

StudioScan

Owner's Guide



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StudioScan and Transparency Module regulation compliance North-American version

Safety regulations

The StudioScan and Transparency module are designed to comply with:

UL 1950-D3

CSA C22.2 No. 950 - M89

UL Safety Statement

Instructions for power supply cord selection:

For units set at 115V:

Use a UL listed, Type SVT or SJT cord, three conductor, rated 10A 125V, not to exceed 15ft in length.

- ❖ *Warning: For the reason of safety, besides the personal maintenance mentioned in this operation manual, don't try to remove any mechanical parts or any electronic devices. If you need service, our dealer and service offices are available to help you.*

Electromagnetic Interference

The StudioScan is designed to comply with:

FCC 20718, part 15, subpart B, class B

FCC

Federal Communications Commission Radio Frequency Interference Statement.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television

reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Notice:

(1) The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

(2) Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.

Canadian department of Communications

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques (de la class B) prescrites dans le Règlement sur le brouillage radioélectriques édicté par le ministère des Communications du Canada.

StudioScan and Transparency Module regulation compliance International version

Safety regulations

The StudioScan and Transparency Module are designed to comply with:

VDE 0805

TÜV

Wichtige Sicherheitshinweise

1. Bitte Lesen Sie sich diese Hinweise sorgfältig durch.
2. Um eine Beschädigung des Gerätes zu vermeiden sollten Sie nur Zuberhörteile verwenden, die vom Hersteller zugelassen sind.
3. Das Gerät ist vor Feuchtigkeit zu schützen.
4. Bei der Aufstellung des Gerätes ist auf sicheren Stand zu achten. Ein Kippen oder Fallen könnte Verletzungen hervorrufen. Verwenden Sie nur sichere Standorte und beachten Sie die Aufstellhinweise des Herstellers.
5. Die Belüftungsöffnungen dienen zur Luftzirkulation die das Gerät vor Überhitzung schützt. Sorgen Sie dafür, daß diese Öffnungen nicht abgedeckt werden.
6. Die Netzanschlußsteckdose muß aus Gründen der elektrischen Sicherheit einen Schutzleiterkontakt haben.
7. Durch die Lüftungsöffnungen dürfen niemals Gegenstände oder Flüssigkeiten in das Gerät gelangen. Dies könnte einen Brand bzw. elektrischen Schlag auslösen.
8. Öffnen Sie niemals das Gerät. Das Gerät darf aus Gründen der elektrischen Sicherheit nur von autorisiertem Servicepersonal geöffnet werden.
9. Die Steckdose sollte nahe dem Gerät und leicht zugänglich sein.

Electromagnetic Interference

The StudioScan is designed to comply with:

VDE 0871, class B

VDE 0875, level N

Introduction



Introduction

This chapter introduces you to your StudioScan and to the different manuals that came with your scanner.

About your StudioScan

The StudioScan is an 8-bit flatbed desktop scanner. You can scan line-art, halftone, gray-scale and color reflective originals up to legal or A4 format. If you purchased the transparency module, you can scan transparent originals as well. The StudioScan is a one pass color scanner with a resolution of 600 dpi. The image sensor is a linear array CCD (Charge Coupled Device) with a daylight fluorescent light.

With its powerful and easy-to-use scanner driver software, the StudioScan gives you easy access to high quality color scans. The scanner driver software gives you a number of additional features that let you create special effects or reproduce even the most difficult originals.

The StudioScan includes a built-in SCSI interface which makes it very easy to connect the scanner to your Macintosh or PC.

The StudioScan exists in two versions, each submitted to different regulation approvals.

- the North-American version operates at voltage 100-120V and is designed to comply with UL 1950-D3, CSA C22.2 No. 950 - M89 and FCC 20718, part 15, subpart B, class B.
- the International version automatically adjusts to any AC electrical outlet rated from 100V to 240V and is designed to comply with VDE 0805, VDE 0871, class B and VDE 0875, level N.

About this Owner's Guide

This guide to the StudioScan contains three chapters and two appendices:

- Chapter 1, 'Preparing the scanner', shows you how to prepare your scanner for installation.
- Chapter 2, 'Installation', shows you how to set up your StudioScan and how to set the SCSI ID number.

- Chapter 3, 'Using the scanner', tells you how to place different originals.
- Chapter 4, 'Caring for your scanner', covers general maintenance tips for your scanner.
- Appendix A, 'Troubleshooting', can be helpful when you come across problems that you are unable to solve.
- Appendix B, 'Technical information', provides specifications and lists additional accessories available for your StudioScan.

