

AV6240
1-pass Color
Image Scanner

User's Manual

Version 1.0

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- * 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.

CAUTION: Any changes or modifications not expressly approved by the manufacture of this device could void the user's authority to operate the equipment.

Table of Contents

1. INTRODUCTION	1-1
2. SCANNER INSTALLATION	2-1
2.1 INSTALLATION OF THE SCANNER.....	2-1
2.2 INSTALLATION OF THE SCSI CARD	2-4
2.2.1 Hardware Installation.....	2-4
2.2.2 Software Installation	2-6
2.3 DOCUMENT LOADING	2-7
2.4 CONNECTING THE CABLE	2-8
3. SCANNER DRIVER INSTALLATION	3-1
3.1 AUTO-INSTALLATION PROGRAM	3-1
4. SCANNER OPERATION & DOCUMENT PRINTING	4-1
4.1 SCANNING SOURCE:	4-3
4.2 IMAGE TYPE	4-4
4.3 RESOLUTION CONTROL	4-6
4.4 IMAGE CONTROL.....	4-7
4.5 SCANNING	4-11
5. MAINTENANCE	5-1
5.1 CLEANING THE COPYBOARD GLASS	5-1
6. TROUBLESHOOTING	6-1
6.1 QUESTIONS AND ANSWERS	6-2
6.2 TECHNICAL SERVICE	6-4
7. SPECIFICATIONS	7-1
7.1 MODEL: AV6240.....	7-1
APPENDIX DETAILED PROCEDURE FOR INSTALLING SCSI DRIVER	a

1. Introduction

Congratulations on your purchase of Avison AV6240 1-pass color flatbed image scanner. Avison Inc. is one of the leading companies in the world to develop high performance image scanners.

Before you install and operate the new scanner, please take a few minutes to read through the manual. It provides you with the proper instructions on how to unpack, install, operate and maintain the scanner.

Figure 1-1 shows how the scanner is packed, you can check all the items against your checklist. If you did not receive all the items, please contact your authorized local dealer immediately.

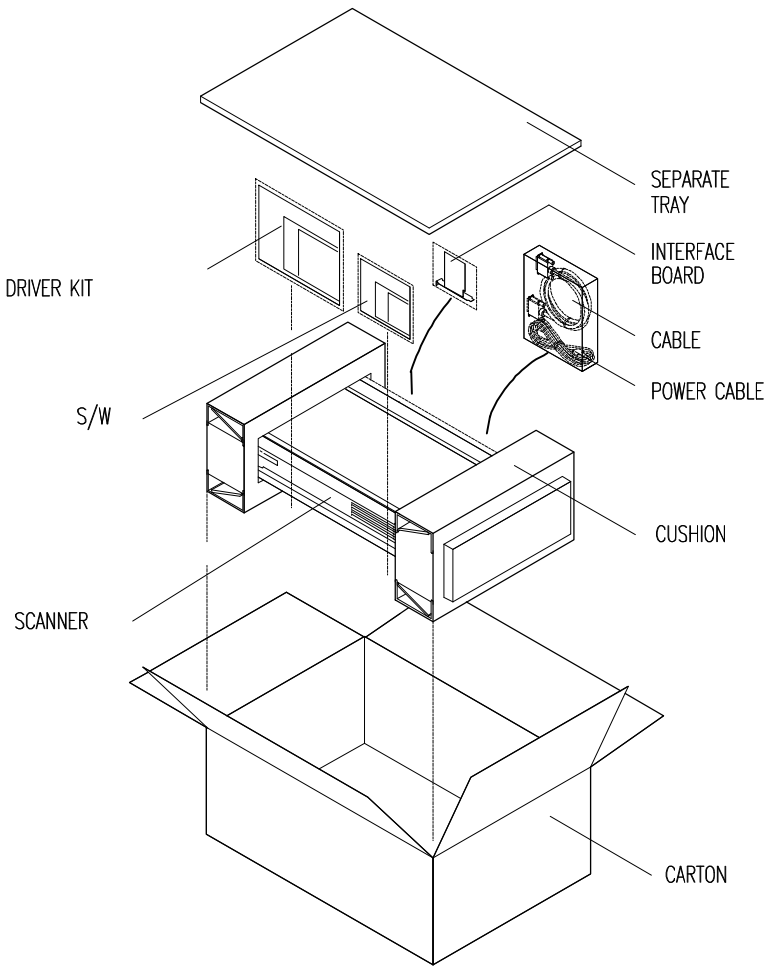


Figure 1-1 Scanner packing

2. Scanner Installation

Precautions

- * Keep the scanner out of 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 scanning problems.
- * Retain the scanner box and packing materials for shipping purposes.

2.1 Installation of the Scanner

Please unpack the scanner carefully, and check the contents against *the checklist*. If any items are missing or damaged, please contact your authorized local dealer immediately.

