

SL1000 Digital Film Scanner

User's Guide



International ENERGY STAR® Compliance Statement



The purpose of the International ENERGY STAR® Program is to promote the development and popularization of energy-efficient office equipment.



SAFETY INFORMATION

This section contains detailed instructions on the operation and maintenance of this machine. To achieve optimum utility of this device, all operators should carefully read and follow the instructions in this manual. Please keep this manual in a handy place near the machine.

Make sure you observe all of the precautions listed in this manual.

* Please NOTE that some parts of the contents of this section may not correspond with the purchased product.

Warning and Precautions Symbols

 WARNING:	Ignoring this warning could cause serious injury or even death.
 CAUTION:	Ignoring this caution could cause injury or damage to property.

Meaning of Symbols



A triangle indicates a danger against which you should take precautions.



This symbol warns against possible burns.



A diagonal line indicates a prohibited course of action.



This symbol warns against dismantling the device.








A Black circle indicates an imperative course of action.






This Symbol indicates you must unplug device.


WARNING

	<ul style="list-style-type: none"> Do not modify this product, as a fire, electrical shock, or breakdown could result. If the product employs a laser, the laser beam source could cause blindness. Do not attempt to remove the covers and panels which have been fixed to the product. Some products have a high-voltage part or a laser beam source inside that could cause an electrical shock or blindness. Do not remove or exchange the fuse of this product, as a fire, electrical shock, or breakdown could result.
	<ul style="list-style-type: none"> Only use the power cord supplied in the package. If a power cord is not supplied, only use the power cord and plug that is specified in POWER CORD INSTRUCTION. Failure to use this cord could result in a fire or electrical shock. Use the power cord supplied in the package only for this machine and NEVER uses it for any other product. Failure to observe this precaution could result in a fire or electrical shock. Use only the specified power source voltage. Failure to do that could result in a fire or electrical shock. Do not use a multiple outlet adapter to connect any other appliances or machines. Use of a power outlet for more than the marked current value could result in a fire or electrical shock.
	<ul style="list-style-type: none"> Do not unplug or plug in the power cord with a wet hand, as an electrical shock could result.
	<ul style="list-style-type: none"> Plug the power cord all the way into the power outlet. Failure to do this could result in a fire or electrical shock.
	<ul style="list-style-type: none"> Do not scratch, abrade, place a heavy object on, heat, twist, bend, pull on, or damage the power cord. Use of a damaged power cord (exposed core wire, broken wire, etc.) could result in a fire or breakdown. Should any of these conditions be found, immediately turn OFF the Power Switch, unplug the power cord from the power outlet, and then call your authorized service representative. Do not use an extension cord, in principle. Use of an extension cord could cause a fire or electrical shock. Contact your authorized service representative if an extension cord is required.



WARNING

	<ul style="list-style-type: none"> Do not place a flower vase or other container that contains water, or metal clips or other small metallic objects on this product. Spilled water or metallic objects dropped inside the product could result in a fire, electrical shock, or breakdown. Should a piece of metal, water, or any other similar foreign matter get inside the product, immediately turn OFF the Power Switch, unplug the power cord from the power outlet, and then call your authorized service representative.
	<ul style="list-style-type: none"> Do not keep using this product if it becomes inordinately hot or emits smoke, or unusual odor or noise. Immediately turn OFF the Power Switch, unplug the power cord from the power outlet, and then call your authorized service representative. If you keep on using it as is, a fire or electrical shock could result. Do not keep using this product, if this product has been dropped or its cover damaged. Immediately turn OFF the Power Switch, unplug the power cord from the power outlet, and then call your authorized service representative. If you keep on using it as is, a fire or electrical shock could result.
	<ul style="list-style-type: none"> Connect the power cord to an electrical outlet that is equipped with a grounding terminal.


CAUTION

	<ul style="list-style-type: none"> Do not use flammable sprays, liquids, or gases near this product, as a fire could result. Do not let any object plug the ventilation holes of this product. Heat could accumulate inside the product, resulting in a fire or malfunction. Do not install this product at a site that is exposed to direct sunlight, or near an air conditioner or heating apparatus. The resultant temperature changes inside the product could cause a malfunction, fire, or electrical shock. Do not place the product in a dusty place, or a site exposed to soot or steam, near a kitchen table, bath, or a humidifier. A fire, electrical shock, or breakdown could result. Do not place this product on an unstable or tilted bench, or in a location subject to a lot of vibration and shock. It could drop or fall, causing personal injury or mechanical breakdown. After installing this product, mount it on a secure base. If the unit moves or falls, it may cause personal injury.
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CAUTION

	<ul style="list-style-type: none"> Do not place any objects around the power plug as the power plug may be difficult to pull out when an emergency occurs.
	<ul style="list-style-type: none"> The socket-outlet shall be installed near the machine and shall be easily accessible as the power plug may be difficult to pull out when an emergency occurs. Always use this product in a well ventilated location. Operating the product in a poorly ventilated room for an extended period of time could injure your health. Ventilate the room at regular intervals. Whenever moving this product, be sure to disconnect the power cord and other cables. Failure to do this could damage the cord or cable, resulting in a fire, electrical shock, or breakdown. When moving this product, always hold it by the locations specified in the User's Guide or other documents. If the unit falls it may cause severe personal injury. The product may also be damaged or malfunction. Remove the power plug from the outlet more than one time a year and clean the area between the plug terminals. Dust that accumulates between the plug terminals may cause a fire. When unplugging the power cord, be sure to hold onto the plug. Pulling on the power cord could damage the cord, resulting in a fire or electrical shock.

Precautions for Routine Use



	<ul style="list-style-type: none"> Do not use this product in an area where ammonia or other gases or chemicals are present. Failure to do so may shorten the service life of the product, cause damage or decrease performance. Do not use this product in an environment with a temperature outside the range specified in the User's Guide, as a breakdown or malfunction could result.
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INFORMATIONS DE SÉCURITÉ

Cette section contient des instructions détaillées sur l'utilisation et l'entretien de cette machine. Pour obtenir un rendement optimal de cette machine, il est impérative que toutes les personnes l'utilisant lisent attentivement et observent scrupuleusement les consignes de ce manuel. Veuillez conserver ce manuel en lieu sûr, à proximité de la machine.

Veuillez observer toutes les consignes de sécurité énumérées dans ce manuel. Veuillez NOTE r que certaines informations contenues dans cette section pourraient ne pas correspondre à votre produit.

Symboles d'avertissement et de précaution

 WARNING:	Le non-respect de cet avertissement pourrait causer de graves blessures, voire un accident mortel.
 CAUTION:	Le non-respect de cette précaution pourrait causer des blessures ou des dommages matériels.

Signification des symboles



Un triangle indique un danger potentiel requérant certaines précautions.



Ce symbole vous met en garde contre des risques de brûlures.



Une diagonale dans un cercle désigne une interdiction.



Ce symbole signifie qu'il est interdit de démonter l'appareil.








Un cercle noir désigne une procédure obligatoire.






Ce symbole signifie que vous devez débrancher l'appareil.


WARNING

	<p>Ne modifiez pas ce produit, car cela risquerait de causer un incendie, une électrocution ou une panne de l'appareil. Si ce produit comporte un laser, sachez que l'exposition au rayon laser pose un risque pour les yeux.</p> <p>N'essayez jamais de démonter les couvercles et panneaux montés sur le produit. Certains produits renferment des composants de haute tension ou une source de rayon laser qui risqueraient de causer une électrocution ou des lésions aux yeux. Ne pas retirer ou d'échanger le fusible de ce produit, comme un incendie, d'électrocution ou une panne peut en résulter.</p>
	<p>Utilisez uniquement le cordon d'alimentation contenu dans l'emballage. Si le cordon d'alimentation n'est pas fourni, veillez à vous procurer uniquement un cordon avec fiches conformes aux INSTRUCTIONS POUR LE CORDON D'ALIMENTATION. Le non-respect de cette consigne risquerait de provoquer un incendie.</p> <p>Utilisez le cordon d'alimentation contenu dans l'emballage uniquement avec cette machine; ne l'utilisez JAMAIS avec aucun autre appareil. Le non-respect de cette consigne risquerait de provoquer un incendie ou une électrocution.</p> <p>Utilisez uniquement la tension d'alimentation spécifiée. Le non-respect de cette consigne risquerait de provoquer un incendie ou une électrocution.</p> <p>N'utilisez jamais d'adaptateur multi-prise pour alimenter simultanément d'autres appareils ou machines. Le branchement à une prise de courant délivrant une tension supérieure aux spécifications risquerait de provoquer un incendie ou une électrocution.</p>
	<p>Né branchez ni débranchez jamais le cordon d'alimentation avec des mains mouillées car cela risquerait de provoquer une électrocution.</p>
	<p>Branchez le cordon d'alimentation à fond dans la prise de courant. Le non-respect de cette consigne risquerait de provoquer un incendie ou une électrocution.</p>
	<p>Veillez à ne jamais entailler, user, chauffer, tordre, déformer ni placer d'objet lourd sur le cordon d'alimentation. L'utilisation d'un cordon d'alimentation endommagé (dont un fil est rompu ou à nu, etc.) risquerait de provoquer un incendie ou une électrocution.</p> <p>Si le cordon présente un de ces endommagements, mettez immédiatement l'appareil HORS tension, débranchez son cordon d'alimentation et contactez un centre de SAV. N'utilisez pas de rallonge. L'utilisation d'une rallonge risquerait de provoquer un incendie ou une électrocution. Contactez un centre de SAV si vous souhaitez un cordon d'alimentation plus long.</p>



WARNING

	<p>Ne posez jamais de vase ou tout autre récipient contenant de l'eau, ainsi que de petits objets métalliques tels que des trombones sur l'appareil.</p> <p>Si le récipient venait à être renversé ou des objets métalliques venaient à tomber dans l'appareil, cela risquerait de provoquer un incendie, une électrocution ou une panne de l'appareil.</p> <p>En cas de pénétration de liquide, d'objet métallique ou de tout autre objet à l'intérieur de l'appareil, mettez immédiatement l'appareil HORS tension avec son interrupteur d'alimentation, débranchez son cordon d'alimentation de la prise de courant et contactez un centre de SAV.</p>
	<p>Si cet appareil venait à chauffer anormalement ou dégageait de la fumée, une odeur ou un bruit anormal, cessez immédiatement de l'utiliser. Mettez immédiatement l'appareil HORS tension avec son interrupteur d'alimentation, débranchez son cordon d'alimentation de la prise de courant et contactez un centre de SAV. Le non-respect de cette consigne risquerait de provoquer un incendie ou une électrocution.</p> <p>En cas de chute de l'appareil ou d'endommagement de son boîtier, cessez immédiatement d'utiliser l'appareil. Mettez immédiatement l'appareil HORS tension avec son interrupteur d'alimentation, débranchez son cordon d'alimentation de la prise de courant et contactez un centre de SAV. Le non-respect de cette consigne risquerait de provoquer un incendie ou une électrocution.</p>
	<p>Branchez le cordon d'alimentation à une prise de courant pourvue d'une broche de mise à la terre.</p>


CAUTION

	<p>Tenez toujours tout produit inflammable -liquide, gaz et vaporisateur- à l'écart de l'appareil car ces produits posent un risque d'incendie.</p> <p>N'obstruez jamais les orifices de ventilation de cet appareil avec quelque objet que ce soit.</p> <p>La chaleur risquerait de s'accumuler à l'intérieur de l'appareil, provoquant un incendie ou une panne.</p> <p>N'installez pas cet appareil dans un endroit directement exposé aux rayons du soleil, ni à proximité d'un climatiseur ou d'un appareil de chauffage. Le changement de température ainsi provoqué à l'intérieur de l'appareil risquerait de causer une panne, un incendie ou une électrocution.</p> <p>N'installez pas cet appareil dans un endroit poussiéreux et évitez également les endroits exposés à de la suie ou de la vapeur, à proximité d'une table de cuisine, d'une baignoire ou d'un humidificateur. Cela risquerait de provoquer un incendie, une électrocution ou une panne de l'appareil.</p> <p>N'installez pas cet appareil sur une surface instable ou inclinée, et évitez également les endroits particulièrement exposés aux vibrations et chocs. L'appareil risquerait de se renverser ou de tomber, causant des blessures ou une panne.</p> <p>Tenez les unités de toner et unités de tambour PC à l'écart des disquettes, montres et autres objets sensibles aux champs magnétiques.</p> <p>Cela risquerait de provoquer un fonctionnement erratique de ces appareils.</p>
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CAUTION

	<p>Ne posez aucun objet à proximité de la prise de courant alimentant le cordon car cela risquerait de gêner l'accès au cordon et son retrait en cas d'urgence.</p>
	<p>Veillez à ce que la prise de courant alimentant l'appareil se trouve à proximité de ce dernier et soit facile d'accès afin de permettre un retrait rapide du cordon d'alimentation en cas d'urgence.</p> <p>Utilisez uniquement cet appareil dans un endroit bien ventilé. Une utilisation prolongée de l'appareil dans une pièce faiblement ventilée pourrait poser un risque pour la santé de l'utilisateur. Veillez à aérer la pièce à intervalles réguliers.</p> <p>Veillez à toujours débrancher le cordon d'alimentation et tout autre câble avant de déplacer l'appareil. Le non-respect de cette précaution risquerait d'endommager le cordon d'alimentation ou le câble et de provoquer un incendie, une électrocution ou une panne.</p> <p>Lorsque vous déplacez l'appareil, veillez à toujours le tenir aux endroits indiqués dans le mode d'emploi ou toute autre documentation. Une chute de l'appareil risquerait de causer de graves blessures. Cela pourrait en outre causer une panne et/ou un endommagement de l'appareil.</p> <p>Veillez à débrancher la fiche du cordon d'alimentation de la prise de courant plusieurs fois par an afin de nettoyer les broches de la fiche.</p> <p>Toute accumulation de poussière entre les broches de la fiche risquerait de provoquer un incendie.</p> <p>Quand vous débranchez le cordon d'alimentation, veillez à saisir le cordon par sa fiche. Ne tirez jamais sur le cordon même car cela risquerait de l'endommager et de provoquer un incendie ou une électrocution.</p>

Precautions for Routine Use

	<p>N'utilisez jamais cet appareil en présence d'ammoniaque ou d'autres produits chimiques ou gaz. Le non-respect de cette précaution risquerait de réduire la durée de vie de l'appareil, de causer des dommages ou de réduire ses performances.</p> <p>N'utilisez jamais cet appareil dans un endroit où la température ambiante sort de la plage spécifiée dans le mode d'emploi, car cela risquerait de causer une panne et/ou un endommagement de l'appareil.</p>
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Welcome

Please follow the instructions given in this manual when operating the system and do not touch any part of the system the manual does not cover.

NEVER attempt to disassemble or rebuild the system.

The contents of this manual are subject to change without notice.

No part of this manual may be quoted, reproduced or translated into any other language.

Introduction

Thank you for choosing our Digital Film Scanner “SL1000” (herein after referred to as “the Scanner”).

This User’s Guide includes precautions for installation/operation of the Scanner, a system outline, an explanation of the Driver software, operation procedures for the Scanner, troubleshooting tips, maintenance, and product specifications.

To ensure the best performance and effective use of your unit, read this manual carefully until you familiarize yourself thoroughly with the unit's operation and features.

Please keep this manual and use it as a quick and handy reference tool for immediately clarifying any questions that may arise.

Please also NOTE the following precautions.

Safety Information

All Areas

Use the USB Cable supplied with the equipment. Use of an unshielded cable invites radio frequency interference.

Always refer to this manual when operating the Scanner and do not attempt to touch the Scanner parts for which no explanations are given in the text.

NEVER attempt to disassemble or modify the Scanner, as it is very dangerous.

Call your authorized dealer when you want to move the Scanner, which has been installed.

FCC Part 15 - Radio Frequency Devices (For U.S.A. Users)

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

WARNING

This equipment has been tested and found to comply with the limits for a Class A 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 commercial environment. 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. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

The design and production of this unit conform to FCC regulations, and any changes or modifications must be registered with the FCC and are subject to FCC control. Any changes made by the purchaser or user without first contacting the manufacturer will be subject to penalty under FCC regulations.

Interference-Causing Equipment Standard (ICES-003 ISSUE 4) For Canada Users)

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

UL/UL Marking

This equipment has been tested and found to comply with UL60950-1.

CE Marking (Declaration of Conformity) (For European Users)

This product complies with the following EU directives:

2006/95/EC and 2004/108/EC directives.

This declaration is valid for the area of the European Union (EU) only.

This device must be used with shielded interface cable and shielded network cable.

The use of non-shielded cable is likely to result in interference with radio communications and is prohibited under rules.

We declare under our sole responsibility that the Scanner and options to which this declaration relates is in conformity with the specifications below.

This declaration is valid for the area of the European Union (EU) only.

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Microsoft, Windows, Windows Vista and Windows 7 are registered trademarks of Microsoft Corporation.

All other brand or product names are trademarks or registered trademarks of their respective companies or organizations.

Organization

This manual consists of the following seven chapters. Chapters 1 and 2 contain basic information about the Scanner, including safety precautions for installation/operation, system configuration, and features. Be sure to read these chapters before using the Scanner.

Chapter 1 Precautions for Installation and Operation

Provides safety precautions required to ensure correct installation and operation of the Scanner.

Chapter 2 Overview

An overview of the features, system configuration, functions and part names of the Scanner

Chapter 3 Application “SL-Touch for SL1000”

Describes the application “SL-Touch for SL1000”.