About the User's Guide

Besides this Owner's Guide, your StudioScan comes with a User's Guide. In this guide you can find information on how to install and use the FotoLook software and a chapter containing an alphabetical reference to all the scanning options.

Conventions

The following conventions are used in this guide:

- ❖ *Note: A note of this type gives you additional information.*
- **Instructions are preceded by a small red square and are set in bold.**
- 1. **Numbered steps describe the actions you must take to perform a task.**

Chapter 1

Preparing the scanner



Preparing the scanner

This chapter assists you in preparing your StudioScan for installation. You'll find instructions for:

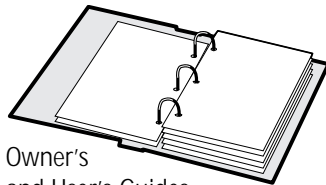
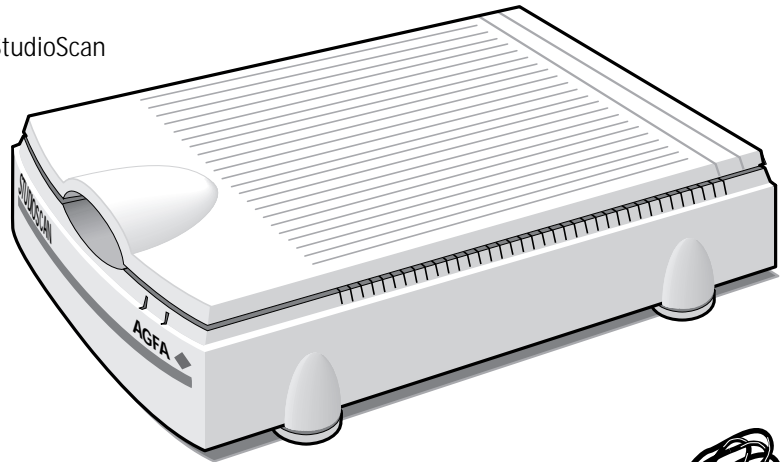
- Unpacking the scanner
- Unlocking the scanner
- Locking the scanner
- Installing the Transparency Module
- Testing the scanner

Unpacking the scanner

The first thing to do is to make sure you have everything you're supposed to.

1. **Open the packing box and take out all the items.**
2. **Check each item against Figure 1 to make sure that you have everything.**
If something is missing, contact your dealer or representative.
3. **Remove the plastic wrapping and the packing materials from the scanner.**
❖ *Note: Save the packing materials so that you can repack the scanner to protect it if you have to move it over long distances.*
4. **Fill out the Warranty and Registration card. You will find the product serial number on the identity label on the rear of your scanner.**

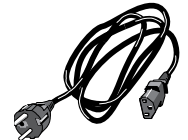
StudioScan



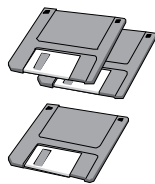
Owner's
and User's Guides



3-pin 110V Power cord
(North-American version)

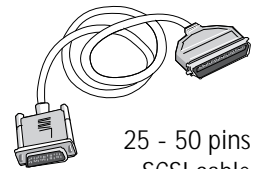


220V Power cord
(International version)

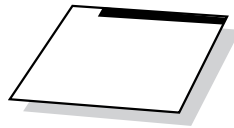


3 1/2 inch
Macintosh
FotoLook disks

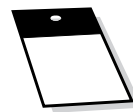
3 1/2 inch PC
FotoLook disks



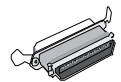
25 - 50 pins
SCSI cable



Warranty and Registration
card



Unlock card



External SCSI
terminator

Figure 1
The contents of the packing box

Unlocking the scanner

The scanner's optical assembly is held in place during shipment by a locking screw which must be loosened before the unit can be operated.

1. **Locate the locking screw at the base of the scanner as shown in Figure 2.**

2. **Unlock the locking screw with a small coin.**

The screw pushes out a small distance, nearly even to the bottom of the scanner.

- ❖ *Note: Leave the locking screw in place so that you can relock it if you have to move the scanner over long distances.*

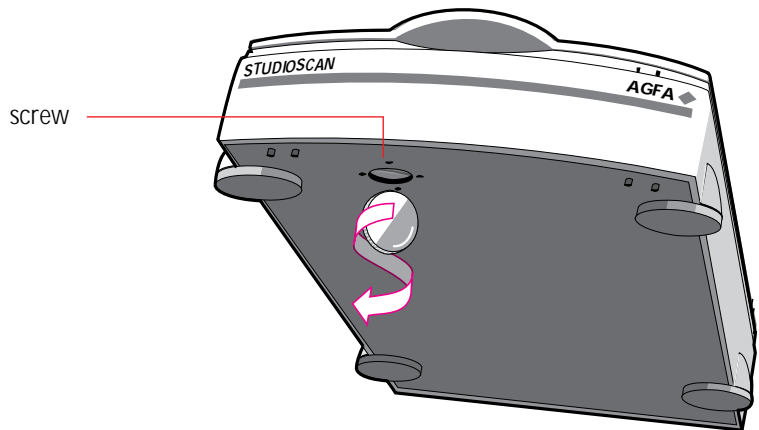


Figure 2
Unlocking the locking screw

Locking the scanner

If you need to transport the scanner over long distances, you should first replace the shipping restraint. This will protect the scanner's optical assembly from possible damage.