Remove the shipping retainer:

1. Stand the scanner on its side as shown in Figure 2-1. (See Figure 2-1)
2. Unscrew the retainer screw.
3. Pull out the shipping retainer, put it in the “use position” slot next by and there fix it with the screw. (See Figure 2-2)
4. Put back down the scanner for normal operation.

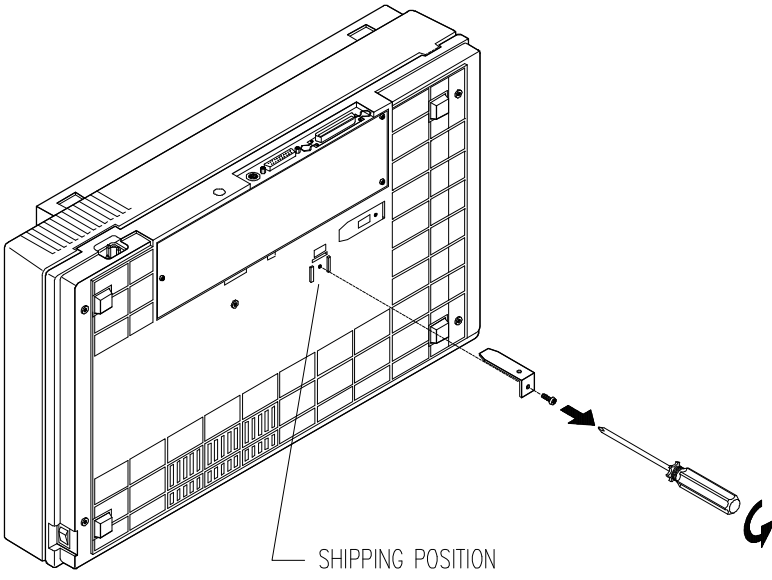


Figure 2-1 Remove the shipping retainer.

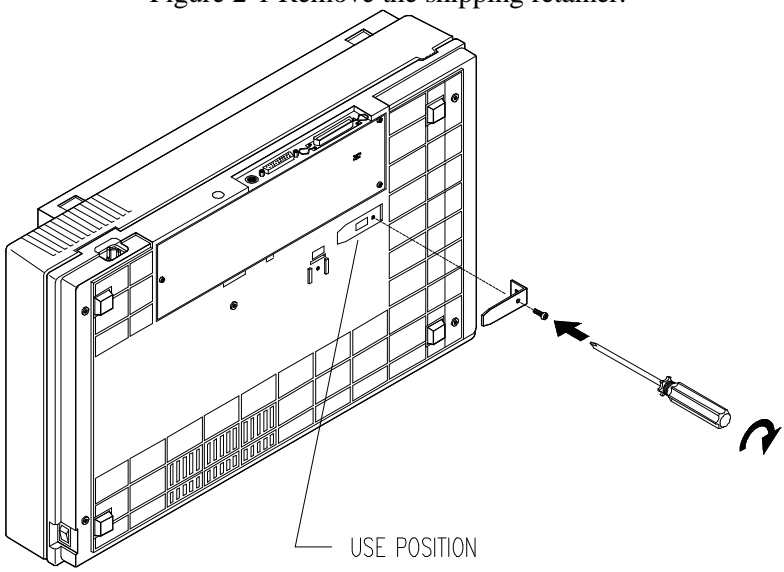


Figure 2-2 Fix the shipping retainer at the “use position.”

Refit the shipping retainer:

Please follow the instructions below if you are to transport the scanner.

1. Turn off the scanner.
2. Open the document cover so that the copyboard glass and the reading engine comes visible in sight.
3. Turn on the scanner. At this, the reading engine should move a few inches forward and stay there for a few seconds. Turn off the power during this pause.
4. Raise the scanner high enough to unscrew the shipping retainer from the “use position” and fix it at the “ship position.”

2.2 Installation of the SCSI Card

2.2.1 Hardware Installation

The hardware installation of SCSI card is quite simple, just follow the following procedure:

- (1) Power off your computer.
- (2) Plug the SCSI card in an available slot of your computer. Be sure to screw it firmly.
- (3) Power on your computer.

The color image scanner bundled with SCSI card is designed to operate with its default setting in most ISA-class PCs.

SCSI ID:

When you have several devices on a SCSI chain, you may need to adjust the SCSI ID selector setting located on the back of the scanner. This setting assigns a specific "device ID" to the scanner. If the assignment conflicts with an existing SCSI device, please select a new ID. (See Figure 2-4)

Note: The factory setting for Avision AV6240 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 actual use.