Chapter 4 Operation

Describes operation precautions and procedures, and settings for each function.

Chapter 5 Troubleshooting

Describes error and warning messages that appear on the Personal Computer, and procedures for eliminating these problems.

Chapter 6 Maintenance

Describes daily maintenance required for satisfactory operation of the Scanner.

Chapter 7 Specifications

Complete specifications of the Scanner.

NOTE:

In this manual, important points requiring special attention are described in sections marked with “NOTE”. Items that appear on the menu screen in the Personal Computer are enclosed by double quotation marks “ ”. Referenced chapters or their titles are shown in brackets [].

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Chapter 1

Precautions for Installation
& Operation

1 Precautions for Installation

1.1 Installation Environment

Install the Scanner in a location, which meets the following requirements to ensure safe operation and utmost performance.

- ◆ A well-ventilated place
- ◆ An area which is free from ammonia or other organic gases.
- ◆ A place which has easy access to a power outlet so that the unit may be easily plugged and unplugged.
- ◆ An area free from direct sunlight
- ◆ A place which is out of the direct air stream of an air conditioner, heater or ventilator and is not subject to extremely high or low temperatures or humidity.
- ◆ A stable location with a flat surface that is not subject to undue vibration.
- ◆ A place away from curtains or other objects that catch fire and burn easily
- ◆ An area that is safe from spilled water or other liquids.
- ◆ A dust-free location

1.2 Power Source

The Power Source Voltage Requirements are as follows.

- ◆ Use a Power Source with little voltage/frequency fluctuations.
 - Power Source: 50 Hz – 60 Hz
 - Voltage Fluctuation: Up to 120 VAC $\pm 10\%$, 230 VAC $\pm 10\%$
 - Frequency Fluctuation: Up to 50 Hz ± 3 Hz
Up to 60 Hz ± 3 Hz
- ◆ Be careful not to exceed the capacity of the outlet, especially when sharing other appliances from the same outlet.
- ◆ The outlet should be located near the unit and be easily accessible so that the Power Cord can be unplugged immediately if necessary.
- ◆ NEVER connect any other appliances or machines by means of a multiple socket to the outlet being used for the unit.
- ◆ If an Extension Cord is needed, use one with a capacity greater than the power consumption of the unit.
- ◆ Make sure that the Power Cord and extension cord do not become caught in any mechanism of the system. Do not allow either the power or extension cord to become caught underneath the weight of the unit.

1.3 Grounding

Be sure to connect the Ground Wire for the Power Cable to any of the following places to prevent electrical shocks due to electrical leakage:

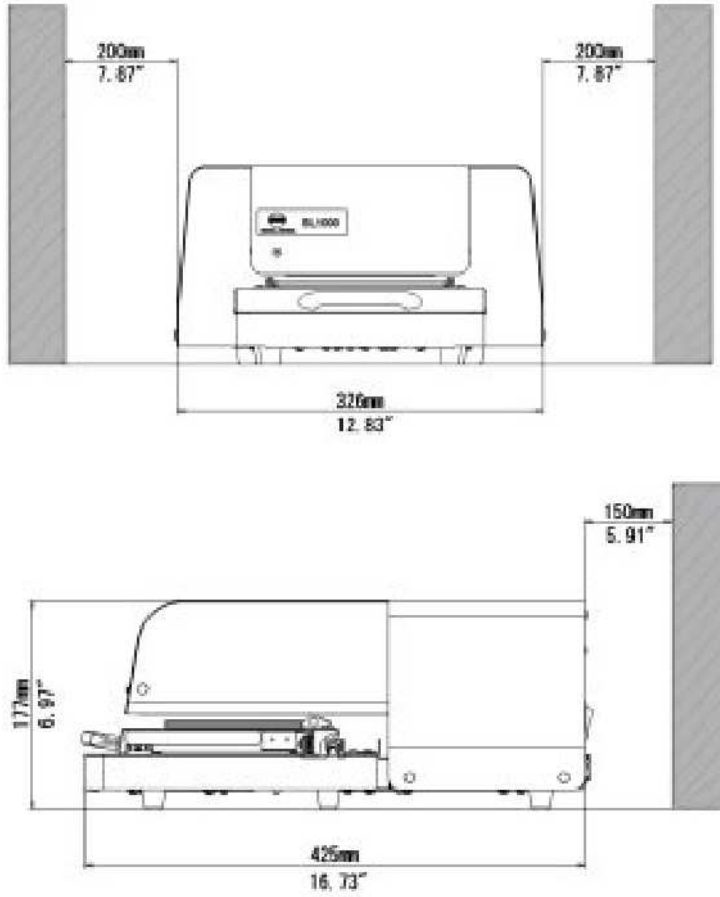
- ◆ Ground Terminal of the outlet
- ◆ Ground terminal that complies with local electrical standards

NOTE : NEVER connect the Ground Cable to a Gas Pipe, the Ground Wire for a Telephone Line, or a Water Pipe.

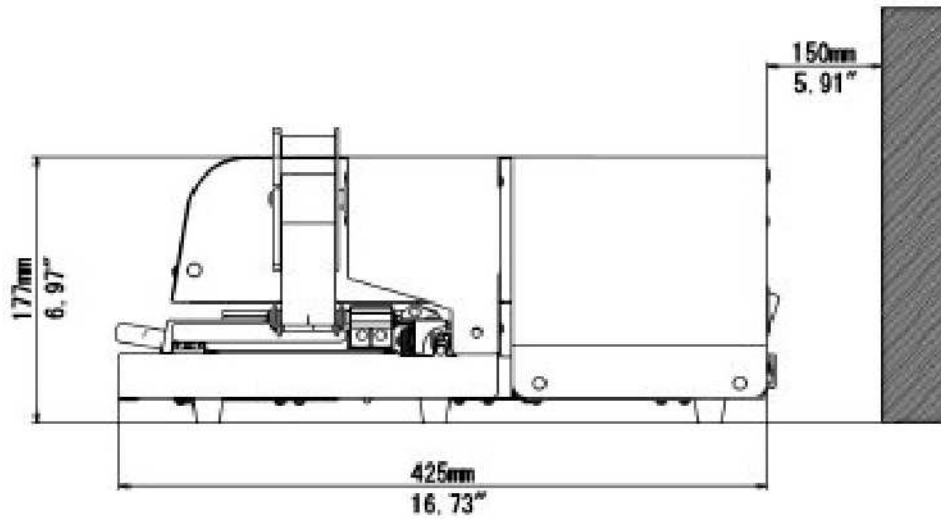
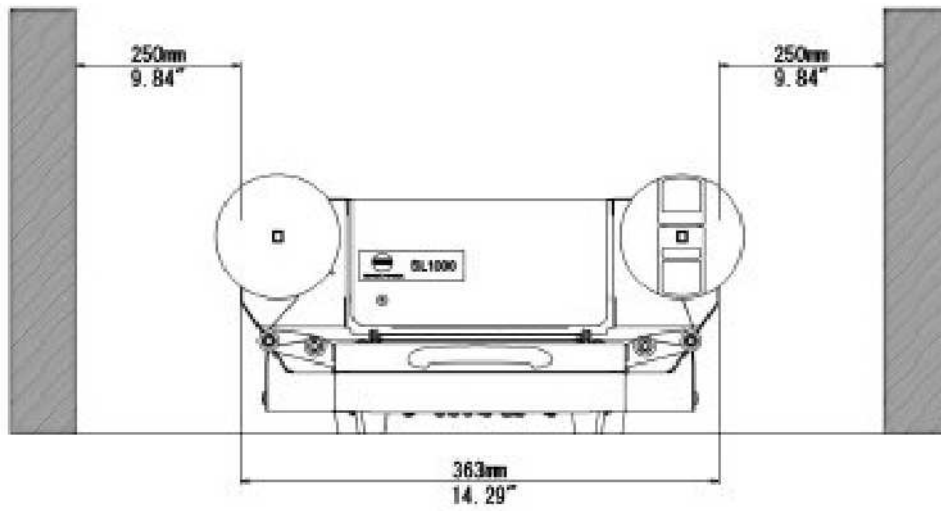
1.4 Space Requirements

- ◆ Secure the recommended space shown in the figure below to ensure easy operation and maintenance of the Scanner.

[Standard: Fiche Carrier Model]



[Motorized Roll Film Carrier /Manual Roll Film Carrier Model]



2 Precautions for Installation and Operation

2.1 Operating Environment

The following environment is required for consistent performance of the Scanner:

Temperature: 50 to 95°F (10 to 35°C) with temperature variations not exceeding 18°F (10°C) per hour.

Humidity: 15 to 85%RH with humidity variation not exceeding 20% per hour.

2.2 Precautions when operating the Scanner

Observe the following precautions to ensure the optimum performance of the Scanner:

- ◆ NEVER place things other than the original on the Fiche Glass or exert force on the Scanner.
- ◆ NEVER place finger(s) between the glass when operating the Scanner.
- ◆ NEVER bring any magnetized object or use flammable sprays/liquids near the Scanner.
- ◆ NEVER place a vase or vessel containing water on the Scanner.
- ◆ NEVER drop paper clips, staples, or other small pieces of metal into the Scanner. If this occurs, contact your Authorized Dealer.
- ◆ NEVER remove the Fixed Outer Cover.
- ◆ ALWAYS completely insert the Power Cord Plug into the Power Outlet.
- ◆ ALWAYS make sure that the outlet into which the Power Cord Plug is inserted is visible.
- ◆ NEVER use this device with Power Cords or USB Cables for other electrical devices.
- ◆ IMMEDIATELY turn the Power Switch OFF, unplug the Power Cord, and call your authorized dealer for appropriate action when the Power Cord or USB Cable of the Scanner has been damaged.
- ◆ ALWAYS be sure to turn the Power Switch OFF, unplug the Power Cord, and call your authorized dealer for appropriate action when the Scanner becomes excessively hot or produces abnormal noise.

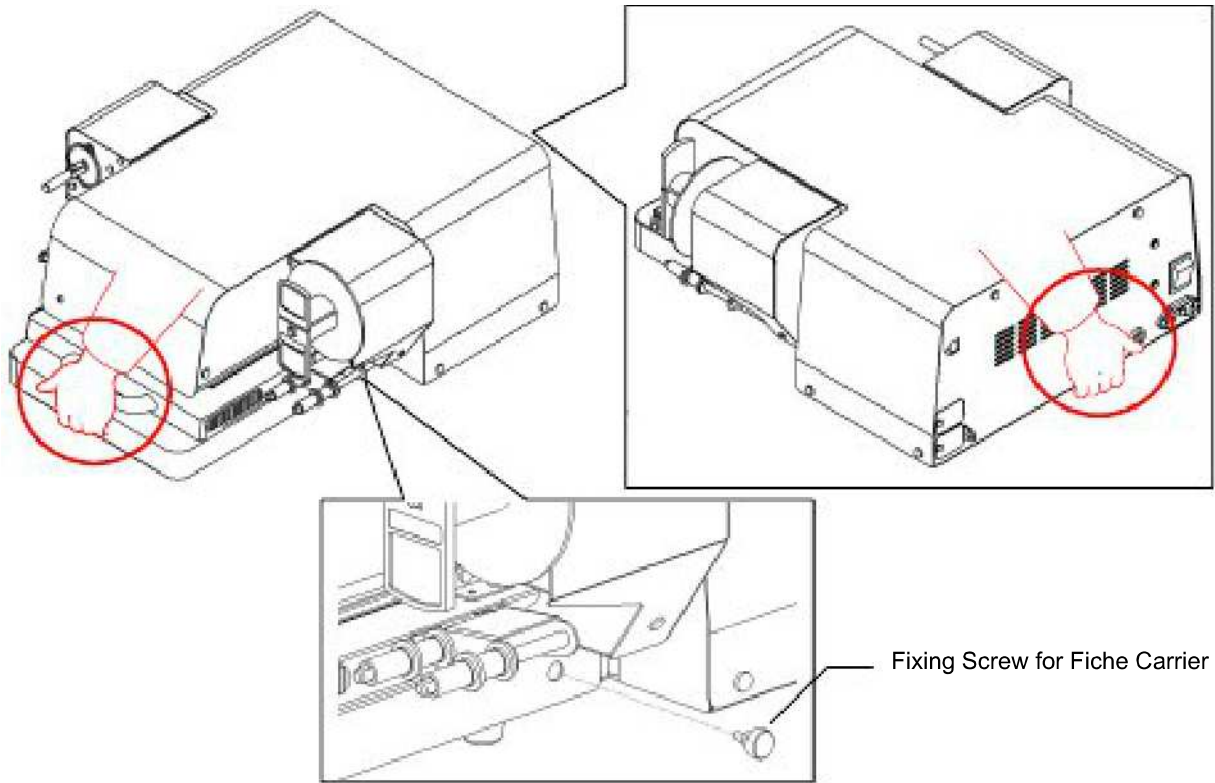
2.3 Precautions when operating the Personal Computer

Refer to the Operation Manual provided for the Personal Computer.

2.4 Moving the Scanner

When moving the Scanner, observe the following:

- ◆ When carrying the Scanner, hold as shown in the below figure. Be careful not to hurt your back.
- ◆ When moving the Scanner, be sure to disconnect the Power Cord and the USB Cable.
- ◆ When transporting the Scanner, contact your authorized dealer.



⚠ CAUTION

- Never move the Scanner while the Fiche Carrier is pulled out, it could cause trouble. When the Scanner the Fiche Carrier should be pushed all the way into the Scanner.
- Never hold in a manner other than the identified in the figure. Scanner must be held in the area designated in the illustration.

Chapter 2

Overview

1 Features

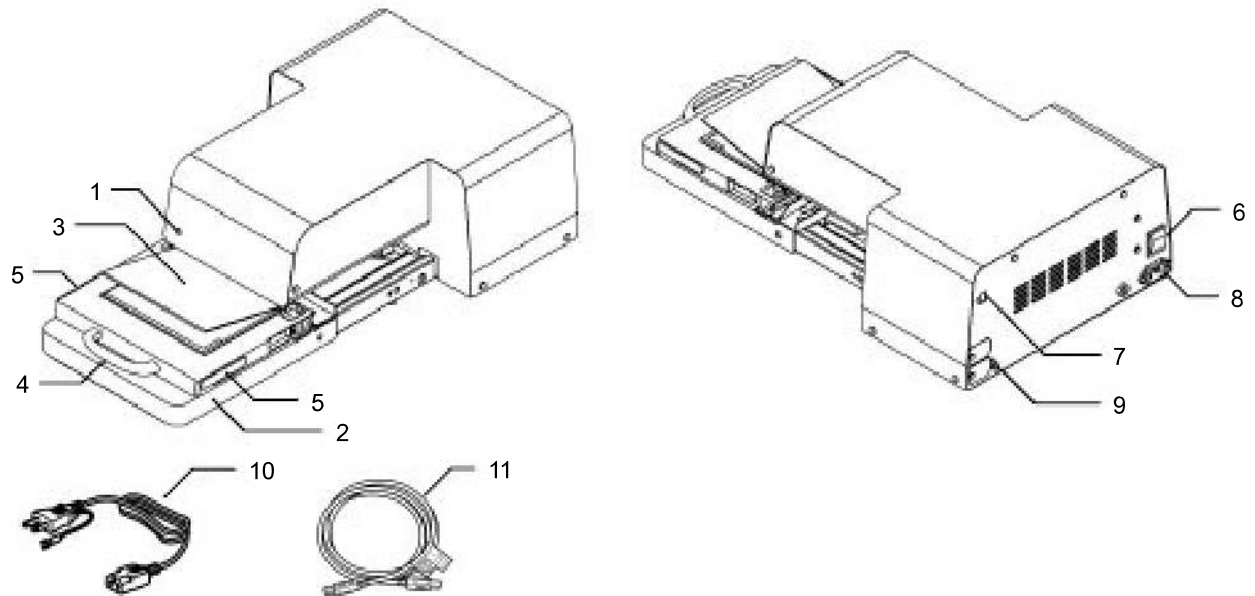
This Scanner is digital screen-less Scanner that has developed for the microfilm editing to the digital image for a high-speed scanning. There are the following features.

- ◆ The machine has a small footprint and light weight. And, the installation location is not limited.
- ◆ The lens exchange is unnecessary, and a super-high magnification optical zoom of (6.8 - 54 x) is equipped, and with "electrical zoom" magnifications up to 8.5 - 105 x.
- ◆ The film in various types can be read by installing the option.
 - * Roll Film/Fiche Carrier, Monochrome(B/W)/Color, Positive/Negative etc,
- ◆ The optical resolution can be read by the high-resolution with 360dpi (A4 L or Letter L conversion).
 - *L = landscape
- ◆ The color image of the high-resolution can be read by a Color Area CCD Sensor (14.22 Mega pixels).
- ◆ It is designed by the power saving corresponding to the regulation (Energy Star (US), ErP Directive (EU)).
- ◆ Special application software (SL-Touch for SL1000) that can be operated by a Touch Panel is standard.
- ◆ The real-time view (film image) and the image view (preservation image) can be switched with one touch by operating the special application software (SL-Touch for SL1000).
- ◆ Various options such as an Motorized Roll Film Carrier, Manual Roll Film Carrier, Manual Switch, etc. are also available.