1. **Turn on your scanner.**

The Power indicator should light and the Ready indicator should blink. The scanner's optical assembly moves to its home position.

2. **Wait until the Ready indicator stops blinking.**
3. **Turn off your scanner.**

4. Locate the locking screw at the base of the scanner.
5. Tighten the locking screw with a small coin.
6. Repack the scanner with the original packing materials to protect it.

Taking a closer look

Now that you have the scanner out of the box, take a closer look so that you're familiar with its parts. Figure 3 and Figure 4 illustrate the locations of the different parts of your StudioScan.

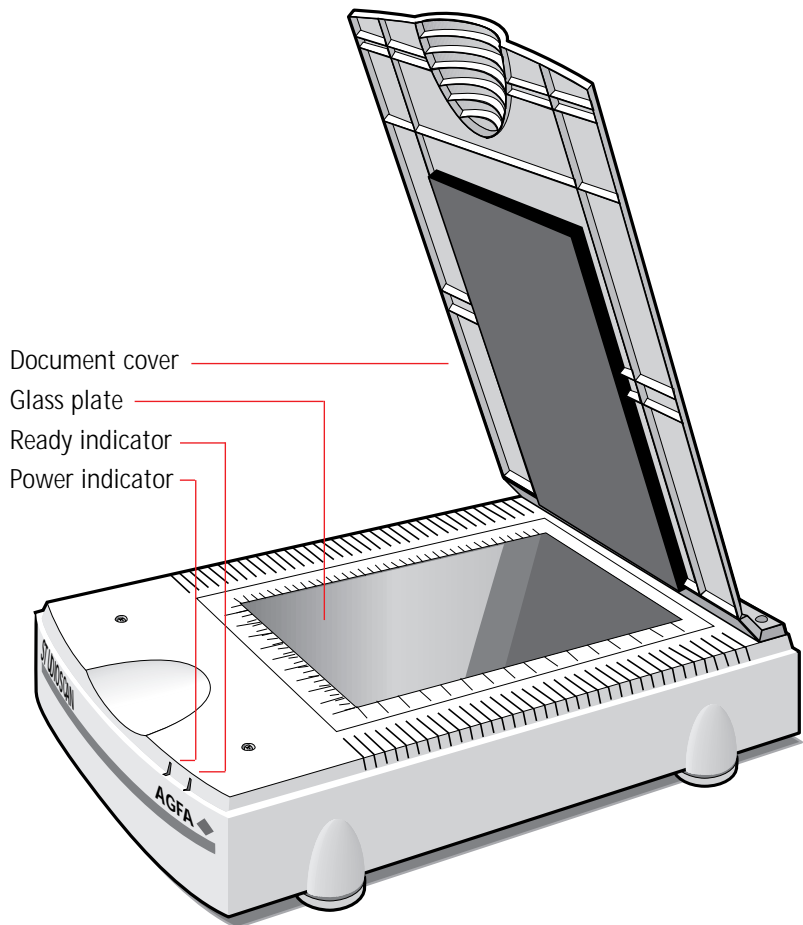


Figure 3
The top and right side of the scanner

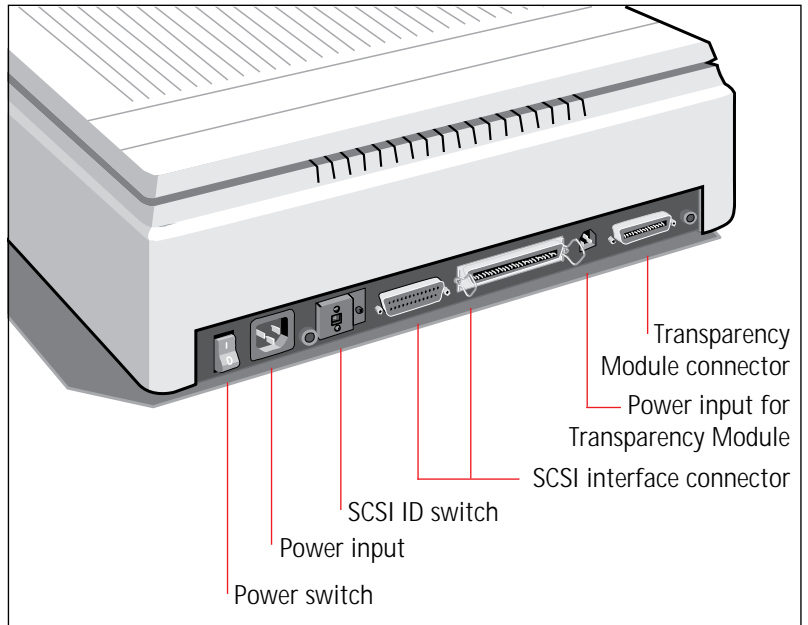


Figure 4
The rear of the scanner

Installing the Transparency Module

The Transparency Module is an optional item. The following describes the procedure for installing the Transparency Module if you have purchased one for your StudioScan.