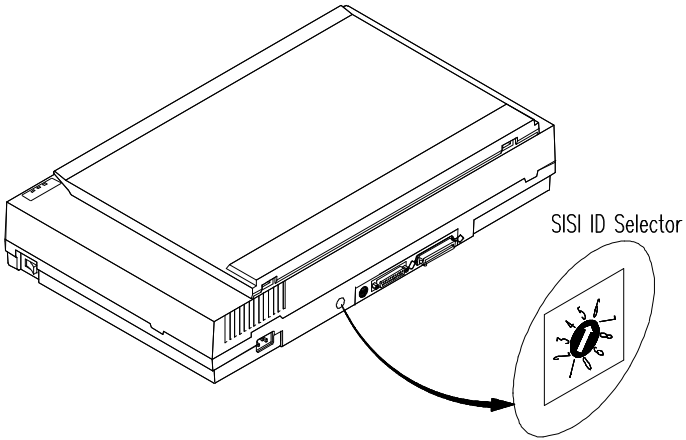


Figure 2-3 Adjust the SCSI ID setting.

2.2.2 *Software Installation*

In Windows 3.1

- (1) If your scanner is bundled with a SCSI card, then install the scanner driver will simultaneously complete the installation of the SCSI card driver.
- (2) If you purchased your SCSI card separately from the scanner, then please follow the manual provided by your SCSI card supplier.

In Windows 95

- (1) Press Start>Setting>Control Panel. And then double click "Add New Hardware" icon. Select SCSI Adapter.
- (2) Select "Have disk" and type "d:\DTCSCSI"(d means the letter for your current CD-ROM drive)
- (3) Press Finish button and restart Windows 95.

In Windows NT

- (1) Press Start>Setting>Control Panel. And then double click "Add New Hardware" button. Select SCSI Adapter.
- (2) Select Driver tag and Add new SCSI Adapter.
- (3) Select Have disk and type "d:\DTCSCSI(d means the letter for your current CD-ROM drive)
- (4) Select Finish and restart Windows NT.

Note: For more details on how to install the SCSI driver, please refer to the Appendix or your SCSI card manual if you purchased it separately from Avision.

2.3 Document loading

For flatbed scan, see Figure 2-4.

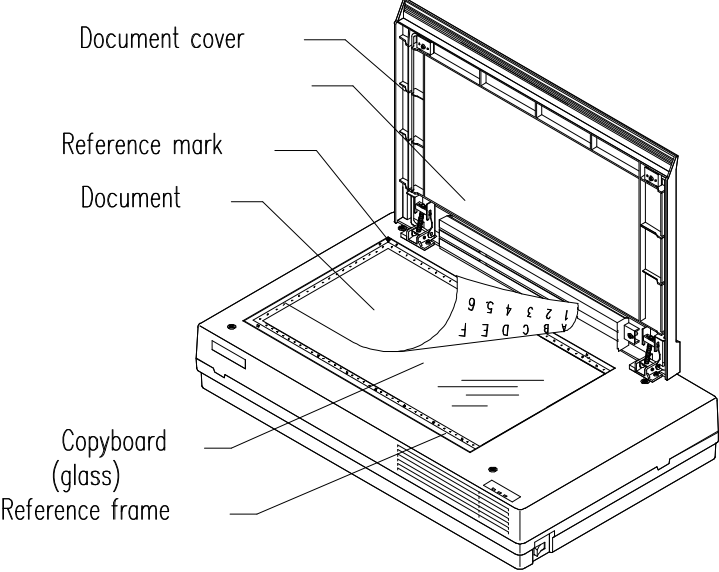


Figure 2-4 Put documents on the scanner.

2.4 Connecting the Cable

Be sure the scanner power is switched off.

Connect the power cable and signal cable as shown in Figure 2-5.

Turning on the Power

The power is controlled by a toggle switch on the left side of the scanner. To turn on the scanner, press the switch toward "1." At this, the POWER LED should light on. If not, please check the power.

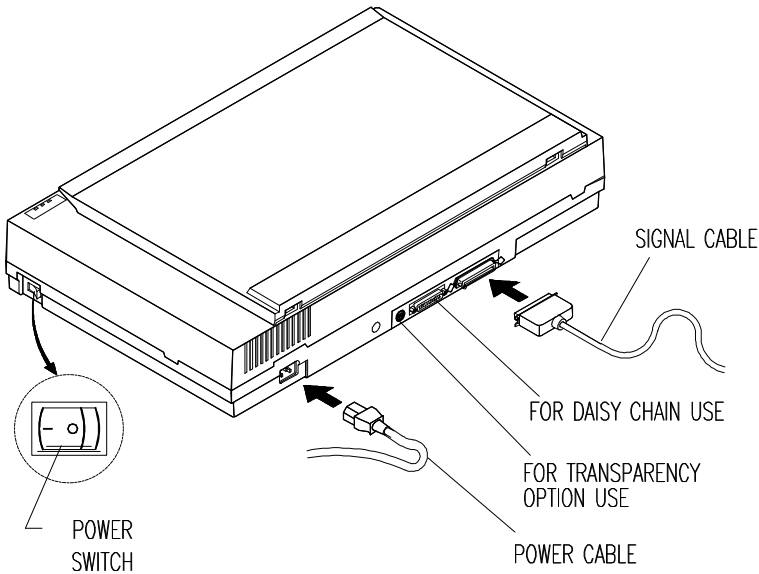


Figure 2-5 AV6240 cable connection

Connecting the SCSI cable to the scanner

If the scanner is the only (or final) SCSI device connected to your host computer, you have to plug the Regular End Terminator into the unused SCSI connector on the scanner (See Figure 2-6). The scanner will not function properly unless every SCSI connector is either connected or terminated.