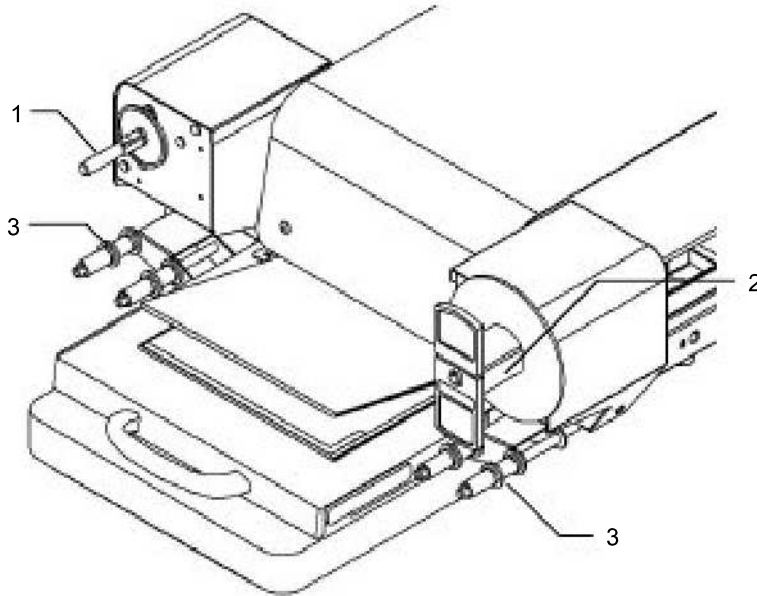
2 Part Identification and Functions

2.1 Main Unit



- | | |
|-----------------------|---------------------------------------------------------------------------------------------------------|
| 1. Indicator Lamp | Scanner condition is shown. |
| 2. Fiche Carrier: | Film is set to desired position. |
| 3. Fiche Glass: | Film held in place. |
| 4. Carrier Handle: | To insert, remove or correctly position the fiche film. |
| 5. Grip: | The area that the hand is placed when the image position is fine-tuned, and the Fiche Carrier is moved. |
| 6. Power Switch: | Turns the Scanner ON/OFF. |
| 7. USB Connector: | Connect the USB Cable that is supplied with the equipment. |
| 8. Power Cord Socket: | Plug the Power Cord into this socket. |
| 9. Security Slot: | General-purpose security wire (for anti-theft) can be connected through this slot. |
| 10. Power Cord: | Connects the Scanner to the Power Outlet. |
| 11. USB Cable: | Connects the Scanner to the Personal Computer. |

2.2 Roll Film Carrier (Option)



- 1. Reel Shaft:
- 2. Take-Up Reel:
- 3. Guide Roller:

Roll Film is inserted.
Roll Film is wound.
The Roll Film is guided.

Chapter 3

Application “SL-Touch for SL1000”

1 SL-Touch for SL1000 Setup

It is necessary to install 'SL-Touch for SL1000' in the Personal Computer beforehand to display the image and to take it with a Personal Computer connected with SL1000. This chapter describes the system requirements of the Personal Computer and the installation procedure of 'SL-Touch for SL1000'.

1.1 Trademark Acknowledgments

IBM and IMB PC/AT are registered trademarks of International Business Machine Corporation. Microsoft, Windows, Windows Vista and Windows 7 are registered trademarks of Microsoft Corporation.

All other brand or product names are trademarks or registered trademarks of their respective companies or organizations

1.2 System environment

The following are the minimum system requirements for the computer connected to the Scanner to install the Driver. The operator should be completely familiar with basic Windows operations.

Computer	Compatible with IBM PC/AT
OS	Windows 7: 32 bit, 64 bit Windows Vista: 32 bit, 64 bit SP2 or later
CPU	INTEL Core i7 or more
Memory	4GB or more
Hard disk drive	1GB of available hard-disk space
Interface	Hi-Speed USB 2.0
Optical disc drive	CD-ROM drive
Display	Display that has screen resolution (1,280 x 1,024 or more)

Recommended system requirements

CPU	INTEL Core i7 2.93GHz faster
Memory	4GB or more
Hard disk drive	SATA3 7200rpm 32MB or more
Video Card	GeForce GT430 1GB or more
Display	Display that has screen resolution (1,920 x 1,080)
Touch Panel	Touch Panel corresponding to a multi touch or display equipped with a Touch Panel

NOTE ! It is necessary to use the display corresponding to the multi touch to enlarge the display image by the zoom operation of the Touch Panel with Windows 7.

1.3 Installation the Application Software and the Driver Software

NOTE ! Must install "SL-Touch for SL1000" before connecting the Scanner.
When the Scanner is connected before "SL-Touch for SL1000" is installed, "Found New Hardware Wizard" is displayed.
In this case, please end the wizard clicking the cancel button.
The driver is installed concurrently with the application.

The following procedure shows the Application Installation for Windows 7.

Administrative rights are needed for the Application Installation.

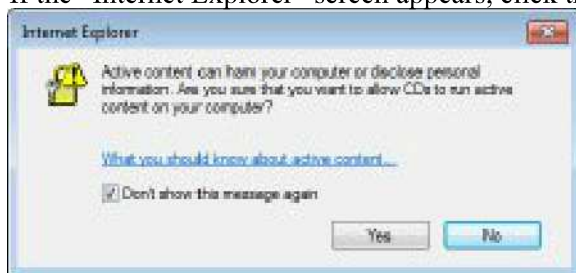
NOTE : Screens may differ slightly depending on the Windows version.

- 1 Set installation CD-ROM in the CD-ROM drive of the Personal Computer. The Auto Play screen appears automatically. Click "Run rundll32.exe".



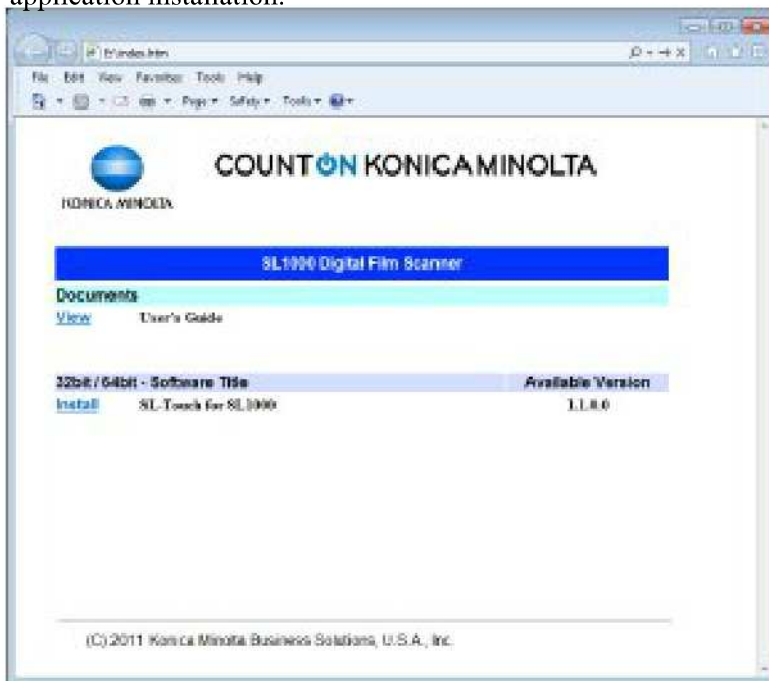
NOTE ! When "Auto Play" function of the computer is "OFF" setting, this screen is not displayed. Please execute index.htm in CD-ROM and start.

- 2 If the "Internet Explorer" screen appears, click the "Yes" button.

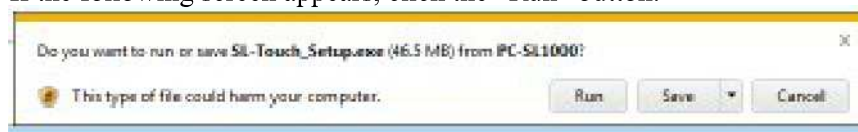


NOTE ! This screen is not displayed according to the setting of the computer when using it.

- 3 When the installation screen appears, Click “Install” for the SL-Touch for SL1000 to begin application installation.



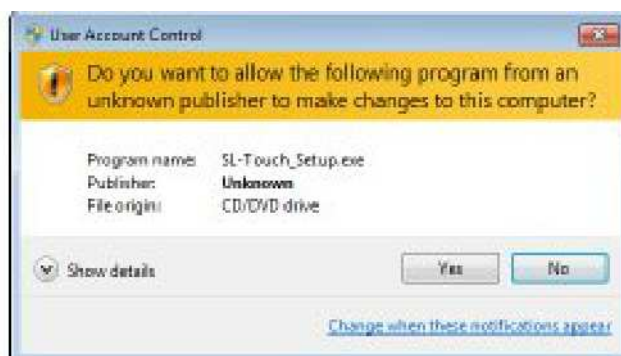
- 4 If the following screen appears, click the “Run” button.



- 5 If the following screen appears, click the “Run” button.

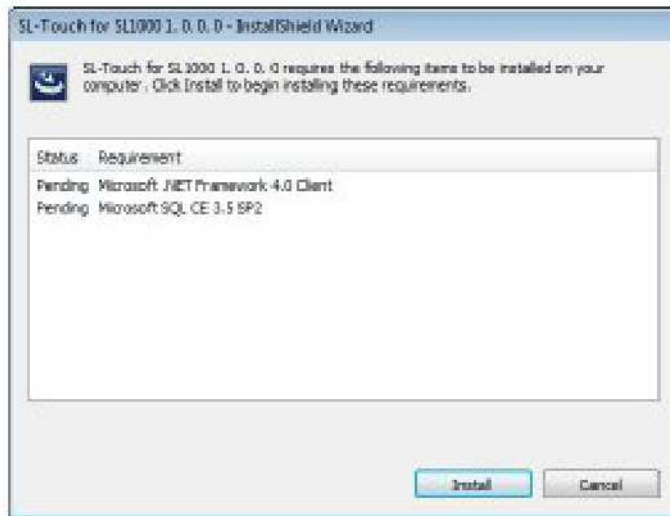


- 6 If the “User Account Control” screen appears, click the “Yes” button.



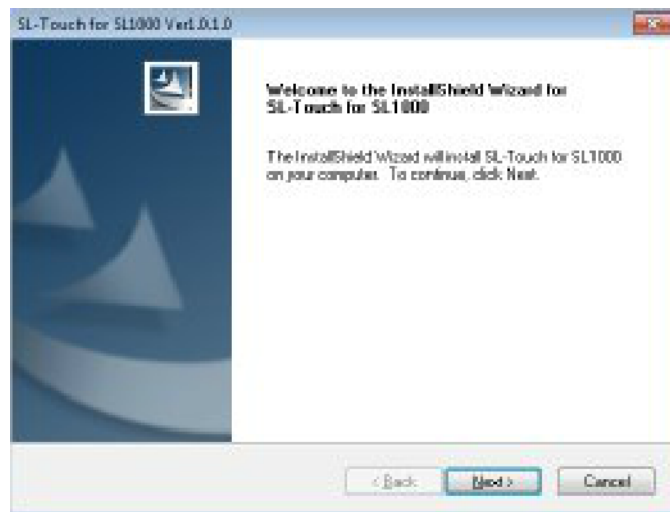
NOTE ! This screen is not displayed according to the setting of the computer when using it.

- 7 When the installation screen of “Microsoft .NET Framework 4.0 Client” and “Microsoft SQL CE3.5 SP2” are displayed, click the “Install” button.

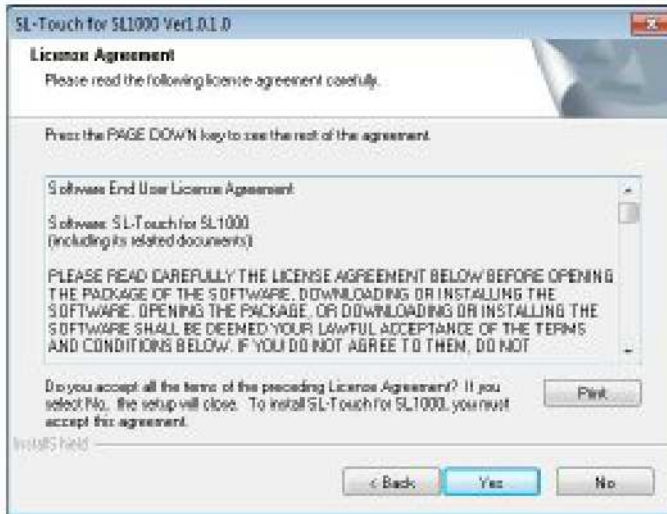


NOTE ! When the above-mentioned item has already been installed the Personal Computer, this installation screen is not displayed.

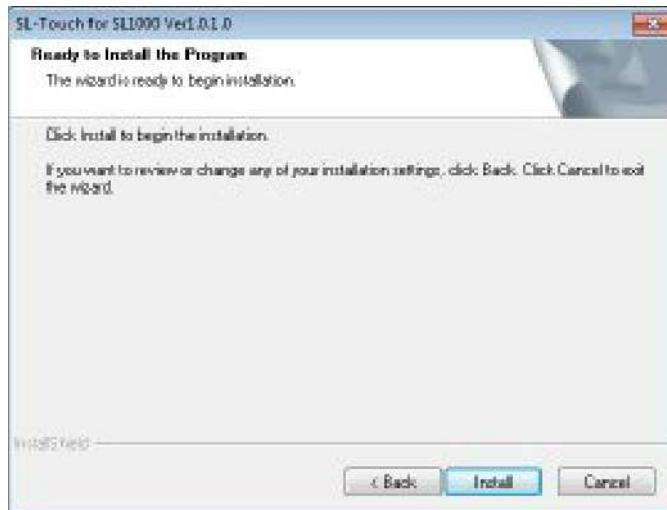
- 8 When the “Welcome to the InstallShield Wizard for SL-Touch for SL1000” screen appears, click the “Next” button.



- When the License Agreement” screen appears, confirm the following messages and click the “Yes” button.



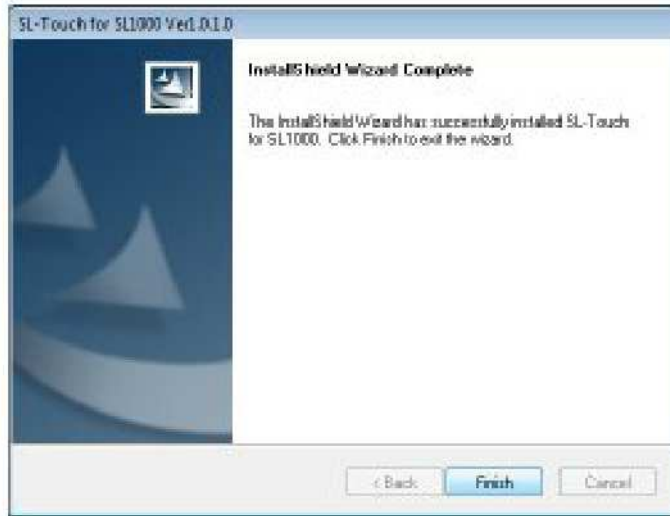
- Click the “Install” button.



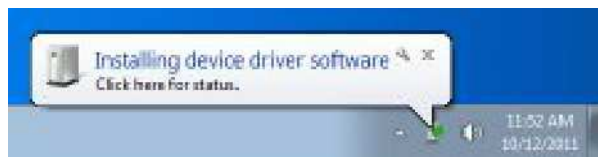
- When the “Windows Security” screen appears, click “Install this driver software anyway”.



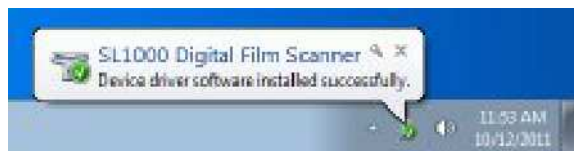
- 12** When the “InstallShield Wizard Complete” screen appears, click the “Finish” button, and remove the CD-ROM from the Personal Computer.



- 13** Connect the Scanner to the Personal Computer with the USB cable.
- 14** Turn the Power Switch of the Scanner ON.
- 15** “Installing device driver software” appears.



- 16** When “SL1000 Digital Film Scanner Device driver software installed successfully” is displayed, the driver was installed successfully.



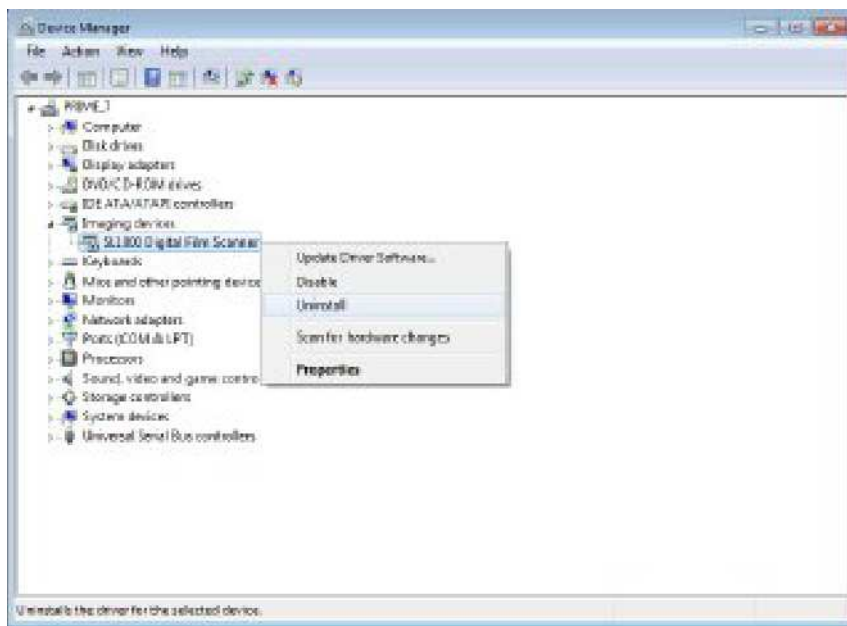
1.4 Uninstall the Application Software and the Driver Software

When “SL-Touch for SL1000” installed on the Personal Computer is no longer necessary, use the following procedure to delete it.