Unpacking the Transparency Module

The first thing to do is to make sure you have everything you're supposed to.

1. **Open the packing box and take out all the items.**
2. **Check each item against Figure 5 to make sure that you have everything.**
If something is missing, contact your dealer or representative.
3. **Remove the plastic wrapping and the packing materials from the Transparency Module.**
4. **Fill out the Warranty and Registration card. You will find the product serial number on the identity label on the rear of your Transparency Module.**

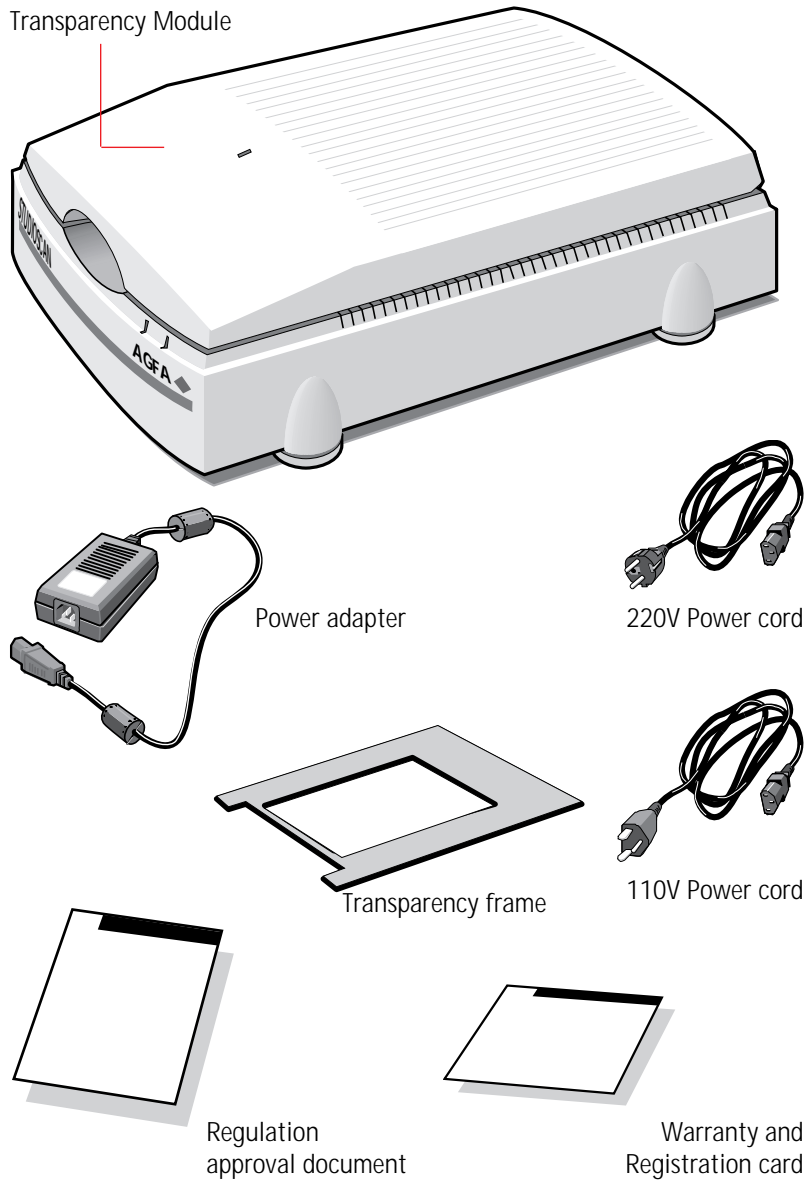


Figure 5
The contents of the Transparency
Module packing box

❖ *Note: Save the packing materials so that you can repack the Transparency Module to protect it if you have to move it over long distances.*

Connecting the Transparency Module

Unlock the transparency module before connecting it to the scanner. Consult the Unlock Card of the transparency module for instructions.