If the scanner is linked in a SCSI chain (between the host computer and other devices), plug the SCSI cable from other devices into the unused SCSI connector of the scanner (See Figure 2-7).

Single -Device Configuration

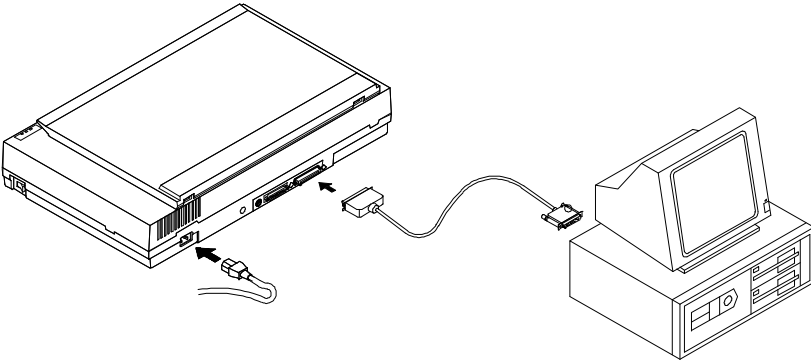


Figure 2-6 In the single-device configuration, the SCSI connection terminates at the scanner.

SCSI Chain Configuration

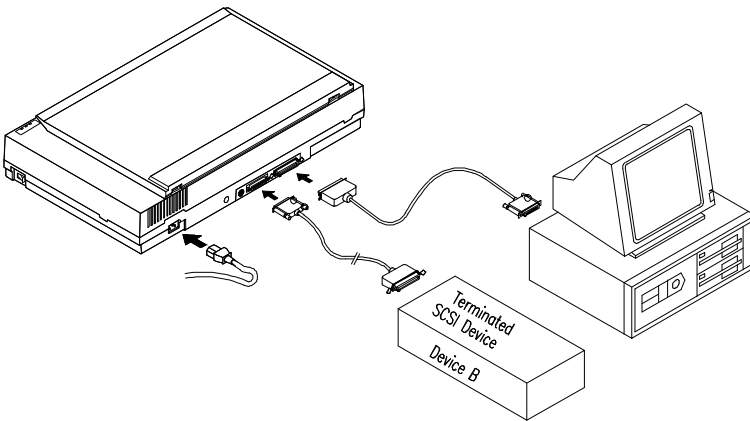


Figure 2-7 In the SCSI chain configuration, the scanner is connected to the host computer; a second SCSI cable then connects the scanner with other devices, such as a printer.

Scanner Diagnostics

The scanner has a built-in self-diagnostic function to detect system errors. The self-test is initiated each time the scanner is turned on. During the test, the READY LED and ERROR LED will light on. At the end of the test, if no error occurs, the READY LED should stay solid while the ERROR LED should extinguish. If the ERROR LED goes on blinking after the diagnostic test, please consult your local dealer to resolve the problem.

3. Scanner Driver Installation

To run AV6240 1-pass color scanner at rated speed, the following minimum requirements are recommended.

- * IBM compatible PC 486, Pentium, or higher;
- * Microsoft Windows 3.1 or Windows 95 or Windows NT;
- * DOS 5.0 or higher;
- * 20 megabytes of available hard disk space;
- * 8 megabytes of RAM (16 megabytes or higher recommended);
- * A video graphics array (VGA) monitor;
- * A Microsoft Windows-compatible pointing device (e.g., mouse);
- * A CD-ROM drive.

3.1 Auto-Installation Program

The installation procedures of Avison scanner driver with Avison Auto-Installation Program are as follows:

1. Start Windows 3.1 or Windows 95 or Windows NT.
2. Insert *Avison PaperCom Supreme* CD into your CD-ROM drive.

In Windows 3.1 or Windows 3.11

3. From the File Menu, choose RUN, type d:\driver\AV6240.exe (d: the drive in use), and then click OK.

For Windows 95 or Windows NT4.0 (See Figure 3-1,3-2)

3. Press the Start button, choose RUN, type type d:\driver\AV6240.exe (d: the drive in use), and then click OK.
4. Follow the instructions on the screen to complete the installation (usually just clicking OK will complete the installation).