The following procedure shows the application and driver uninstall for Windows 7. Administrative rights are needed for the application and the driver uninstall.

NOTE ! Screens may differ slightly depending on the Windows Version.

- 1 Confirm that the Personal Computer is connected with the Scanner
- 2 Turn the Power Switch of the Personal Computer ON.
- 3 Turn Scanner Power Switch ON.
- 4 From “Start”, choose “Control panel”, Click “System and Security”. Click “Device Manager”.
- 5 Uninstall the “Imaging devices - SL1000 Digital Film Scanner”.



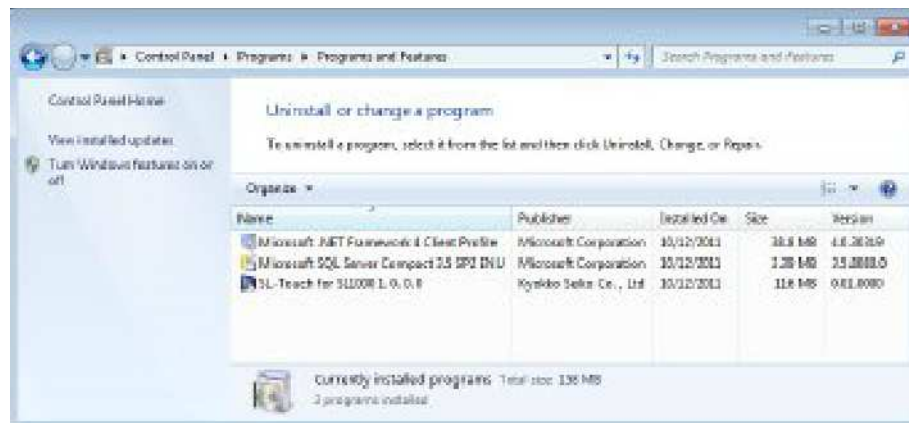
- 6 When the “Confirm Device Uninstall” screen appears, check “Delete the driver software for this device” and click the “OK” button.



- 7 When the following window appears, click “No” in order not to restart the computer.



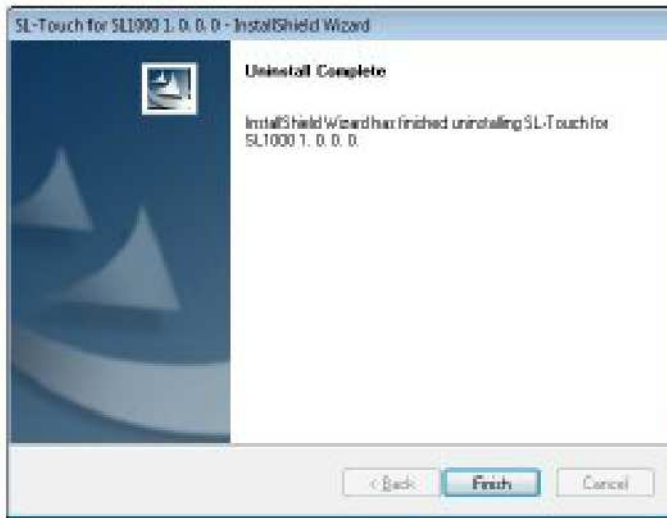
- 8 Turn OFF the Power Switch of the Scanner.
- 9 From “Start” menu, choose “Control panel”. Click “uninstall a program”.
- 10 Select “SL-Touch for SL1000” and then click the “Uninstall” button.



- 11 When the following window appears, Click “Yes”.



- 12** When the “Uninstall Complete” screen appears, click the “Finish” button.



- 13** Restart the Personal Computer.

2 Application start-up

There are "SCAN Mode" and "VIEW Mode", and the mode changes into "SL-Touch for SL1000" by connecting the Scanner when start up.

NOTE ! Connect the Scanner before you start an application, complete the Application and the Driver Installation.
If you start an application before connecting the Scanner will display an error message.

SCAN Mode

- 1 Turn on the Power Switch of the Personal Computer, and start Windows.
- 2 Connect the Scanner to the Personal Computer with the USB cable, and turn on the Power Switch of the Scanner.
- 3 Select the button "Start" → "All programs" → "SL-Touch" → "SL-Touch".
- 4 The application starts in the SCAN Mode after the main screen of "SL-Touch for SL1000" is displayed.

NOTE ! It takes time to start to read the Scanner adjustment value while displaying the opening screen.
When the Scanner is not connected, VIEW Mode starts.

- 5 The film used or the registered user is selected after "Film selection" screen is displayed, and click the "OK" button.

NOTE ! Non-display setting of "Film Selection" is also possible.

VIEW Mode

- 1 Turn on the Power Switch of the Personal Computer, and start Windows.
- 2 Select the button "Start" → "All programs" → "SL-Touch" → "SL-Touch".
- 3 The application starts in the VIEW Mode after the opening screen of "SL-Touch for SL1000" is displayed.

3 SCAN Mode screen

The image is displayed on the application screen. This mode enables you to read the image and set various functions.

Listed below is an explanation of the functions that can be set in SCAN Mode.



1. Scan Window

The scanning image is displayed.

While the film is moving, animation (Follow to movement) is displayed. Moreover, when the film stops, the still picture (Read by high resolution) is displayed.

NOTE ! • The image arbitrarily displayed by the zoom operation of the Touch Panel can be magnified and be reduced for the multi touch environment.

2. Cropping Area

The area to the output file and the output printer is selected, and displayed. The size of the Cropping Area changes if a quadrangle in four corners and all sides is dragged.

NOTE ! • The Cropping Area set within the selection crop size range is output when the fixed form size (Excluding Custom) has been selected by "Output setting",

- The Cropping Area is not changed at the zoom. Please return to normal display pressing "Fit", and execute it.

3. Toolbar

The application and the Scanner are operated and set.

NOTE ! • There is no menu bar in this application.

- All are operated with buttons on the toolbar.
- The button displayed on the tool bar can be changed.

4. Roll Film Carrier The Motorized Roll Film Carrier (Option) is operated.

3.1 Toolbar



to VIEW Mode

It changes from the SCAN Mode to the VIEW Mode.



Film Selection

The Film Selection screen is displayed.
→ 3.2 Film Selection



Auto Focus

It is automatically adjusted to the best focus.

NOTE ! • It may not function correctly due to the condition of the film (density, contrast, and image pattern). In this case, adjust it manually.



Film Polarity

The polarity of the film ("Positive film" or "Negative film") is selected.



Zoom In

The Scanner performs the zoom operation so that the magnification display is adjusted as long as button is depressed.

The Scanner shifts to an electronic zoom when the upper bound of the optical zoom is exceeded and does the magnification operation.



Zoom Out

The Scanner does the zoom operation like wide-ranging being displayed as long as button is depressed.



Rotate CCW

Whenever the button is pushed, the image is rotated 90 degrees counterclockwise.



Rotate CW

Whenever the button is pushed, the image is rotated 90 degrees clockwise.



Horizontal Flip

Whenever the button is pushed, the image reverses right and left.

NOTE ! • It changes into the picture that reverses the icon for the reverse image.





Deskew CCW

The image is counterclockwise and is aligned when the button is depressed. (max. 45 degrees)



Deskew CW

The image is clockwise and is aligned when the button is depressed. (max. 45 degrees)

NOTE ! • When the inclination is corrected, the arrow of the icon becomes an orange.



- The correction returns to the origin (0 degrees) when "Deskew CCW" or "Deskew CW" is pushed while depress the "Shift" key on the keyboard.
 - Even if "Deskew CCW" and "Deskew CW" of the Touch Panel are pushed at the same time for the multi touch environment, the correction angle can be returned to the origin (0 degrees).
-



Scan to File

The image is scanned, and it outputs to the file.

NOTE ! • The scan size, resolution, and output destinations etc. are set by "Output Setting"

- When the Manual Switch (Option) is installed, "Scan to File" can be executed even if the Manual Switch is pressed.



Scan to Print

The image is scanned, and it outputs to the printer.

NOTE ! • The printer screen is not displayed when printing by "Scan to Print".

- The scan size and output destinations etc. are set by "Output Setting".
- "Scan to Print" cannot be executed from the Manual Switch (Option).



Magnifier +

The displayed image is magnified continuously and displayed. The magnification is displayed in the scan window (upper right) at the zoom.



Magnifier -

The image that has been magnified is reduced.

NOTE ! • When the magnification is displayed, the Cropping Area can not be changed..

- The reduction image doesn't become smaller than the scan window size.
- It is possible to magnify and to reduce even by the zoom operation of the Touch Panel for the multi touch environment.



Fit to Window

The zoom image is returned to a normal size.

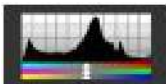


Image Adjustment The image quality is adjusted
→ 3.3 Image Adjust



Auto Cropping The Cropping Area is automatically adjusted to the size of the image frame.

NOTE ! • The Auto Cropping might not function normally according to the shape and the density of the image. In this case, it adjusts manually.



Cropping Mode The Cropping Mode ("Normal Mode" or "Custom Mode") is changed.

Normal Mode : The selected area (Cropping Area) is read in an area one rectangular.



Custom Mode : The rectangular area is added to plurals, and the area is read.



"Custom Mode" is selected, a mouse cursor becomes a "cross" and it can specify two or more ranges.

NOTE ! • It returns to the Cropping Area at the Normal Mode immediately before when changing from the Custom Mode to the Normal Mode.



Auto Zoom To be suitable for the scan window size, the range of the Cropping Area selection is automatic zoom position corrected.

NOTE ! • The magnification becomes the upper bound of the optical zoom.



Multiple SCAN The continuous scanning screen of the Roll Film is displayed. (The Motorized Roll Film Career of the option is installed.)
→ 5.1 Multiple SCAN



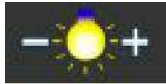
Multiple SEARCH The continuous retrieval screen of the Roll Film is displayed. (The Motorized Roll Film Career of the option is installed.)
→ 5.2 Multiple SEARCH



Auto Exposure

The image density is automatically corrected.

NOTE ! • It may not function correctly due to the condition of the film (density, contrast, and image pattern). In this case, please adjust it with Image Adjustment.



Lamp Illuminance

The illuminance of the exposure lamp are set
→ 3.4 Lamp Illuminance



Auto Corrections

The item selected from "Automatic inclination correction", "Automatic density correction", and "Automatic focus" is corrected automatically grouped together.

NOTE ! • The item selection is executed by "Preference".



Step Focus

Focus is adjusted manually.



Auto Deskew

The inclination of the image is automatically corrected.

NOTE ! • It may not function correctly due to the condition of the film (density, contrast, and image pattern). In this case, adjust it manually. When the inclination is corrected, the arrow of the icon changes to the color orange.





Pan Window

The window of a whole image (pan window) is displayed at the zoom.

The image in the scan window also follows when the frame of the pan window is dragged and moved.

Oppositely the frame of the pan window also follows when the image in the scan window is dragged and moved.



Output Setting

When the scan is output, the scan size and the resolution, etc. are variously set.

→ 3.5 Output Setting



Preferences

The application and the Scanner are variously set (Power Saving, etc.).

It is necessary to input the password for the setting.

→ 3.6 Preference

3.2 Film Selection

The type of the film is selected and the setting (display color and zoom position, etc.) that is appropriate for the film is achieved.



1. Film Type

The zoom position and the exposure lamp illuminance that is appropriate for the film format are set.



The following settings are read to each user to whom the user is registered.

- Film Type
- Monochrome and color film
- Positive and negative film
- Zoom position
- Image rotation
- Reversing image (right and left)



The proper zoom position is set to the aperture card.



The proper zoom position is set to the 35 mm Roll Film.

NOTE ! • When the Motorized Roll Film carrier is installed, the screen of the Roll Film Carrier is displayed.



The proper zoom position is set to the 16 mm Roll Film.

NOTE ! • When the Motorized Roll Film carrier is installed, the screen of the Roll Film Carrier is displayed.



The proper zoom position is set to the Micro Fiche Film 60F or 98F.



The proper zoom position is set to the Micro Fiche Film 270F or 420F.



The proper zoom position is set to the Micro Opaque.
Moreover, the exposure lamp illuminance also set a proper value to the Micro Opaque.

NOTE ! • When the Micro Opaque is selected, the film polarity cannot be set.

2. Film Polarity

The polarity of the film used is selected.

Negative film : When the negative film is used, the reversing display (Conversion: the black from the transparency, white from the black) and the scanning are selected.

Positive film : When the positive film is used, the neutral display (Neutral: the white from the transparency, black from the black) and the scanning are selected.

3. Film Color

The color of the film used is selected.

Monochrome film : The film is selected when the monochrome display and scanning.

Color film : The film is selected when the color display and scanning.

4. OK

It moves to the zoom position and the color display to set of the selection.

NOTE ! • The following settings change into an initial value or the registration value of each user if the film selection is executed.

- Film type
 - Monochrome and color film
 - Positive and negative film
 - Zoom position
 - Image rotation
 - Reversing image(right and left)
-

5. Cancel

It cancels the moving of the setting of the color display or the zoom position.

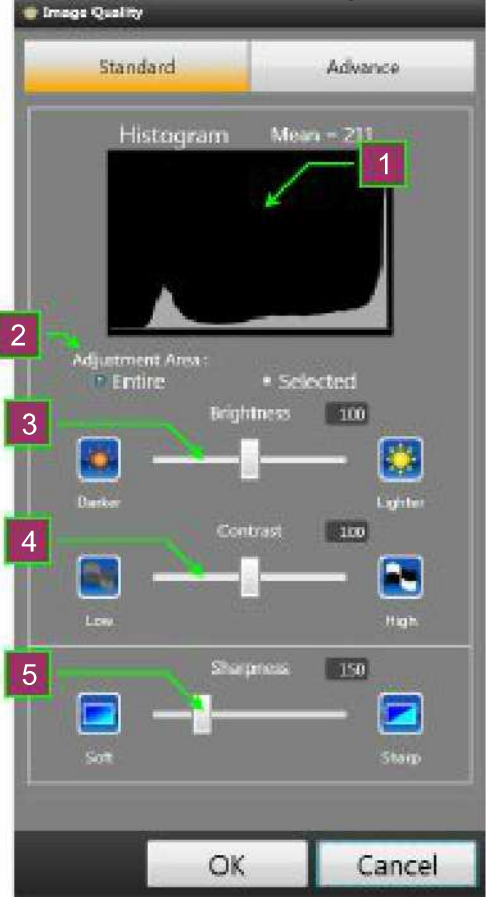
NOTE ! • When the application starts, the color display and the zoom position are moved to set of the memory at the end.

3.3 Image Adjustment

The display and the image quality when scanning are adjusted.
The adjusted value is in real time reflected in the displayed image.
"Standard Mode" and "Advance Mode" can respectively be set by switching the tab.

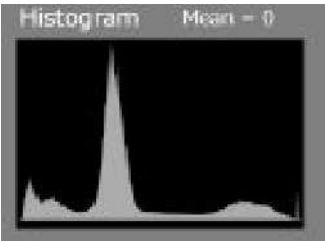
Standard Mode

A common item to the reading color is set.



1. Histogram

Distribution and the Mean Value of the Histogram of the adjustment area that has been selected are displayed.



2. Adjustment Area

The adjustable range of "Brightness" and "Contrast" is selected.

Entire: Display of the histogram in read whole area and "Brightness" and "Contrast" are adjusted.

Selected: Display of the histogram in read selected area and "Brightness" and "Contrast" are adjusted.

Procedure of the operation:

- 1) The Cropping Area disappears when "Selected" is selected, and the selection range frame is displayed in the dotted line of "Orange" and "White".
- 2) The selection range frame is set to the adjusted position.
- 3) When "Brightness" or "Contrast" is changed, it is affected in the image of the selection range frame. Please set it to a proper value.
- 4) The changed setting is settled when "OK" is pressed, the selection range frame disappears, and the Cropping Area is displayed.
- 5) When other range is adjusted, the "Image adjustment" is pressed again, and 1) to 4) is executed.

NOTE !

- A specified frequency of "Selected" is eight places or less.
- The adjusted image returns to the initial when "Image rotation" and "Skew correction" are executed, and the scan image of the film is changed.
- The selection range frame is not changed at the zoom. Please return to normal display pressing "Fit", and execute it.

NOTE !

- Whole areas except "Brightness" and "Contrast" are adjusted.

3. Brightness

The brightness of the image is adjusted.



Lighter The image is lightened.



Darker The image is darkened.

4. Contrast

The contrast of the image is adjusted.



High

The contrast of the image is increased.



Low

The contrast of the image is decreased.

NOTE ! • The proper image density can be obtained by adjusting "Brightness" and "Contrast" to distribute the histogram in the whole area.

5. Sharpness

The sharpness of the image is adjusted.



Sharp

The image is made sharper.



Soft

The image is made softer.

NOTE ! Even if "Brightness" and "Contrast" are adjusted according to the film, an appropriate image density might not be obtained. In that case, it might be improved by changing illuminance intensity of the LED lamp. (Please refer to the section "3.4 Lamp Illuminance".)

Advance Mode

When the reading color is "Color" or "Monochrome binary", the following items can be set.