1. Switch off the scanner and remove the scanner's Document Cover.
2. Position the Transparency Module on the top of the scanner, aligning the positioning holes at the top-rear of the scanner.
3. Plug the scanner connector cable into the scanner.
4. Connect the power adapter to the scanner and a power outlet.

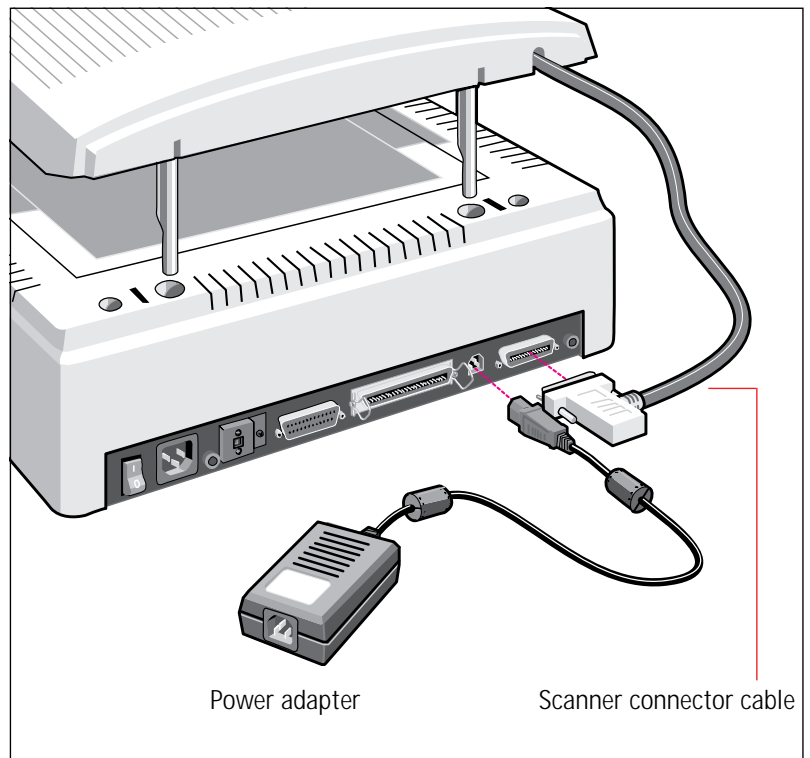


Figure 6
Connecting the Transparency Module

Testing the scanner

You are now ready to perform a power-on test to check if the scanner is operating correctly.

1. Check that you have unlocked the locking screw.

2. Connect the power cord to the scanner.

- ❖ *For the international version: Use the correct power cord for the voltage in your area. The StudioScan automatically adjusts to any AC electrical outlet rated from 100V to 240V.*
- ❖ *For the North-American version: Use the correct power cord for the voltage in your area.*

3. Turn on the scanner.

The Power indicator lights up and the Ready indicator flashes briefly. The scanning lamp turns on.

The scanner performs a self-test after which the Ready indicator turns on.

If the Power and Ready indicators fail to light up during the self-test, refer to Appendix A, 'Troubleshooting'.

Chapter 2

Installing the scanner



Installing the scanner

This chapter shows you how to set up your StudioScan. Before installing the scanner, read the safety instructions below. You'll also find instructions for:

- Changing and setting the SCSI ID number
- Installing the scanner for the Macintosh
- Installing the scanner for the PC

Important safety instructions

For your own safety and that of your equipment, always take the following precautions.

- Disconnect the power plug when you want to clean the scanner case or glass plate and when the scanner needs service or repair
- Place the scanner on a level surface.
- To ensure proper ventilation, allow a minimum of 10 cm free space around each side of the scanner and a minimum of 15cm at the rear side of the scanner.
- Any curative maintenance, such as replacing the scanning lamp or fuse should be carried out by an authorized Agfa dealer. Do not open the scanner housing as it contains high voltage areas and sensitive components.
- Do not leave originals on the glass plate for excessive periods of time. The warmth of the scanner may cause them to deteriorate.
- Do not operate the scanner when the environmental temperature falls below 10°C or goes above 40°C.
- Do not operate the scanner when the environmental humidity falls below 20% or goes above 85%.

About SCSI devices

The StudioScan is a Small Computer System Interface (SCSI) device. It communicates with your computer by using the SCSI standard. The SCSI communication standard allows you to connect more than one peripheral device to the same port of your computer in chain fashion.