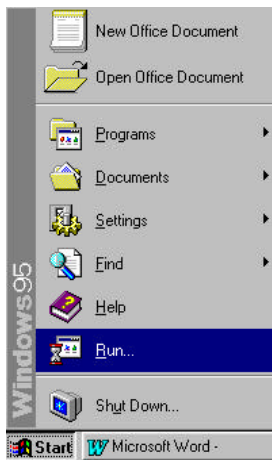


Fig. 3-1

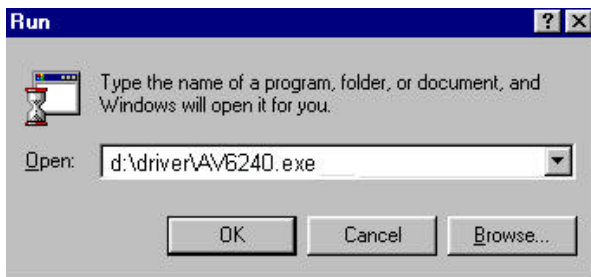


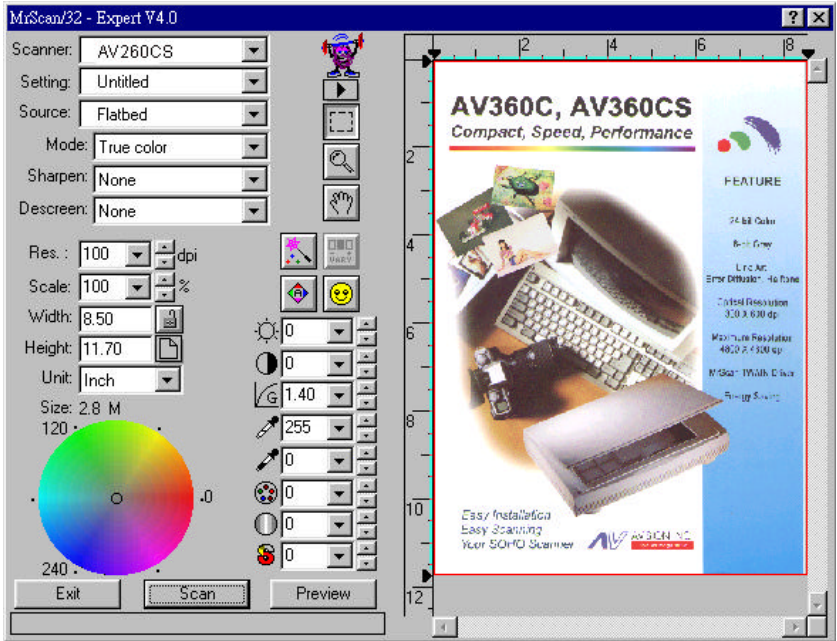
Fig. 3-2

4. Scanner Operation & Document Printing

TWAIN is the most popular interface among image-editing application software.

Scanning Images from within an Application (TWAIN)

1. Open your application and choose ***Select Source*** from the File menu. If the ***Select Source*** menu options are not available from the File menu, see the user guide of your application to learn how the TWAIN link is used.
2. A dialog box appears containing the different TWAIN sources that you can choose for bringing an image into your application.
3. Select ***MrScan/32-Expert Vx.xx*** as the source.
4. You need to select Mrscan/32-Expert Vx.xx for just once except when you have used the dialog box to select a different source. In that case, you will need to select Mrscan/32-Expert Vx.xx as the source again before you can resume your use of AV6240 scanner. Place the image to be scanned face down on the scanner.
5. From the File menu, select ***Acquire***.
6. AV6240 TWAIN user interface will pop up on the screen. Click on the ***Prescan*** or ***Scan*** button to get the image.

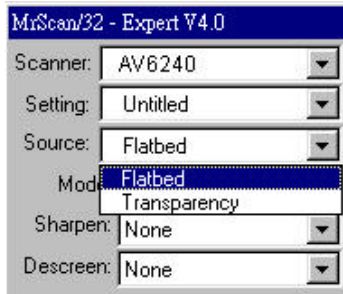


Avison TWAIN user interface

4.1 Scanning Source:

AV624 scans two types of original source, the document as well as the transparency. Select either one from the Source drop-down list box as shown in the following Figure.

Note: To make transparency scanning work, you have to purchase the transparency unit separately. You can consult the details from your nearest dealer.



4.2 Image Type

You can select the *Type* menu for the mode you want to use with your document or image.



Line art

Line art includes only black and white areas. There are no intermediate shades of gray in between.

Halftone

In addition to the black and white display, Halftone can create the illusion of shades of gray by using different size of dots.

Gray (256 levels gray scale)

Scanner recognizes each point in the image as a shade of gray (continuous tone). 8-bit gray gives more detailed information about the image.

256 Color

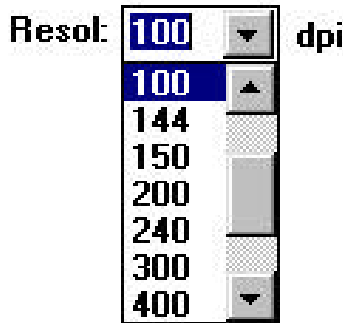
256 Color presents 256 colors in a color image.