Image Type: Color

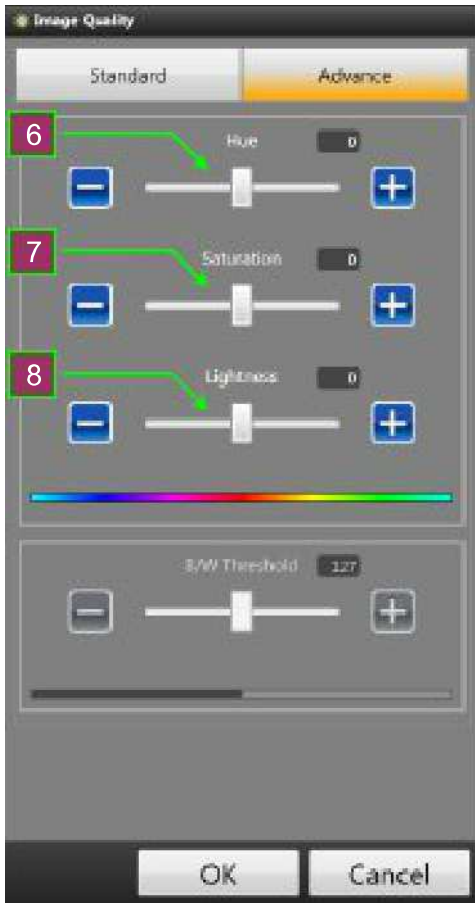
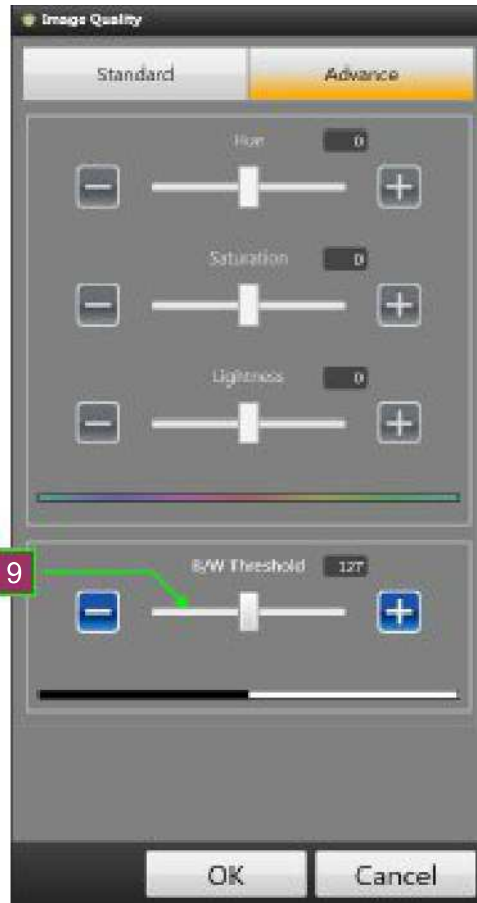


Image Type: Monochrome binary (manual)



- | | |
|---------------|------------------------------------------------|
| 6. Hue | The hue of the color image is adjusted. |
| 7. Saturation | The saturation of the color image is adjusted. |
| 8. Lightness | The lightness of the color image is adjusted. |

NOTE ! • "Hue", "Saturation", and "Lightness" can be adjusted only for the "Color" "Image type" of "Output setting".

- | | |
|------------------|-------------------------------------------------------------------------|
| 9. B/W Threshold | When a black and white binary image is made, the threshold is adjusted. |
|------------------|-------------------------------------------------------------------------|

NOTE ! • When "Output setting" of the "Image type" is only "Monochrome binary (manual)", the binary threshold can be adjusted.

3.4 Lamp Illuminance

The illuminance of the exposure lamp are set.



1. Lamp Illuminance Quantities of light of the exposure lamp are set.



The exposure lamp is lightened.

The image lightens for the positive film.
The image darkens for the negative film.



The exposure lamp is darkened.

The image darkens for the positive film.
The image lightens for the negative film.

NOTE ! • The usually according to the film and the magnification, brightness is adjusted automatically to standard position.

3.5 Output Setting

The scan setting, the output setting and printer setting when "Scan to File" and "Scan to Print" are executed are set.



1. **Batch – Title** Register, set scan settings and delete batch settings of associated settings. When the selected item is registered, the registered name is input to "Batch title" column. When the registered batch is accessed, it selects from the pull-down list.
* The Default setting cannot be deleted.

NOTE !



- The character (\ and / etc.) cannot be used for the title as a file name of Windows.
- Because the batch of each logon user of Windows is preserved, the batch of another logon user cannot be read.

2. **Batch – NOTE** The comment is added to the registered batch.

3. **Delete** The registered batch is deleted. When "Delete" is clicked after "Batch title" is selected, the selected batch is deleted.

NOTE !

- The setting of "Default" cannot be deleted.
- Even if the batch is deleted, the image file in batch is not deleted.

4. Save
- The input batch is preserved.
When "Save" is clicked after "Batch title" is input, the batch is preserved.
- The following setting is preserved in the batch.
Orientation, Size, Resolution, Image Type, Edit, Save in, File name, File number, Format, Compression, Printer Name, Fit to printable area of paper size, Rotate to orientation of paper
-
- NOTE !**
- It can not be preserved by changing the setting of "Default".
 - Batch of each logon user of Windows is preserved.
-
5. Orientation
- When the fixed form size is output, the output direction is set.
-  Portrait: Scan image is output by a portrait fixed form size.
-  Landscape: Scan image is output by a landscape fixed form size.
6. Size
- The output image size is set.
It can be selected according to 9 selections (A3, A4, B4, B5, Ledger, Legal, Letter, Check, and Custom).
-
- NOTE !**
- When the fixed form size (excluding Custom) is selected, the range of the Cropping Area is output to the selected output size or less.
 - When Custom is selected, it is output in the condition within the range of the Cropping Area that has been selected.
-
7. Resolution
- The output resolution when saving a file is set.
It can be selected according to 9 selections (600, 400, 360, 300, 240, 200, 150, 100 ,75dpi.)
-
- NOTE !**
- As for "600 dpi", if the "Image type" is "Gray scale" or "Monochrome binary", and "Size" is less than "A4" or "Letter", only it can be selected "
 - The resolution when the printer output is fixed by "360dpi".
-
8. Image Type
- The mode of the output image (Color and Binary) is set.
- When Film "Color Film" is selected:
Only the Color (24bit) can be selected.
- When film "Monochrome Film" is selected:
It can be selected according to 4 selections (Gray Scale (8bit), B/W (Manual), B/W (Auto), B/W (Error Diffusion)).

9. Edit

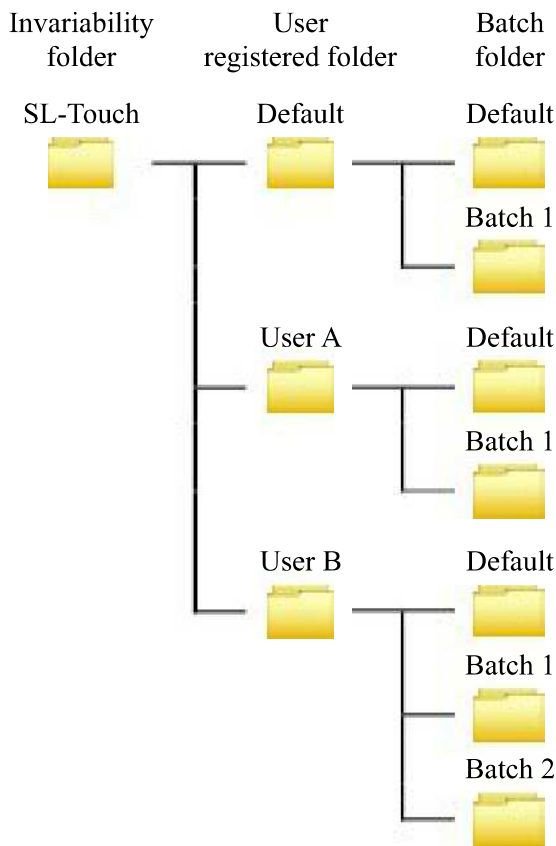
"Masking" and "Centering" are set.

1. Masking: When a size that is larger than the image that has been selected, the outside of the image is deleted by "White".
2. Centering: The center gap of the image is detected, and the image is arranged at the center of the output area.

NOTE ! • The Masking might not function normally according to shape and the density of the image.

10. Save In

The preservation place of the scanned file is set.
 The folder of the batch name is made under the registered folder.
 The folder of each user registered under the SL-Touch folder is made in default as shown in the figure below, and the folder of each batch is made under that.



NOTE ! • The SL-Touch folder is made under the My Pictures folder of the logon user of Windows. And, it can not be changed.
 • The confirmation message is displayed when under the registered folder, there is a folder of the same name as the batch name.
 • When the image file exists in the folder that preserves the rewrite, the file is not registered as an image in the batch. Only the file newly scanned is registered in the batch.

-
- | | |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11. File Name | The character of a fixed part of the file name is set. |
| 12. File Number | Sequential number for the file name and "Increment" and "Decrement" are selected. |
| 13. Format | <p>The file format is selected.
It can be selected according to 6 selections (BMP (*.bmp), TIFF (*.tif), JPEG (*.jpg), PDF (*.pdf), and PNG (*.png)).</p> <hr/> <p>NOTE !</p> <ul style="list-style-type: none">• JPEG (*.jpg) cannot be selected in case of monochrome binary.• The multi page file (TIFF and PDF) cannot be preserved directly.
When the multi page file is made, "VIEW Mode" and "Multi page output" are used for conversion. <hr/> |
| 14. Compression | <p>When the file is preserved, the compressed format is selected.</p> <hr/> <p>NOTE !</p> <ul style="list-style-type: none">• The compressed format is different depending on the file.• The compressible ratio of JPEG can not be changed. <hr/> |
| 15. Printer Name | The output printer is selected. |
| 16. Fit to printable area of paper size | When the image is output, the image is magnified or reduced based on the size of the paper. |
| 17. Rotate to orientation of paper | The image rotates and is printed according to the orientation of the paper. |

3.6 Preferences

The Application and the Scanner Settings are saved.


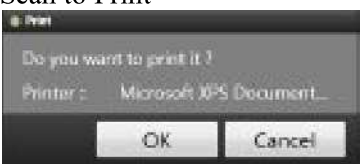
It is necessary to input the password to display the screen in the environmental setting.



- NOTE !**
- The password of default is "0000".
 - To initialize the password when the password was forgotten, contact the Servicing Dealer.



1. Show Scan Image After it scans, the scanning image is displayed based on the selected time interval.
2. Image Display Time When "Show Scan Image" is enabled (Check Show Scan Image Box), set the image display time.

3. **Ask Before Output** It displays on the confirmation screen before the scan image is output when "The scan image is displayed" is "ON".
- For Scan to File
- 
- Scan to Print
- 
4. **White Balance** The correction of the white balance is set. There are two selections available (Manual, Auto).
5. **Color Correction** The correction of the color reproduction for the color image is set. There are three selections available (Non, Standard, Color Management).
6. **ICC Profile** The ICC Profile is selected.
7. **Auto Contrast** When the monochrome film is set, the image contrast is automatically corrected.
8. **Digital GEM** The graininess of the film is decreased. It is effective for the image quality reproduction of negative film.
9. **Put the Scanner to Sleep** The time that should elapse when no operation is performed before the device enters Sleep Mode. It can be selected according to 7 selections (5 Minutes, 15 Minutes, 30 Minutes, 60 Minutes, 2 Hours, 3 Hours, 4 Hours).
10. **Turn OFF the Scanner** The time that should elapse when no operation is performed in Sleep Mode before the Power Supply is turned OFF. It can be selected according to 4 selections (60 Minutes, 2 Hours, 3 Hours, 4 Hours).
11. **Non-display button** The buttons not displayed on the toolbar is displayed in the list.
12. **Toolbar** The button displayed on the toolbar is displayed in the list. The list is displayed, queuing up in order from the left of the toolbar to the lower right.
13. **Add** The button displayed on the toolbar is added. "Non-display button" is selected, and "Addition" is clicked, and the oriented button is added onto the "Toolbar" list.
14. **Remove** The button displayed on the toolbar is deleted. The oriented button on the "Toolbar" is selected, and the button is deleted when "Remove" is clicked.

15. Move Up The position of the selection button on the toolbar is moved (on the left).
When the button is selected on the "Toolbar", and "Move Up" is clicked, it shifts up one.
16. Move Down The position of the selection button in the toolbar is moved on (lower right).
When the button is selected on the "Toolbar", and "Move Down" is clicked, it shifts down by one.
17. Reset The button displayed in the toolbar is reset in the initial values.
18. Show Text of Icons The toolbar functions are displayed under the toolbar.
19. Show Output Setting Button "Output setting" button of the toolbar is displayed.
20. Auto Correction The adjusting item executed when the "Auto Corrections" button is clicked, is set.
It can be selected according to the following.
1. Exposure & Deskew & Focus
 2. Exposure & Deskew
 3. Deskew & Focus
 4. Exposure & Focus
21. Show Property Various properties are displayed at the right of the scan window by the sidebar.

SCAN Mode



VIEW Mode



22. Launch Film Selection at Startup When the application is started, the "Film Selection" screen is displayed.
23. Use operation sound When the application starts, and the operation is executed, the sound is reproduced.

NOTE ! • When Windows Media Player is not installed, the operation sound is not reproduced.

24. The setting is preserved and complete. The last settings are preserved when quitting the application and it ends.

NOTE ! • The setting of each logon user of Windows is preserved.

- 25. Add User The selection user is registered by "Film selection".
→ 3.7 Add User
- 26. Change Password When the screen of "Preference" is accessed, the password is changed.
→ 3.8 Change Password
- 27. Maintenance Mode The device is adjusted in this area.
Only Service Technicians can use this mode.
- 28. OK The setting is saved, and exits out of the screen.
- 29. Cancel The setting is canceled, and exits out of the screen.

3.7 Add User



1. **User Name**

The user who displays on the film selection screen is registered, and deleted. When the user is registered, the name of the user is input to "User Name" column. When the user who registered is presented, it selects from the pull-down list. *The Default user cannot delete.

NOTE !

 - The character (\ and / etc.) cannot be used for the user name as a file name of Windows
 - Because the batch of each logon user of Windows is preserved, the batch of another logon user cannot be read.

2. **Delete**

Deletes registered user. When deleted "User Name" is selected, and "Deletion" is clicked, the user is deleted.

NOTE !

 - The user of "Default" cannot delete.

3. **Save**

The user who input is preserved. When "Save" is clicked after "User Name" is input, the user is preserved. The following setting is preserved by the user.
Film Kind, Film Type, Film Polarity, Zoom, Rotate, Horizontal Flip

NOTE !

 - It can not be preserved by changing the user of "Default".
 - The user of each logon user of Windows is preserved.

4. **Current Setting**

The present setting is displayed and saved.

3.8 Password

The password to display "Preferences" screen can be changed.



1. Old password The password set now is input.

NOTE ! • The default password is "0000".

2. New password The new password is input.
The password can set only 4 digit numeral.
3. Confirm new password The password is input again for the confirmation.

4 VIEW Mode Screen

The image file preserved in the SCAN Mode is displayed and it can be edited.

NOTE ! • It is possible to display only with the batch file preserved with the connected Scanner.



1. Thumbnail

The image preserved in the batch that is currently open is displayed in the Thumbnail.

The file is selected by the Thumbnail, and the image is displayed in the scan image window by using the drag & drop to the window or by performing a double-click.

NOTE ! • It can also be scrolled on the Touch Panel by the flick operation of the Touch Panel.

2. View Window

The image selected from the Thumbnail is displayed.

When the VIEW Mode is started, the final scanned image is displayed in the SCAN Mode.

NOTE ! • The image can be magnified and be reduced by the zoom operation of the Touch Panel for the multi touch environment.
• If the image is edited with other applications, it may be unable to read normally.

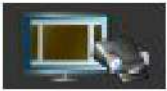




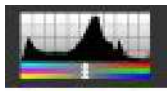









3. Toolbar

The application is operated.

→ 4.1 Toolbar

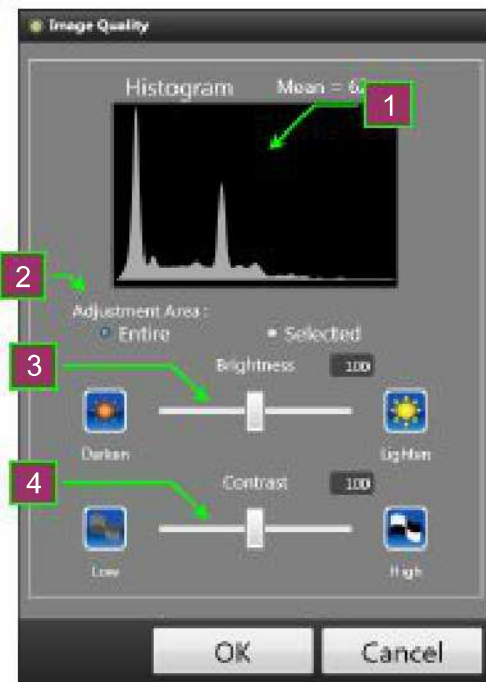
NOTE ! • There is no menu bar in this application. All are operated with buttons on the toolbar.
• The button displayed in the toolbar is not changed in the VIEW Mode.