A unique SCSI ID number is assigned to each device in the SCSI chain enabling your computer to identify the device it wants to communicate with and the priority of each device.

❖ *Warning: If two SCSI devices have the same ID number, your system will not work properly and you may damage your SCSI devices.*

A SCSI chain requires an electronic component called a 'terminator' which absorbs old signals traveling along the cables and keeps the path open for new signals. The chain should never have more than two terminators, one at each end. It is important to remember that using too many or too few terminators may damage your SCSI devices. Some SCSI devices have built-in terminators and must therefore be placed at the beginning or end of your SCSI chain.

❖ *Note: Your StudioScan does not have a built-in terminator.*

Your StudioScan is supplied with terminator power that is switched on.

Changing the SCSI ID number

Before connecting the scanner to your computer, you must be aware of the SCSI ID numbers already assigned. Your StudioScan is preset to ID2 and only needs to be changed if there is already another device in your chain set to the same number.

- 1. Make sure your scanner is turned off and is disconnected from your computer.**
- 2. Decide on an unassigned SCSI ID number.**
- 3. Insert a pencil into one of the small holes above or underneath the SCSI ID number at the rear of the scanner.**

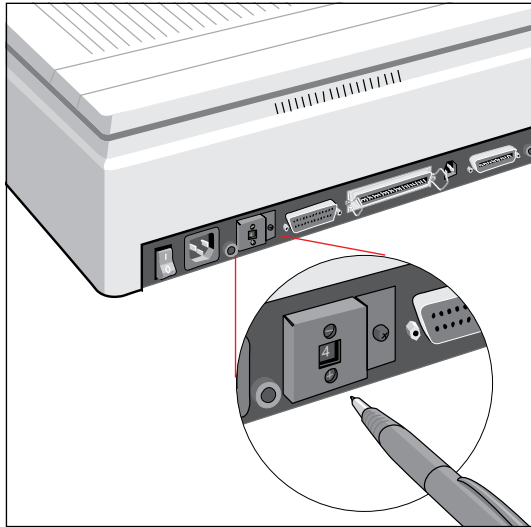


Figure 7
Changing the SCSI ID number

4. **Push with your pencil above or underneath the SCSI number until you see the number you want.**
Push above the SCSI number to decrease the number, push underneath the SCSI number to increase the number.

Installation for the Macintosh

This section shows you how to set up your StudioScan with your Macintosh computer. You must first choose and set a SCSI ID number, then connect the scanner to your Macintosh, and lastly test the connection.

Choosing a SCSI ID number

To find out which SCSI ID numbers are already assigned and which numbers are free you can use the Macintosh utility 'SCSIIDChecker'. You will find this utility on the Macintosh FotoLook disks.

1. **Copy the SCSI ID Checker to your Macintosh computer.**
2. **Open the SCSI ID Checker.**
A dialog box appears with a list of the SCSI ID numbers that are free in your Macintosh computer.

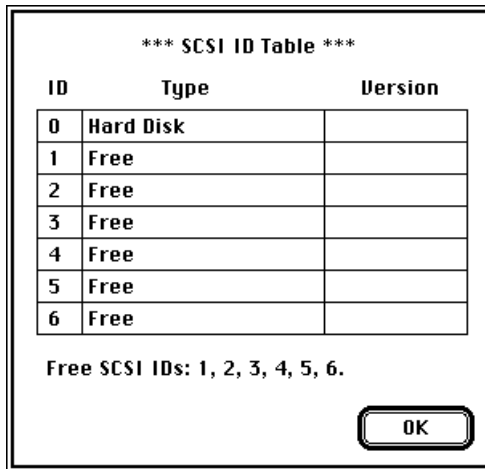


Figure 8
SCSI Table

Your Macintosh always occupies ID7 and its internal hard disk usually ID0 or ID1.

3. Write down any SCSI ID number that is free.

Your StudioScan is preset to ID2. If this number is free you do not need to reset the SCSI ID switch on rear of the scanner.

4. Click OK to quit the SCSI ID Checker.

5. Set the scanner to the SCSI ID number that you have written down.

For more information, see 'Changing the SCSI ID number' earlier in this chapter.

Connecting the scanner

Before you connect the scanner to your Macintosh, make sure your Macintosh and everything connected to it is turned off.

To connect your StudioScan to your Macintosh:

- 1. Connect the smaller end of the SCSI cable to the SCSI port on your Macintosh.**
- 2. If your scanner is the last device in your SCSI chain, place the terminator on the 50-pin SCSI port of your scanner.**

If your scanner is not the last device in your SCSI chain, do not place the terminator. You can connect the scanner to the next device by using another 25-50 pin cable and plugging the 25-pin side in the scanner or by using a SCSI cable with a T connector so that you can connect a cable extender to it.