True Color (16.7 million colors)

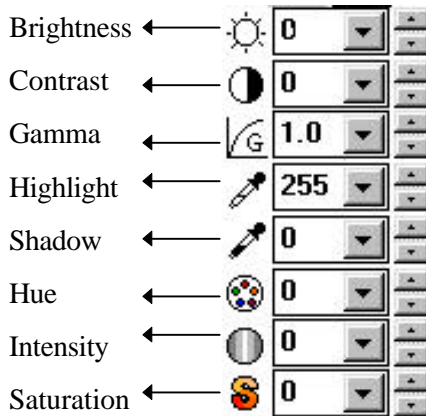
Color image have continuous tones along with its color hues.

4.3 Resolution Control

Resolution: A good control of the resolution results a satisfactory detail of an image. The resolution is measured by dots per inch(dpi). Normally the greater the dpi number, the higher the resolution and the image file size. Yet the greater resolution takes more time, memory and disk space, therefore, up to a certain degree of dpi, the resolution will not visually be improved, on the contrary, it makes your files more unmanageable.



4.4 Image Control



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

Contrast: Adjusts the range between the darkest and the lightest shades in the image. The higher the contrast, the bigger the different gray scales.

Gamma: Adjusts the midtone of the image without losing details of the lightest and the darkest areas.

Highlight: Adjusts the highlight area of the image.

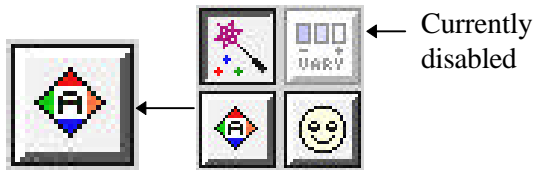
Shadow: Adjusts the darkest area of the image.

Hue: Adjust the hue up to 360 by clicking your desired color on the Color wheel or clicking the up or down arrow button. (Note the level of intensity will be changed simultaneously when the hue adjustment is made.)

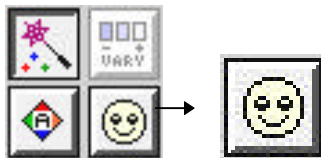
Intensity: Adjust the color strength by clicking the up or down arrow button.

Saturation: Adjust the saturation level for the color by clicking the up or down arrow button. The level of saturation decides if the color is pale or rich.

Auto Level Automatically adjusts the highlight and shadow areas of the scanned image to give it an optimal effect.

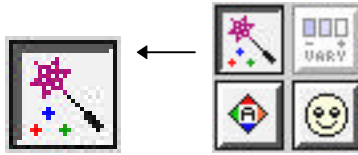


Invert: The invert command reverses the brightness and the color in the image. For color images, each pixel will be changed into its complementary color at the command of *Invert*.



Color Matching: Adjusts the color quality of the image so that it

comes close to that of the original. This function uses default parameters to adjust the image.



Sharpen:

Sharpens the scanned image. Look for more selections under this item.

Sharpen: ▼

Descreen: Eliminates the moire patterns commonly found in printed matter.

Descreen: ▼



Before Descreen



After Descreen

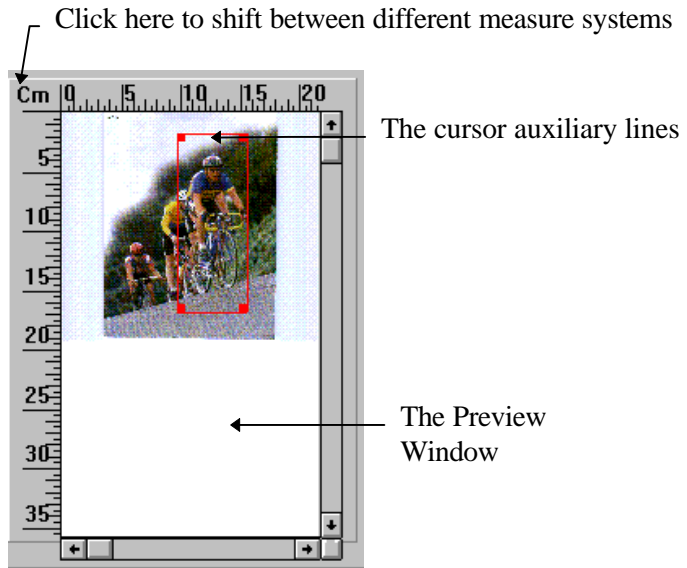
4.5 Scanning

Preview: Previews your image roughly and allocates the area to be scanned.

Scan: Scans the area with the parameters you have set.

Exit: Cancel the current job.

As shown in the figure below, in the Preview window, you can define the area to be scanned by dragging the cursor auxiliary lines with the mouse.