4.1 Toolbar

	to SCAN Mode	It changes to the SCAN Mode.
<hr/>		
	Open	The registered batch is opened.
	Save	The edited image is overwritten and preserved.
<hr/>		
	Print	The displayed image is printed.
	Undo	The operation is canceled and it returns to the previous condition.
	Image Adjustment	The image quality is adjusted. → 4.2 Image Adjustment
	Rotate CCW	Whenever the button is clicked, the image is rotated 90 degrees counterclockwise.
	Rotate CW	Whenever the button is clicked, the image is rotated 90 degrees clockwise.
	Deskew CCW	When it keeps pressing the button, the image is adjusted counterclockwise (45 degrees or less).
	Deskew CW	When it keeps pressing the button, the image is adjusted clockwise (45 degrees or less).
	Magnifier +	The displayed image is magnified and displayed. The magnification ratio is displayed on the right of the window between zooms.
	Magnifier –	The image that the magnification display is done is reduced.
	Fit to Window	The image that the magnification display is done is returned to the normal size.
	Convert multi-page	The multi page is output. → 4.3 Convert multi-page
	Recycle Bin	The image selected by "Thumbnail" is deleted.
<hr/>		
NOTE ! • It is not a present display image, and the selected image by "Thumbnail list" is deleted.		
<hr/>		

4.2 Image Adjustment

The image quality of the image being displayed now can be adjusted.



- | | |
|--------------------|---------------------------------------------------------------------------------------------------------------|
| 1. Histogram | Distribution and the Mean Value of the Histogram of the Adjustment Area that has been selected are displayed. |
| 2. Adjustment Area | The adjustable range of "Brightness" and "Contrast" is selected. |
| | Entire: Display of the histogram in read whole area and "Brightness" and "Contrast" are adjusted. |
| | Selected: Display of the histogram in read selected area and "Brightness" and "Contrast" are adjusted. |

Procedure of the operation:

- 1) When "Selected" is selected the selection range frame is displayed in the dotted line of "Orange" and "White".
- 2) The selection range frame is set to the adjusted position.
- 3) When "Brightness" or "Contrast" is changed, it is affected in the image of the selection range frame. Please set it to a proper value.
- 4) The changed setting is settled when "OK" is pressed, the selection range frame disappears.
- 5) When other range is adjusted, the "Image adjustment" is pressed again, and 1) to 4) is executed.

NOTE ! • There is no limitation in a specified number of times of "Selected".

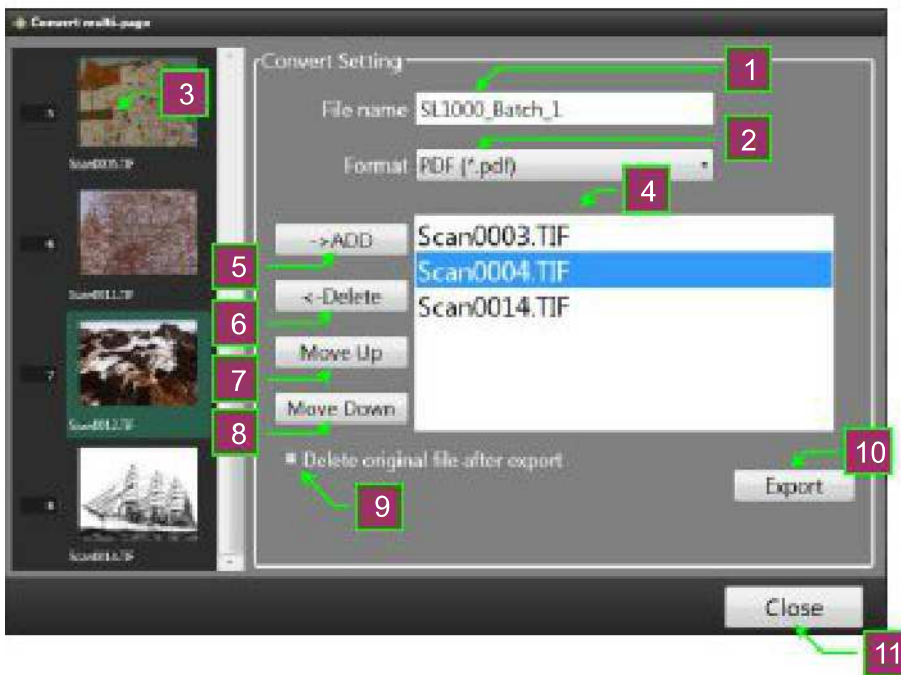
NOTE ! • Whole areas except "Brightness" and "Contrast" are adjusted.

- 3. **Brightness** The brightness of the image is adjusted.
- 4. **Contrast** The contrast of the image is adjusted.

NOTE ! • The proper image density can be obtained by adjusting "Brightness" and "Contrast" to distribute the Histogram in the whole area.

4.3 Convert multi-page

The selected image is converted from the image preserved in the batch into the multi page file.



1. File Name The file name of the multi-page output is input.
2. Format The file type of the multi page output is selected.
It can be selected according to 2 selections (PDF (*.pdf) and TIFF (*.tif)).
3. Export File The batch file of the multi page output is displayed by the thumbnail.
4. Selection File The selected file of the multi page output is displayed.
Top list is the first page.
5. Add The selected file of the multi page output is added.
It is added to the selection file that the file is selected, and "Add" is clicked.
6. Remove The selected file of the multi page output is deleted.
When the file is selected, and "Remove" is clicked, it is deleted from the selection file.
7. Move Up The position of the selected file is moved to the upward (forward).
When the file is selected with the selection file, and "Move Up" is clicked, it moves above one.
8. Move Down The position of the selected file is moved to the downward (backward).
When the file is selected with the selection file, and "Move Down" is clicked, it moves one the below.

9. Delete original file after export After the multi page is exported, the selected original file is deleted.
10. Export The export to the multi page file begins.
This key changes into "Cancel", and the file export can be canceled while exporting the multi page file.
-
- NOTE !** • The message is displayed when the export is canceled, and the file is deleted.
-
11. Close The screen of the multi page output is closed.

5 Roll Film Carrier

When the option "Motorized Roll Film Carrier" is utilized, it can be operated from "Roll Film Carrier" screen of the application.

5.1 Roll Film Carrier



Rewind

The film is rewind.

NOTE ! • Only when the Fiche Glass is opened, it can be operated.
 When the Fiche Glass is shut, this key becomes gray, and it can not be operated.



Glass Open Glass Close

• After a few seconds, it stops automatically when the film rewind is completed.



Previous page movement

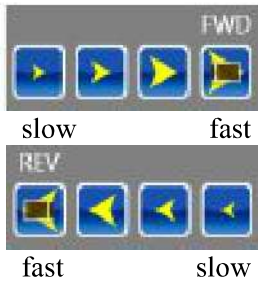
The frame of the film (image) is detected, and it reverses to previous one.



Next page movement

The frame of the film (image) is detected, and it advances to next one.

NOTE ! • Only when the Fiche Glass is closed, the frame movement can be operated.
 • The frame might not be normally detected according to the film condition (image shape and image density).



Film Feeding (FWD Direction)

The film feeding is continued in the forward direction while pressing "FWD", and stops when "FWD" is released.

Film Feeding (REV Direction)

The film rewinding is continued in the reverse direction while pressing "REV", and stops when "REV" is released.

The function continues when "FWD" or "REV" is double-clicked, and moves at the same speed.

Operation is locked when "FWD" or "REV" is double-clicked and moves at the same speed.

NOTE ! • When "FWD" "REV" is locked, the outer display changes to orange.



- After a few seconds, it stops automatically when winding the film is completed.
-

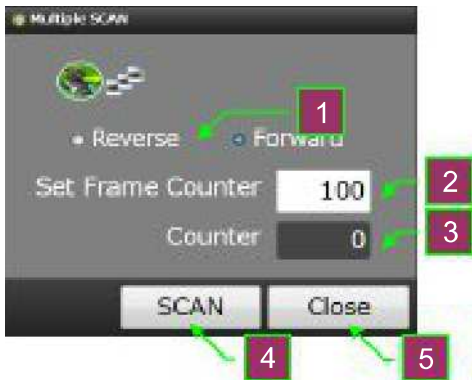


Stop

Operation stops when "STOP" is clicked at the lock condition.

5.2 Multiple SCAN

The frame (image) on the Roll Film is automatically detected, and the scan image is preserved in the file.



1. Film Operating Direction When continuously scanning, the film operating direction is set.
2. Set Frame Counter The number of frames (images) continuously scanned is set. It can be set up to 9,999 frames.
3. Counter The number of frames continuously scanned is displayed.
4. SCAN The continuous scanning begins. When the display changes into "Cancel", and it is clicked while executing a continuous scanning, cancel operates.
5. Close The screen is closed.

NOTE !

- The position where Multiple SCAN is stopped might vary.
- The film might not normally detect the frame depending on the image condition (shape and density).
- When the frame cannot be detected for a defined time, a message is displayed, and a continuous scan is canceled.

5.3 Multiple SEARCH

The frame (image) on the Roll Film is automatically detected, and it displays on the screen at constant intervals.



- | | |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Film Operating Direction | When continuously scanning, the film operating direction is set. |
| 2. Interval | After the frame (image) is retrieved, the stop time is set. It can be set from 2 to 10 seconds every second. |
| 3. Set Frame Counter | The number of frames (image) continuously scanned is set. It can be set up to 9,999 frames. |
| 4. Counter | The number of frames continuously scanned is displayed. |
| 5. SEARCH | The continuous searching begins. When the display changes into "Cancel", and it is clicked while executing a continuous searching, cancel operates. |
| 6. Close | The screen is closed. |

NOTE !

- The position where Multiple SEARCH is stopped might vary.
- The film might not normally detect the frame depending on the image condition (shape and density).
- When the frame cannot be detected for a defined time, the message is displayed, and a continuous scan is canceled.

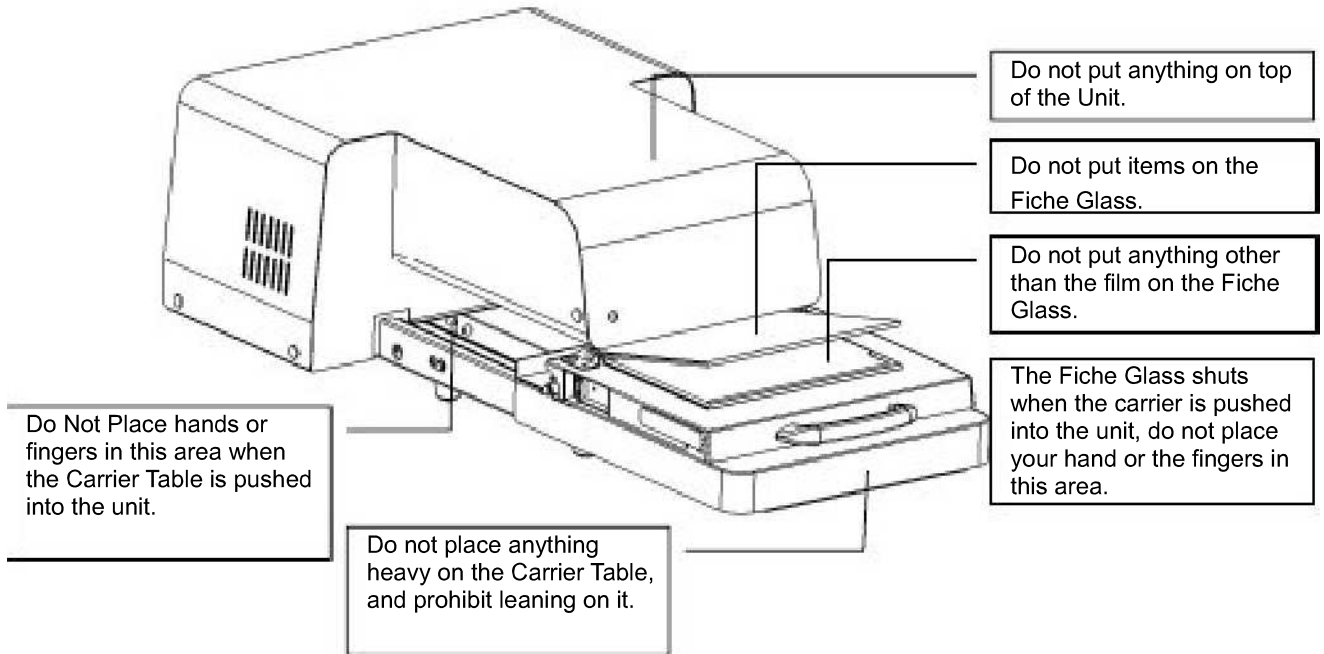
Chapter 4

Operation

1 Precautions for Operation

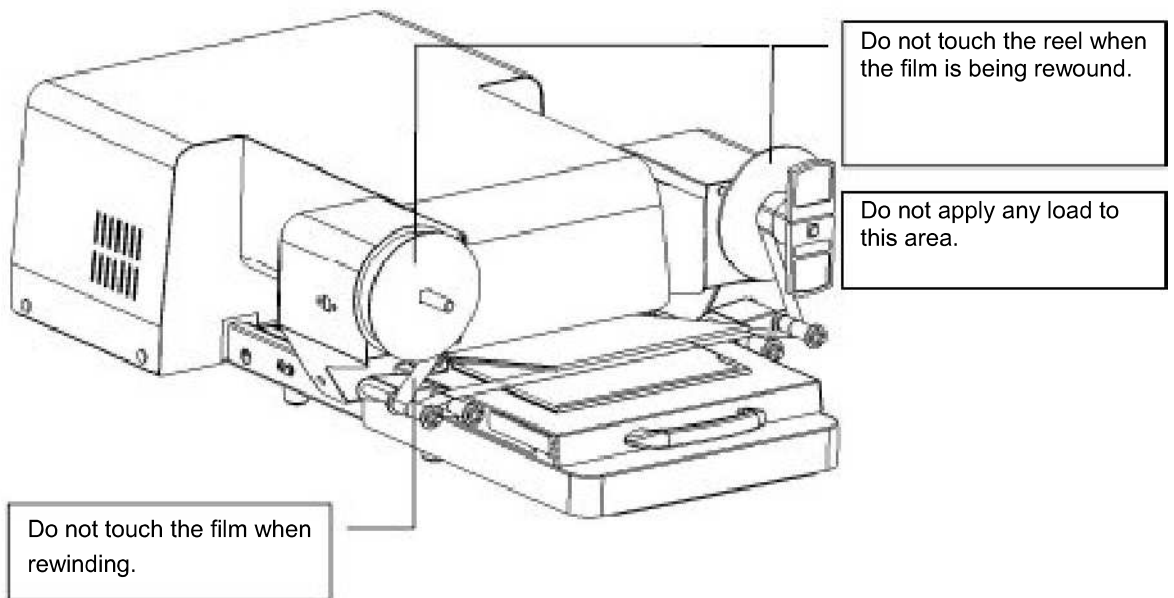
1.1 Main Unit

The following sections require special attention when operating the Scanner.



1.2 Roll Film Carrier (Option)

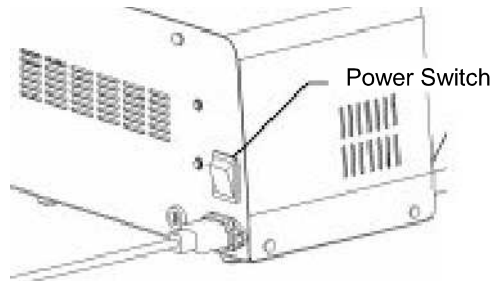
The following sections require special attention when operating the Scanner.



2 Turning the Scanner ON/OFF

2.1 Turning ON the Power Switch

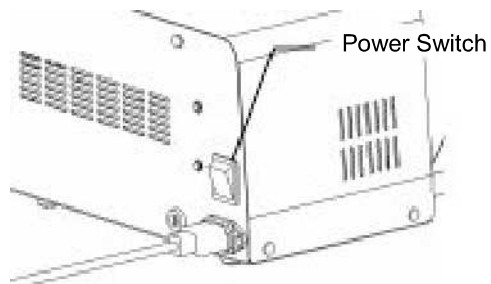
- 1 Check that the Scanner is securely connected to the Personal Computer with the USB Cable, and press the Power Switch of the Scanner to the ON (“I” Position).



NOTE ! When the USB Cable that connects this machine with the computer is not securely connected, scanner image data cannot be read.

2.2 Turning OFF the Power Switch

- 1 Quit the application (SL-Touch for SL1000).
- 2 Press the Power Switch to the OFF (“O” Position).



NOTE ! Do not turn OFF the Power Switch when the application is starting in the Scanning Mode.

2.3 Power Saving Features

The Exposure Lamp goes OFF, and the Indicator Lamp flashes when the Scanner has not been used for a determined amount of time, and it enters the Sleep Mode.

To return it to the Stand-by Condition, press any button of the application.

This machine shuts down when leaving it without any operation after a continued amount of time when in the Sleep Mode Condition.

-
- NOTE !**
- When returning from Sleep Mode, the initialization operation is done.
 - It also returns from Sleep Mode if the Manual Switch is pressed once, when the Manual Switch (Option) is utilized.
 - It also returns from Sleep Mode if the Fiche Glass is opened and closed when the Motorized Roll Film Carrier (Option) is utilized.
-

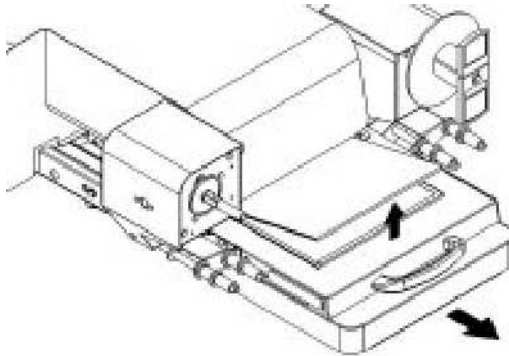
3 Operating the Fiche Film

3.1 Film Selection

- 1 "Film selection" screen is opened by "SCAN Mode", and the type of the fiche film is selected.