3. Connect the other side of the SCSI cable to the terminator that is placed on the 50-pin SCSI port of the scanner.

- ❖ *Warning: Make sure there are no more than two terminators in your SCSI chain. Some SCSI devices have built-in terminators and must therefore be placed at the beginning or end of your SCSI chain. Please check the documentation of each of your SCSI devices if you're not sure whether the device has a built-in terminator. Your StudioScan has no built-in terminator.*

Apple Computer, Inc. recommends using only its proprietary (Black) terminator for the Macintosh IIfx.

Testing the connection

You are now ready to perform a test to check if the scanner is correctly connected to your Macintosh.

1. Connect the power cord to the scanner.

- ❖ *For the international version: Use the correct power cord for the voltage in your area. The StudioScan automatically adjusts to any AC electrical outlet rated from 100V to 240V.*
- ❖ *For the North American version: Use the correct power cord for the voltage in your area.*

2. Check that the SCSI cable(s) are properly connected.

3. Turn on the scanner.

After a self-test the scanner's Ready indicator turns on.

4. Turn on any other SCSI devices you may have attached.

5. Turn on your Macintosh.

As it boots up, your Macintosh performs a series of tests to verify the correct system configuration.

6. Open the SCSI ID checker to verify that the scanner has a unique SCSI number.

In case of problems, refer to Appendix A, 'Troubleshooting'.

You are now ready to install and configure Agfa's scanning software. Please refer to the User's Guide.

Installation for the PC

This section shows you how to set up your StudioScan with your PC. You can find information on which SCSI adapter card to use and instructions for connecting the scanner to your PC.

Which SCSI adapter card

The StudioScan requires a SCSI adapter card (for example, an Adaptec card AHA 1510) to work with your PC-AT, 386, 486, or compatible computer. If your PC does not have such a card, contact your dealer.

❖ *Important: Please check the following documentation:*

- ❑ The Read Me file on the PC FotoLook disk for up-to-date information.
- ❑ The documentation supplied with your adapter card. This will tell you how to install the card.
- ❑ If you are using third party software, check the documentation supplied with that software for the SCSI adapter cards supported.

Connecting the scanner

Before you connect the scanner to your PC, make sure your PC and everything connected to it is turned off.

1. **Set the scanner to an unused SCSI ID number between 1 and 6.**
For more information, see 'Changing the SCSI ID number' earlier in this chapter.
2. **Connect the 50-pin side of the SCSI cable to the SCSI port at the rear of your PC.**
3. **Connect the smaller end of the SCSI cable to the smaller SCSI port on your scanner.**
4. **If the scanner is at the end of your SCSI chain, place the terminator on the remaining SCSI port of your scanner and snap the diamond shaped wire clips into the clip brackets to secure the connection.**
5. **Connect the power cord to the scanner.**

- ❖ *For the international version: Use the correct power cord for the voltage in your area. The StudioScan automatically adjusts to any AC electrical outlet rated from 100V to 240V.*
- ❖ *For the North American version: Use the correct power cord for the voltage in your area.*

6. Turn on the scanner.

After a self-test the scanner's Ready indicator turns on.

7. Turn on your PC.

In case of problems, refer to Appendix A, 'Troubleshooting'.

You are now ready to install and configure Agfa's scanning software. Please refer to the User's Guide.

Chapter 3

Using the scanner



Using the scanner

This chapter tells you how to place transparent and reflective originals on your scanner.

Placing a reflective original

The following steps explain how to position your original on your scanner.

1. **Raise the document cover of the scanner.**
If you have a Transparency Module, you do not have to remove the Transparency Module. Raise the Transparency Module.
2. **Place the original that you want to scan face-down on the glass plate.**
3. **Guide the top left corner of the original into the lower left (0,0) corner of the glass plate.**
4. **Lower the document cover of the scanner.**

Placing a transparent original

You need the Transparency Module to scan transparent originals.

1. **Raise the Transparency Module.**
2. **Place the transparency frame on the glass plate with the calibration hole facing the front of your scanner.**
3. **Place the original that you want to scan face-down inside the transparency frame on the glass plate.**
4. **Guide the top left corner of the original into the lower left (0,0) corner of the transparency frame.**
5. **Lower the Transparency Module.**

Chapter 4

Caring for your scanner



Caring for your scanner

This chapter covers general maintenance tips for your StudioScan.

Cleaning the scanner

Cleaning the glass plate regularly will ensure that dirt or smudges do not reduce the quality of your scanned images.

Before cleaning, turn off the power to the scanner and unplug the cord.