5. Maintenance

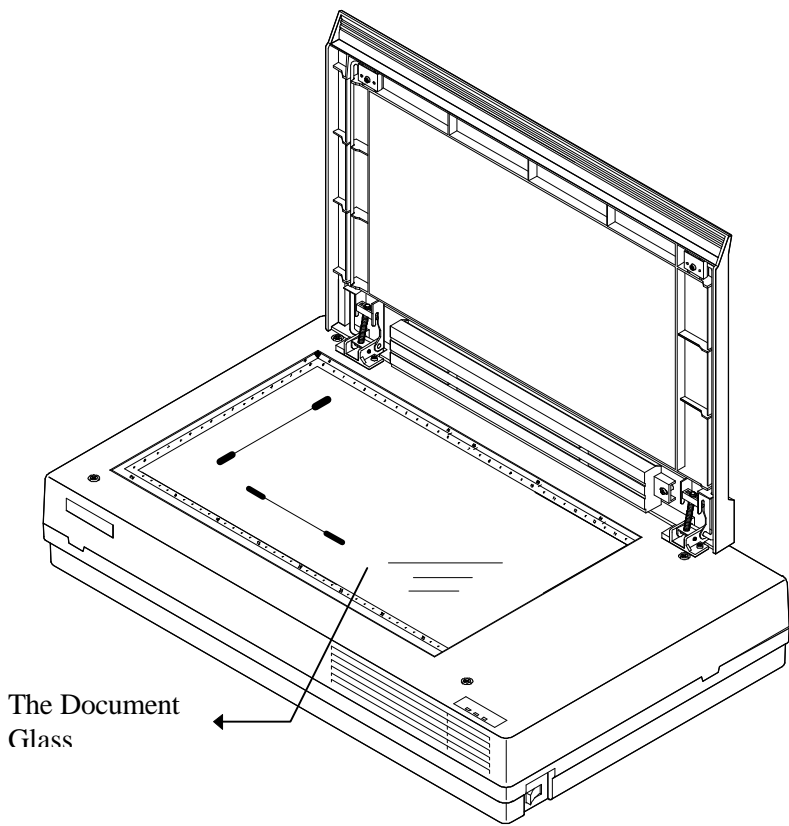
5.1 Cleaning the Copyboard Glass

Your scanner is designed to be maintenance free. However, it still needs to be cleaned from time to time to ensure optimum image quality and performance.

The scanner document glass may be contaminated with ink, toner particles or paper coatings. As a result, the scanner needs to be cleaned occasionally particularly if the scanned image looks smeared.

The cleaning procedures (See Figure 5-1)

- 1) Open the document cover.
- 2) Soak a cotton swab with some isopropyl alcohol. (95%).
- 3) Wipe the copyboard glass by moving the swab from side to side. Repeat this step until the whole copyboard glass is cleaned.
- 4) Close the document cover. Your scanner is now ready for use.



The Document Glass

Fig. 5-1 Cleaning the document glass

6. Troubleshooting

The scanner will automatically perform a simple self-test each time it is turned on. This helps spot major system errors in the scanner itself.

During the test, the READY LED and ERROR LED will light on and the scanner reading head will move a bit forward. Once the test is finished and if no error occurred, the READY LED will stay solid and the ERROR LED will extinguish and the scanner reading head will back to its leftmost position.

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

6.1 Questions and Answers

Question: The LED indicates that the scanner is ready, but the scanner does not act to the Scan command from the host computer.

Answer: Please check that the signal cable is firmly seated, and invoke the Scan command again. If there is still no response, please reboot the host computer as well as reset the scanner by turning it off and then on again.

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

Answer: There are two possibilities:

- 1) You forgot to remove the shipping retainer from the scanner. If this is the case, please remove the shipping retainer first.
- 2) The scanner is not placed on an even, flat desktop surface. This may cause the scanner to function improperly.

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

Answer: The possible causes are as follows:

- 1) The lamp is out of order. In this case, contact your local dealer or distributor to change the lamp. The average life time of the lamp is about 50,000 hours.
- 2) The fuse on the main board of the scanner is burned. You can check the main board of the scanner. If the fuse is burned, replace it with a new fuse that is 250V/2A .

- 3) If the fuse is burned again after the changing, it means the inverter of the lamp is burned. Call your local dealer or distributor to replace the inverter.

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 that the cable is firmly seated.
2) 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. (Please see Section 2-2 for more details.)

Question: Scanning, the scanner will often make noises, or it scans back and forth.

Answer: Please select a lower speed from the TWAIN user interface for low-speed PC.

Question: Why is it the scanned images always come out to be too dark.

Answer: 1) Modify the Gamma setting to 1.8 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 otherwise but for the line art, of which the lines seem to be much thicker than those of the original.

Answer: Use the Brightness or Threshold setting to control the line art image.

6.2 *Technical Service*

Technical support for Avision scanner is provided at the 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...);
- * The name and version of your scanning software application;
- * The version of your scanner driver.

Please call us at:

US and Canada Area:

Avision Labs., Inc.