3.2 Film Insertion

- 1 Take hold of the Carrier Handle and pull it forward fully, then the Fiche Glass will open.

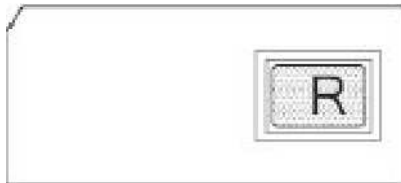


NOTE ! When the Fiche Carrier is pulled out to the maximum position, do not put heavy objects on the Carrier Table. And, prohibit lean against the Fiche Carrier as it could cause damage.

- 2 Insert the film between the Fiche Glasses.

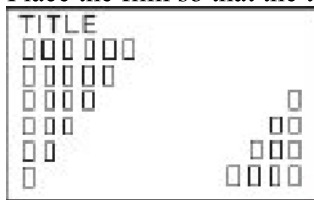
Aperture Card

Place the Card so that the film area is on the right side, face-up.

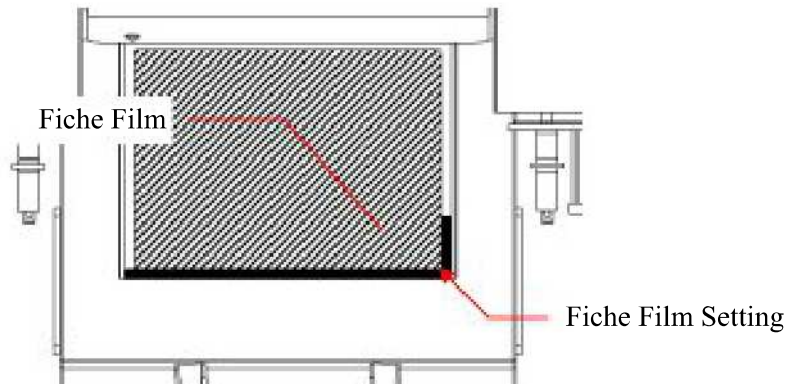


Fiche, Jacket Film

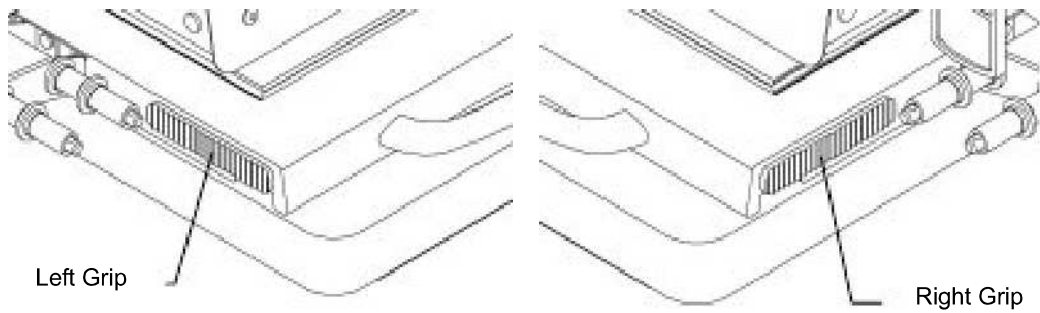
Place the film so that the title is toward the rear and face-up.



- 3** Position the Fiche Film on the Fiche Glass as shown on the figure below.



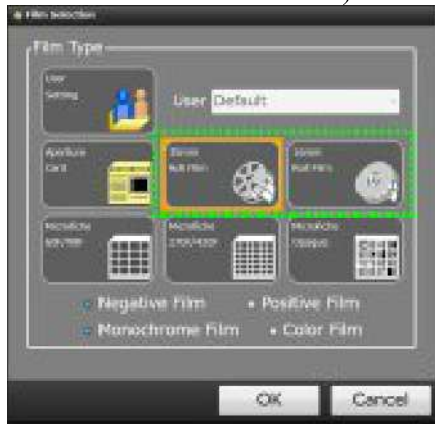
- 4** Place hands to both sides of the grips of the Fiche Carrier and fine-tune the image position.



4 Operating the Roll Film (When optional Roll Film Carrier is installed)

4.1 Film Selection

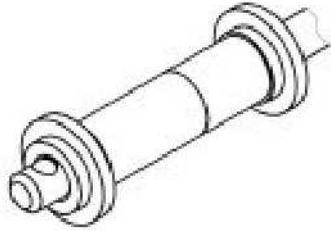
- 1 Open the "Film Selection" screen in "SCAN Mode", and select the Roll Film ("35 mm Roll Film" or "16 mm Roll Film") and the User (Registered Roll Film User Setting).



NOTE ! If the Roll Film is not selected when the automatic Roll Film Carrier is utilized, the Roll Film cannot be operated.

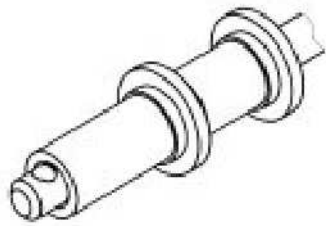
4.2 Selecting the Film Width 16mm/35mm

- 1 Pull out the front part of the Guide Roller, then reverse the directions of the roller and insert again.

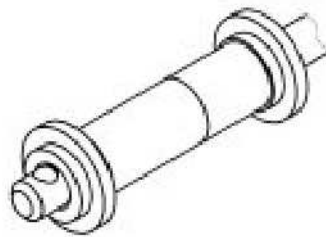


- 2 Change the position of other Guide Rollers in the same manner (4 pieces in total).

NOTE ! All of the directions of the Guide Rollers must be in the same orientation.



16 mm Setting

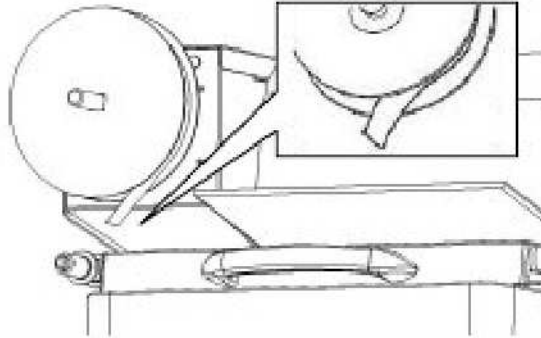


35 mm Setting

4.3 Loading the Roll Film

Motorized Roll Film Carrier

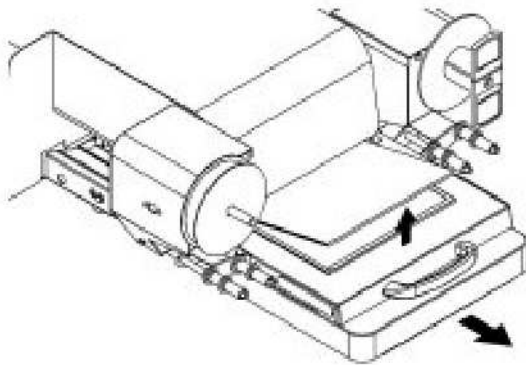
- 1 Mount the Roll Film onto the Reel Shaft and unwind the Leading Edge of the Film.



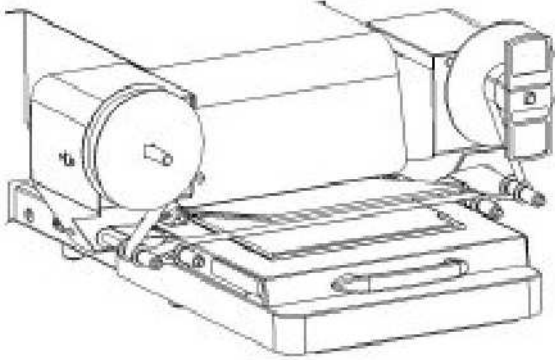
NOTE ! Be sure to set the film so that its winding direction is clockwise.
The film will not be correctly rewound if the open reel Roll Film is mounted in the opposite direction.

Install the Roll Film to the reel so that the square hole of the film and the square face can be adjusted.

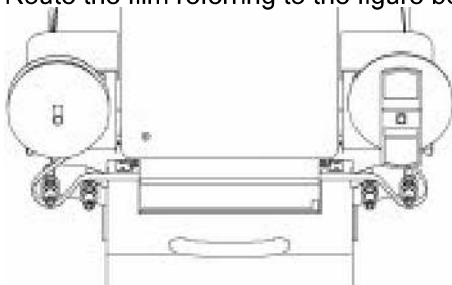
- 2 Take hold of the Carrier Handle and pull it forward fully, then the Fiche Glass will open.



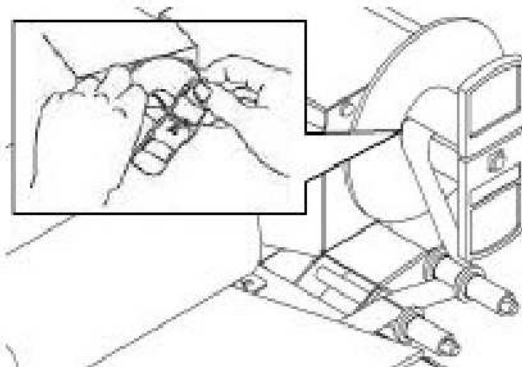
- 3** Insert the Leading Edge of the Film between the Fiche Glasses.



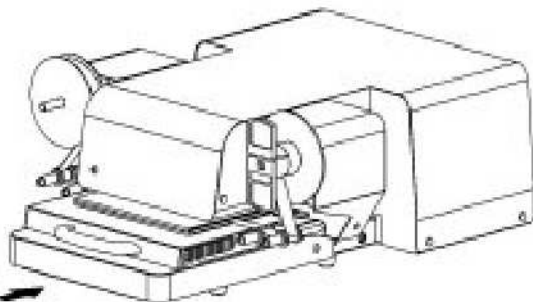
NOTE ! Route the film referring to the figure below.



- 4** Insert the Leading Edge of the Film into the slit in the Take-Up Reel and rotate the Take-Up Reel two to three turns so that the Film Leader is wound around the Take-Up Reel.

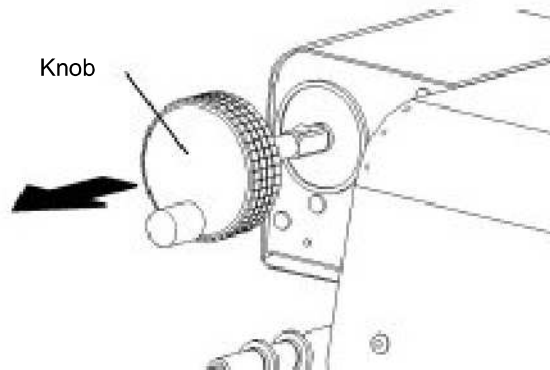


- 5** Move the Fiche Carrier so that the image is displayed.

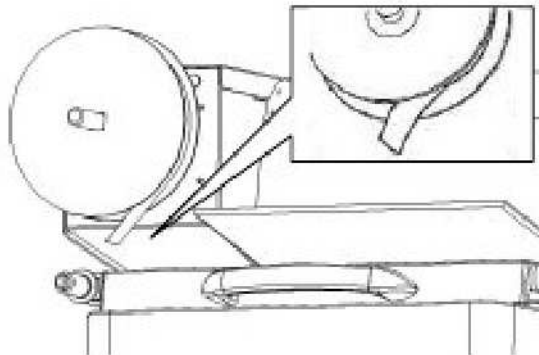


Manual Roll Film Carrier

- 1 Remove the knob from the Reel Shaft.



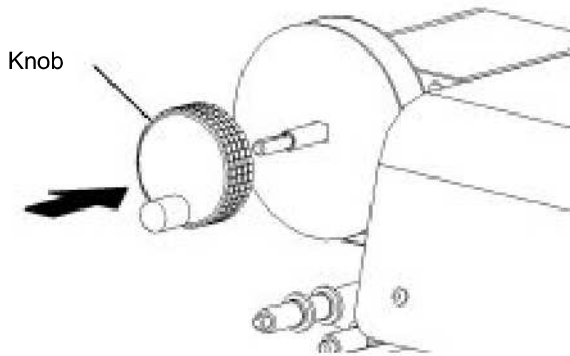
- 2 Mount the Roll Film onto the Reel Shaft and unwind the Leading Edge of the Film.



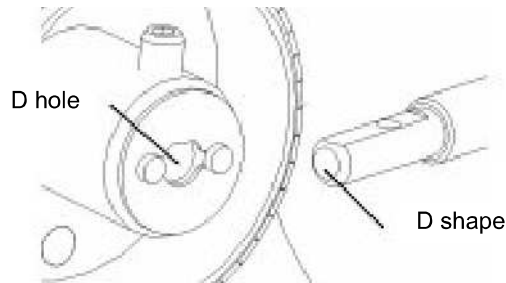
NOTE ! Be sure to set the film so that its winding direction is to be clockwise.
The film will not be correctly rewound if the open reel Roll Film is mounted in the opposite direction.

Install the Roll Film to the reel so that the square hole of the film and the square face can be adjusted.

- 3 Insert the knob in the Reel Shaft.



NOTE ! When the knob is inserted, D hole is inserted into the D shape position of the Reel Shaft.



- 4 Grasp the Carrier Handle and pull it forward fully, the Fiche Glass will then open.
- 5 Insert the Leading Edge of the Film between the Fiche Glasses Plate.
- 6 Insert the Leading Edge of the Film into the slit in the Take-Up Reel and rotate the Take-Up Reel two to three turns so that the Film Leader is wound around the Take-Up Reel.
- 7 Move the Fiche Carrier so that the image is displayed.

4.4 Feeding the Film

Motorized Roll Film Carrier

- 1 Press the following keys of "Roll Film Carrier" screen to operate the film.

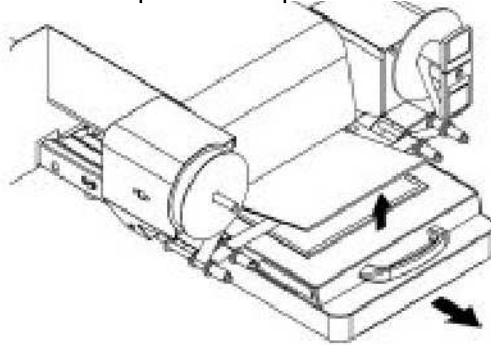


It is locked when a key is double-clicked, and it keeps feeding the film at the same speed.



The film feeding stops when "Stop" is clicked at the lock condition.

NOTE ! If you feed the film at high speeds, pull the Carrier Handle completely forward and then operate the Speed Control Button with the Fiche Glass open.



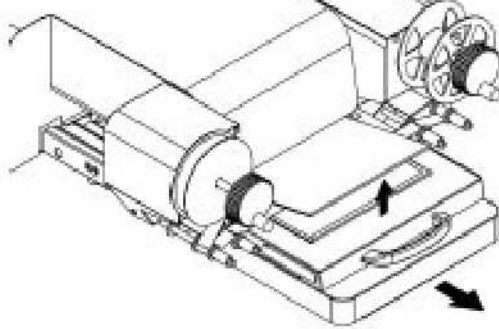
The state of the Fiche Glass (open/close), determines the Film Feeding Speed.

When the film is stopped, the motor will stop automatically after a few seconds.

Manual Roll Film Carrier

- 1 When the forwarding or the rewinding knob is turned, the film is advanced or reversed.

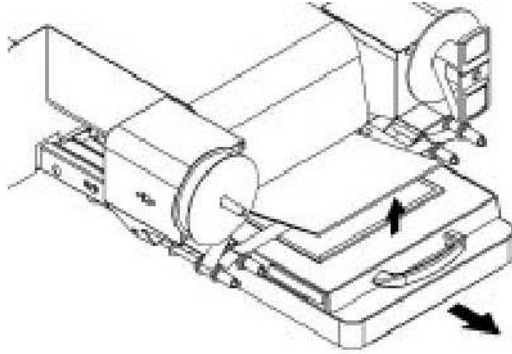
NOTE ! The knob can be operated when the handle of the Carrier Table is pulled out to maximum, which opens the Fiche Glass for film high-speed feeding.



4.5 Rewinding the Film

Motorized Roll Film Carrier

- 1 Grasp the Carrier Handle and pull it gently out as far as it will go. This causes the Fiche Glass to swing up.



- 2 Click "Rewinding", and the film is rewind.



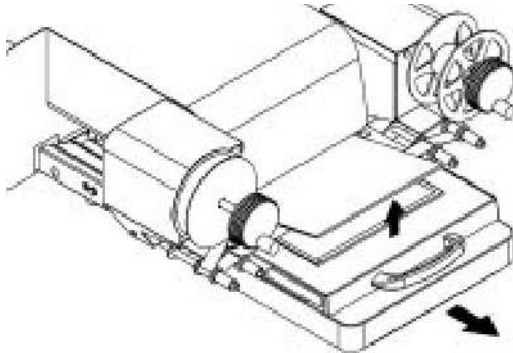
NOTE ! When Fiche Glass is not open completely, "Rewinding" cannot be operated.



When the film is finished being rewind, the motor will stop automatically after a few seconds.

Manual Roll Film Carrier

- 1 Grasp the Carrier Handle and pull it gently out as far as it will go. This causes the Fiche Glass to swing up.