Use a damp cloth and a mild detergent to clean the surface of the glass plate and document board. If you use alcohol to clean the glass plate, make sure you do not touch the plastic elements of the scanner.

- ❖ *Warning: Avoid using sprays directly onto the glass plate as this may cause the liquid to penetrate the seams around the glass and contaminate the mirrors and lenses inside the scanner.*

Replacing the fluorescent lamps

The StudioScan and Transparency Module lamps each have an average lifetime of 3000 hours. Lamp replacement must only be carried out by an authorized Agfa dealer. Return the scanner in its original packing to your dealer for service.

- ❖ *Warning: Do not open the scanner housing. There are extremely sensitive components inside the scanner.*

Replacing the fuse

Fuse replacement must only be carried out by an authorized Agfa dealer. Return the scanner in its original packing to your dealer for service.

- ❖ *Warning: Do not open the scanner housing. There are extremely sensitive components inside the scanner.*

Appendix A

Troubleshooting

This appendix explains some common problems you may come across when starting up or using your StudioScan.

The Ready indicator on the scanner operating panel fails to light up.

- Check that you have removed the lock.
- Check the scanning lamp in the scanner. If the lamp flickers, dims, or goes off, please contact your dealer.
- If the weather is very cold, leave the scanner on for several minutes to let it warm up. Turn the power off, then immediately on again. If both lights still go off, contact your dealer.

The scanner or Transparency Module lamp flickers, dims, or fails to come on.

- The scanning lamp is failing or has failed and needs to be changed. Contact your dealer.

The power indicator fails to light up.

- Verify the power connection to the scanner
- Check that the power switch is turned on.
- If you have confirmed that there is power to the scanner, it is likely that the scanner fuse needs to be replaced. Contact your dealer.

The Macintosh does not boot.

- ❑ Your computer cannot find its hard disk due to a conflict with the SCSI ID numbers of the devices you have attached. Turn off the power to the scanner and unplug the cord. Disconnect all SCSI devices (except the startup disk) and connect them one by one, beginning with the scanner, to identify the device that causes the problem.

The scanner driver software returns a “Scanner not ready” or similar message.

- ❑ Verify the power connection to the scanner
- ❑ Check that the power switch is turned on.
- ❑ Check the Installation procedure, to see if you followed the instructions. Pay special attention to the setting of the SCSI ID number.
- ❑ Verify the terminators and the cables. If there is a problem with a cable or with the SCSI board of the scanner, contact your dealer.
- ❑ Disconnect all SCSI devices and connect them one by one, beginning with the scanner, to identify the device that causes the problem.

Appendix B

Technical Information

This appendix provides some technical information about your StudioScan and Transparency Module.

StudioScan specifications

Scanner type:	Desktop, flat bed
Optical resolution:	300 dpi horizontal x 600 dpi vertical
Maximum resolution:	600 dpi x 600 dpi (gray-scale and color) 1200 dpi x 1200 dpi (line-art)
Sample depth:	8 bits per color
Scanning speed:	Calibration - 4 s per color Line-art - 4.5 ms per line Halftone - 4.5 ms per line Gray-scale - 4.5 ms per line Color - 14 ms per line
Scanning area:	Minimum - 1 line, 2 pixels in gray-scale and color, 16 pixels in line-art Maximum - 8,5" x 14"
Lamp:	8W daylight fluorescent light with 3000 hours life time in average field conditions
Warm up time	30 seconds
Power supply:	Line voltage: 100 to 240 V International type 100-120 V North-American type Frequency: 47 to 63 Hz Power: 34 W
Dimensions:	Length: 545 mm Width: 386 mm Height: 143 mm
Weight:	9.2 kg
Options	Transparency Module

Interface:	SCSI-2 interface
Image memory:	64 KB
Transmission speed:	1 Mbyte/second
Environment:	Operating temperature 10° C to 40° C (50° F to 104° F) Storage temperature -25° C to 55° C (-13° F to 131° F) Relative humidity 20% to 85% Surrounding space 10 cm on each side, 15 cm at the rear side

Transparency Module specifications

System	Moving light source, transparency stable
Maximum resolution	300 dpi Horizontal x 600 dpi Vertical, optical
Scanning area	Maximum 8" x 10"
Lamp:	8W cool white fluorescent light with 2000 hours life time in average field conditions
Power supply:	Input: 100 to 250 volts Frequency: 50 to 60 Hz Output: 12 volts DC, 24 W
Interface:	15-pin cable with connector to scanner
Dimensions:	Length: 543 mm Width: 339.5 mm Height: 63.5 mm
Weight:	4.7 kg
Environment	Same as scanner

All software and hardware described in this document are subject to change without any notice.