Address :6049 Stewart Ave., Fremont, CA 94538

Telephone number :510-440-8785

Fax number :510-440-8337

Web Site :<http://www.avision.com>

E-mail :avision@avision-labs.com

Other Area:

Avision Inc.

Address :No.20, Creation Road, Science-Based Industrial Park, Hsinchu, Taiwan, R.O.C.

Telephone number :886-3-5782388

Fax number :886-3-5777017

Email :service@avision.com.tw

Note: You can find the latest driver and documents
in our homepage located in World Wide
Web(WWW) with our web site:
<http://www.avision.com>

7. Specifications

All specifications are subject to change without notice.

7.1 Model: AV6240

Scanner Type: 1-pass 30-bit color flatbed

Optical Resolution: 600 dpi * 1200 dpi (H*V)

Max Resolution: 19200 dpi * 19200 dpi

Scanning modes: Black & White mode
Halftone mode (64-step)
8-bit Gray scale (256 levels)
24-bit color (16.7 Millions of color)
(30-bit internal, auto mapping to optimal 24-bit)

Document size: 216 x 356 mm (8.5 x 14 inches)

Interface: SCSI 2

Power Source: 100-240 VAC, 50-60 Hz

Power Consumption: 35 watts

Dimensions: 570 mm x 350 mm x 117 mm (WxHxD)

Weight: Approx. 20 lbs. (9 kg)

EC Declaration of Conformity

According to EN45014

Manufacturer's Name: AVISION INC.
Manufacturer's Address: No. 20, Creation
Rd. I, Science-Based
Industrial-Park,
Hsinchu, Taiwan,
R.O.C.

declare that the product

Model Number : AV6240

conforms to the following Product Specifications:

Emission: EN 50081-1(1992)
EN 55022(class B)
(Conducted Radiated) (1994)
EN 60555-2 (Harmonics) (1987)
EN 60555-3 (Flicker) (1987)

Immunity:
EN50082-1(1992)
IEC 1000-4-2 (ESD)(1995)
IEC 1000-4-3(RS)(1995)
IEC 1000-4-4(EFT/Burst)(1995)
IEC 1000-4-5(SURGE)(1995)

Date: December, 1995

Appendix Detailed Procedure for installing SCSI Driver

Continue on subsection 2.2.2 *Installation of the SCSI Card,*

In Windows 95, please:

- (4) The "New Hardware Found?" dialog box will be displayed. Choose Driver from hard disk provided by the hardware manufacturer or choose Do not install a driver.

If you choose Driver from hard disk provided by the hardware manufacturer, please follow the following procedure.

- (5) The "Install from hard disk provided by the hardware manufacturer" dialog box will be displayed. Press Browse button to assign your path. Type d:\DTCSCSI (d is the letter indicating your current CD-ROM drive). Press OK.
- (6) The unknown device statement will be displayed. Press OK.
- (7) The d:\SCSI and filename will be displayed. Press OK. You are now completing the installation of SCSI card on your computer.

If you choose Do not install a driver, please follow the following procedure.

- (5) Click Windows Start icon from the bottom. Choose Setting. Choose Control Panel from Setting.
- (6) Double click "Add new hardware" icon from the Control Panel. The "Add new hardware wizard" dialog box will be displayed. Choose Next.
- (7) The "Do you want Windows to search for your hardware" dialog box will be displayed. Press No and then press Next.
- (8) Choose hardware type "SCSI Controller", then press Next.

- (9) The "click the manufacturer & model of your hardware" dialog box will be displayed. Choose current SCSI manufacturer and model and then press Next. Follow the subsequent procedure as indicated to complete the installation and to restart Windows 95.
- (10) If current manufacturer and model are not listed in the selection box, press Have disk button. The "Have disk" dialog box will be displayed. Type d:\DTCSCSI in the path box(d is the letter indicating your current CD-ROM drive). Choose Confirm and follow the subsequent procedure as indicated on the screen to complete the installation.
- (11) The "Finish" dialog box will be displayed. Choose Finish and then choose Restart the Windows 95.

In Windows 3.1, please:

- (4) If your SCSI card is bundled with Avision AV260CS, then install the scanner driver will simultaneously install the SCSI card driver.
- (5) If your SCSI card is not bundled with Avision AV260CS, then please follow the installation sheet contained in your SCSI card.

In Windows NT, please:

- (5) Click Windows Start icon from the bottom. Choose Setting. Choose Control Panel from Setting.
- (6) Choose SCSI Adapter from the Control Panel. The " SCSI Adapter" dialog box will be displayed. Choose Driver.
- (7) Choose Add and select manufacturer and SCSI adapter
- (8) Choose Have disk if your SCSI card manufacturer and SCSI adapter is not listed in the selection box. Type d:\DTCSCSI (d representing the letter of your current CD-ROM drive) and choose Confirm.
- (9) Follow the subsequent procedure on the screen to complete the installation.

When the "System Setting Change" dialog box appears, choose OK to restart Windows NT.