, A4, Letter, and Scanner Maximum.**
3. Image Size	Display image size for the scanned area.
4. Lock Image	Fix your output width and height.

5. CARE AND MAINTENANCE

5.1 CLEANING THE GLASS

The procedures

1) Soak a cotton swab with some isopropyl alcohol. (95%)
2) Open the document cover as shown in Figure 5-1. Wipe the document glass by moving the swab from side to side.
3) Close the document cover. Your scanner is now ready for use.

1. Document glass

Figure 5-1 The cleaning area

6. TROUBLESHOOTING

If you have problems with the operation of your scanner, please check the following troubleshooting hints.

6.1 FREQUENTLY ASKED QUESTIONS

Question: When the scanner is powered on, it makes noises and won't stand ready.

Answer: There are two possibilities:

1) You might fail to push the scanner shipping lock to its "use" position. If this is the case, pull the scanner status switch to its "use" position first.

2) The scanner is not placed on an even, flat desktop surface. This may cause the scanner to malfunction.

Question: The scanner is powered on, but the lamp does not light up.

Answer: The lamp is probably out of order. Contact your local dealer or distributor to replace the lamp. For your information, the average life time of the lamp is about 15,000 hours and the operating temperature for the scanner is between 10°C(50°F) and 40°C(104°F).

Question: To get image from the scanner is no problem. But when scanning, the scanner or the system will often crash.

Answer: 1) Please check if the cable is firmly seated.

2) Please note only two SCSI terminators can be connected to your SCSI daisy chain. One is at the end of the SCSI device, the other already in your host adapter.

Question: While scanning, the scanner often makes noises, or it scans back and forth.

Answer: Usually this means the memory of your computer is not enough or the speed of your CPU too slow. Please try to increase your memory to at least 32M or replace your CPU with Pentium or later.

Question: Why is it that the scanned image always comes out to be too dark?

Answer: 1) Modify the Gamma setting to1.8~2.2 for your monitor and, when printing, set the Gamma setting to 2.2 for your printer.

2) Adjust the Brightness setting from the TWAIN user interface to get a brighter image.

Question: The scanner works well except for the line art image. The lines in the image seem to be much thicker than the original one.

Answer: Increase the Brightness or adjust the Threshold setting to improve line art image.

6.2 TECHNICAL SERVICE

Technical support for Avision scanner is provided at Avision Technical Assistance Center (ATAC). Before contact with ATAC, please prepare the following information.

- Scanner serial & revision number (located on the bottom of the scanner)
- Hardware configuration (e.g., your host CPU type, RAM size, free disk space, display card, interface card, etc.)
- The name and version of your software application
- The version of your scanner driver.

Please call us at:

Avision Inc.

Address:	No.20, Creation Road I, Science-Based Industrial Park, Hsinchu, Taiwan
Telephone number:	+886 (3) 578-2388
Fax number:	+886 (3) 577-7017
Web Site:	http://www.avision.com
E-mail:	service@avision.com.tw

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