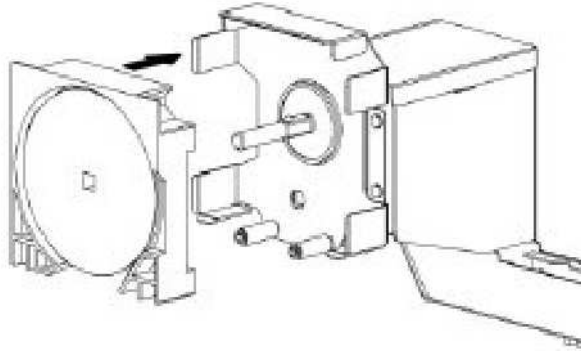


- 2 Turn the rewinding knob and the film is rewind.

4.6 Operation of the A-type Cartridge Adapter(Optional)

When the 16mm Cartridge Film (type: ANSI) is used.

- 1 Mount the 16mm Film Cartridge (type:ANSI) onto the Reel Shaft in the figure below and unwind the Leading Edge of the Film.

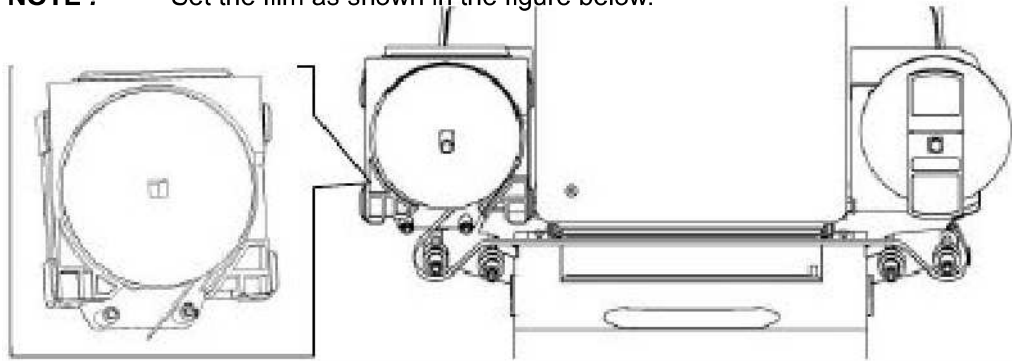


NOTE !

- Be sure to set the film cartridge so that its winding direction is to be clockwise.
- Push the cartridge into a bottom of the Reel Shaft when the cartridge is inserted.

- 2 Insert the film between the upper and lower fiche glass.

NOTE ! Set the film as shown in the figure below.



CAUTION

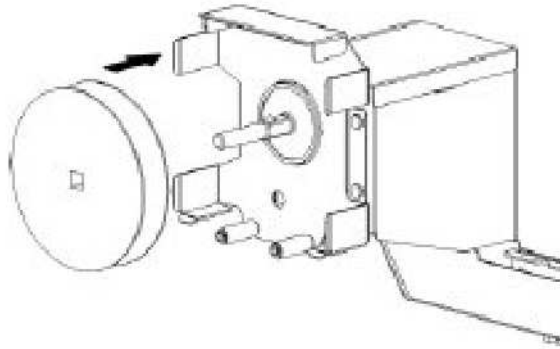
- Do not set it in a counterclockwise rolling so that the film surface might get the wound.
-

- 3 Insert the Leading Edge of the Film into the slit in the take-up reel and rotate the take-up reel two to three turns so that the Film Leader is wound around the take-up reel.
- 4 Operate the Fiche Carrier, and rewind the film to an image lead position.

When the 16/35mm Roll Film(Open-Reel) is used.

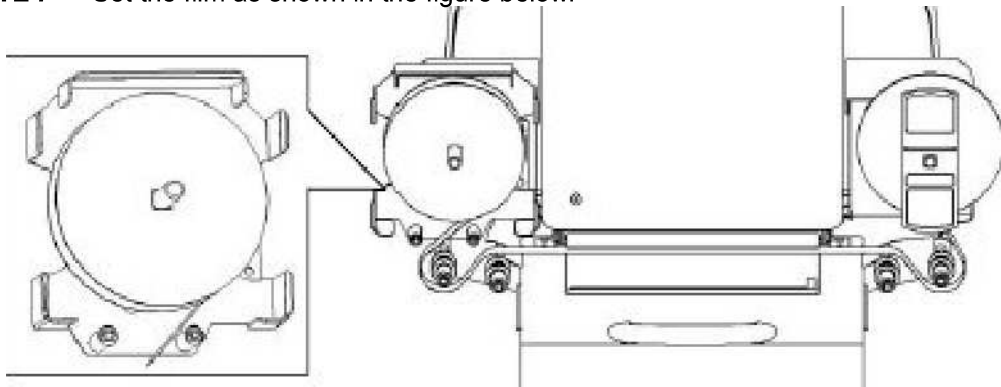
16/35mm Roll Film (open-reel) can be used with the A type cartridge adaptor installed.

- 1 Mount the 16mm or 35mm Film (Open-Reel) onto the Reel Shaft in the figure below and unwind the Leading Edge of the Film.



- 2 Insert the film between the upper and lower fiche glass.

NOTE ! Set the film as shown in the figure below.

**⚠ CAUTION**

- Do not set it in a counterclockwise rolling so that the film surface might get the wound.

- 3 Insert the Leading Edge of the Film into the slit in the take-up reel and rotate the take-up reel two to three turns so that the Film Leader is wound around the take-up reel.
- 4 Operate the Fiche Carrier, and rewind the film to an image lead position.

Chapter 5

Troubleshooting

1 Problems of the Scanner





When any error occurs in the Scanner, an error message appears on the screen of the Personal Computer and on the Operation Panel Screen, the LED Lamp flashes red and scanning stops. In this case, turn the Power Switch OFF and then back ON. Restart the Personal Computer again. If the same message appears again, call your Authorized Dealer and inform the trouble details and the Scanner condition.

2 Troubleshooting






2.1 Flashing display of the Indicator Lamp






Indicator Lamp Situation	Action
Indicator Lamp in front of the Main Body flashes approximately every second.	The main body is in the Sleep Condition. It returns normally from the sleep if any key of the application is pressed.
Indicator Lamp in front of the Main Body flashes approximately 0.5 cycle of second.	The Main Body is in need of service. Please contact an Authorized Dealer for Service.

2.2 Attention display on the Personal Computer Screen

Information or Warning message	Action
<p>SL-Touch</p>  Cannot find the Scanner.	<ul style="list-style-type: none"> • Confirm the USB Cable Connection is properly connected for the SCAN Mode, start the application after the Scanner Power Switch is turned OFF and ON. • Close the Warning Screen for the VIEW Mode, and try the operation again.
<p>SL-Touch Error</p>  The Scanner is disconnected. The software is switched to the VIEW Mode.	<ul style="list-style-type: none"> • When using the SCAN Mode, Scanner Power Switch is turned OFF/ON and change to the SCAN Mode. • Close the Warning Screen for the VIEW Mode, and try the operation again.
<p>SL-Touch</p>  "The Scanner is powered OFF for Power Saving, and the software is switched to the VIEW Mode. If you use the Scanner, power ON the Scanner and switch the software to the SCAN Mode.	<ul style="list-style-type: none"> • When using the SCAN Mode, Scanner Power Switch is turned OFF/ON and change to the SCAN Mode. • Close the Warning Screen for the VIEW Mode, and try the operation again.
<p>Film Search</p>  A target frame was not able to be retrieved.	<ul style="list-style-type: none"> • The frame of the Roll Film was not able to be detected. • Search the target frame by manually.

2.3 Errors shown on the Personal Computer Screen

Error message	Action
<p>SL-Touch Error</p>  <p>Cannot find the Scanner. Connect the Scanner to the PC, install the driver, then boot up the software.</p>	<ul style="list-style-type: none"> Start the application after connecting the Scanner with the Personal Computer, and installing the driver.
<p>SL-Touch Error</p>  <p>Turn OFF the Power Switch of the Scanner, and turn it ON again. Restart the Personal Computer.</p>	<ul style="list-style-type: none"> After confirming that the USB Cable is properly connected, turn ON the Power Switch of the Scanner again and restart the computer.
<p>SL-Touch Error</p>  <p>CCD Board Error. Turn OFF the Power Switch of the Scanner, and turn it ON again. Restart the Personal Computer.</p>	<ul style="list-style-type: none"> After confirming that the USB Cable is properly connected, turn ON the Power Switch of the Scanner again and restart the computer.
<p>SL-Touch Error</p>  <p>Zoom Motor Error. Turn OFF the Power Switch of the Scanner, and turn it ON again. Restart the Personal Computer.</p>	<ul style="list-style-type: none"> After confirming that the USB Cable is properly connected, turn ON the Power Switch of the Scanner again and restart the computer.
<p>SL-Touch Error</p>  <p>Focus Motor Error. Turn OFF the Power Switch of the Scanner, and turn it ON again. Restart the Personal Computer.</p>	<ul style="list-style-type: none"> After confirming that the USB Cable is properly connected, turn ON the Power Switch of the Scanner again and restart the computer.

Error message	Action
<p>SL-Touch Error</p>  <p>H/W Error. Turn OFF the Power Switch of the Scanner, and turn it ON again. Restart the Personal Computer.</p>	<ul style="list-style-type: none"> • After confirming that the USB Cable is properly connected, turn ON the Power Switch of the Scanner again and restart the computer.
<p>SL-Touch Error</p>  <p>Invalid Shading Data. The "Shading" adjustment must be completed.</p>	<ul style="list-style-type: none"> • It is necessary to adjust the Scanner. • Please contact the Authorized Dealer for Service, and explain the detail of the error and condition.
<p>SL-Touch Error</p>  <p>Failed to read the Shading Data. The "Shading" adjustment must be completed.</p>	<ul style="list-style-type: none"> • It is necessary to adjust the Scanner • Please contact the Authorized Dealer for Service, and explain the detail of the error and condition.
<p>SL-Touch Error</p>  <p>Failed to read the HotPixel Data. The "Shading" adjustment must be completed.</p>	<ul style="list-style-type: none"> • It is necessary to adjust the Scanner • Please contact the Authorized Dealer for Service, and explain the detail of the error and condition.
<p>SL-Touch Error</p>  <p>Failed to read the White Balance Data. The "White Balance" adjustment must be completed.</p>	<ul style="list-style-type: none"> • It is necessary to adjust the Scanner • Please contact the Authorized Dealer for Service, and explain the detail of the error and condition.

3 Trouble when scanning an image

Trouble content	Action
The Scanner does not start.	<ul style="list-style-type: none">• Is it connected properly? Check if the USB Cable connected firmly with the Scanner and the Personal Computer.

When a problem cannot be solved even after the troubleshooting described above is attempted, contact your Authorized Dealer for service.

4 Trouble when the Film Rewinding and Winding

Trouble content	Action
The film winding slows.	<ul style="list-style-type: none">• Clean the inside of the guide roller with the cotton pad etc.
The film stops.	<ul style="list-style-type: none">• Is the direction where the film is set correct?• Confirm the film set direction according to Chapter 4.
The film cannot be feeding at high speed.	<ul style="list-style-type: none">• Is the Fiche Carrier set at a correct position?• Feed the film with the Fiche Carrier handle completely pulled forward(The glass opening condition).

Chapter 6

Maintenance

1 Maintenance

The following daily checks and cleaning are required to ensure the best possible performance and utmost safety for the Scanner.

1.1 Daily checks

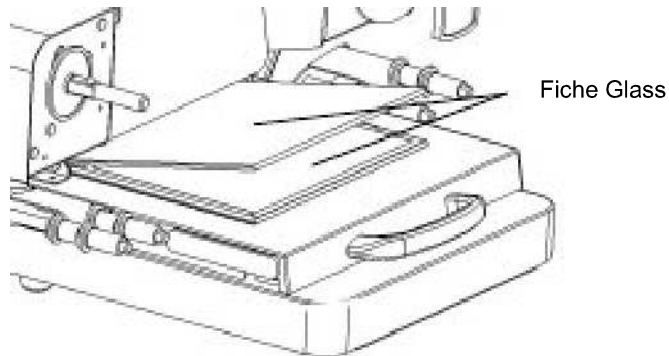
- 1** Any of the following conditions could damage the Scanner or other electrical equipment. Move the Scanner immediately and eliminate the possible cause of malfunction.
 - The Scanner is placed on the Power Cord or other cables.
 - The Scanner is placed on a cord of other electrical devices.

- 2** If any of the following condition is found, turn the Scanner OFF immediately, unplug the Power Cord from the outlet, and call your local Authorized Dealer.
 - The Power Cord or USB Cable is damaged.

1.2 Cleaning

Fiche Glass

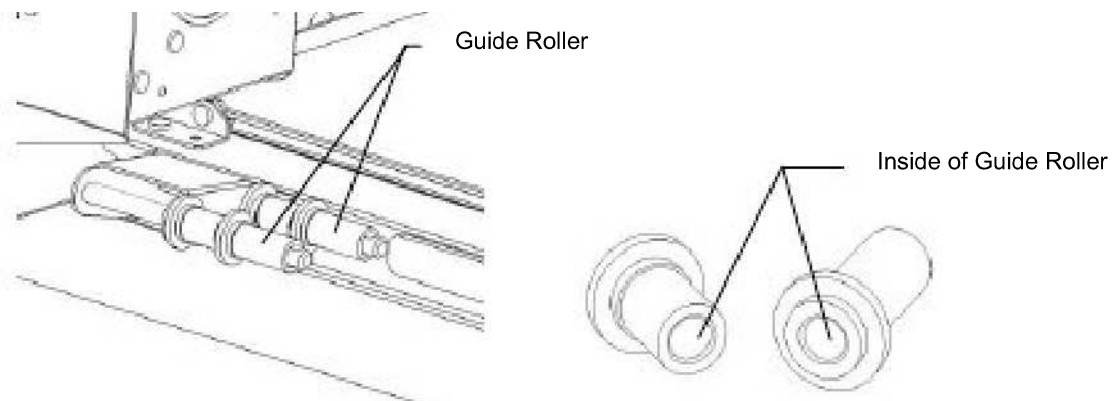
When dust and dirt adhere to the Fiche Glass, the original may not be read correctly. Please clean the Fiche Glass surface with a soft dry cloth.



- 1 Wipe the dirt of the fiche glass surface off with a soft cloth.
- 2 Remove the dust with the air blower or the brush.

Guide Roller

It might not be able to wind up the film when dirt adheres in the guide roller.



- 1 Clean the inside of the guide roller with the cotton pad etc.

NOTE ! "Cleaning kit for the camera" like the figure below is recommended as a cleaning tool.



Chapter 7

Product Specifications

1 Major Specifications

Type	Digital Film Scanner	
Image Sensor	Area Type Color CCD Sensor (14.22 Mega pixels)	
Light Source	White LED for color	
Lens Magnification	Optical Zoom : 6.8 - 54x Optical Zoom + Electrical Zoom : 6.8 - 105x	
Focus Adjustment	Auto or Manual	
Optical Resolution	360dpi (A4 Landscape Conversion)	
Scan Speed with recommended PC environment	Approx. 1 second *It is provided for at the processing performance that doesn't depend on the PC specifications.	
Film Type	Color Film/Monochrome Film, Negative Film/Positive Film <ul style="list-style-type: none"> • Micro Fiche Film • Jacket Film • Aperture Card • 16/35 mm Roll Film • 16 mm Cartridge Film (Type : A, M) • Micro Opaque The maximum reading size: 47 mm x 34 mm	
Gradation	Internal : 36 bit, Output : 24 bit Color, 8 bit Gray scale, 1 bit B/W binary * B/W Binary : Manual Binary / Automatic Binary / Diffusion Dither It can be selected from 3 modes.	
Resolution	75 / 100 / 150 / 200 / 240 / 300 / 400 / 600 dpi * 600dpi : Only the Gray Scale and Monochrome Binary can be set. Even A4 or Letter or less can be set.	
Output Size Portrait: P, Landscape: L	a. Formal Size	A3 P/L, A4 P/L, B4 P/L, B5 P/L Ledger P/L, Legal P/L, Letter P/L, Check P/L
	b. Discretion Size	It specifies with the Cropping Area.
File Output Format	JPEG, TIFF (Compression / Non-compression / G4), PNG, BMP, PDF TIFF multi page, PDF multi page	
Interface	USB 2.0 High Speed (The length of the USB Cable is 2.0 m or less.) *The PC Standard Equipment Port can be used.	
OS Compatibility	32 bit OS: Windows Vista SP2 or later, Windows 7 64 bit OS: Windows Vista SP2 or later, Windows 7	
Recommended PC System	CPU : Intel Core i7 870 2.93 GHz or faster MEMORY : 4 GB or more VIDEO : GeForce GT430 1 GB or more HDD : SATA 3 7200 rpm 32 MB or more PC Monitor : Multi Touch Panel (Full HD) 1,920 x 1,080 dot or (SXGA) 1,280 x 1,024 dot	

Dimensions	326 (W) x 425 (D) x 177 (H) mm 12.83 (W) x 16.73 (D) x 6.97 (H) inches * Standard Fiche Carrier Model
Weight	13.5 kg or less 29.76 lbs or less * Standard Fiche Carrier Model
Power Source	AC 100 - 240V 50/60 Hz
Power Consumption	Less than 30W * Standard Fiche Carrier Model
Operating Environment	Temperature: 10 - 35 °C (Temp Variations : 10°C/h or less) Humidity: 15 - 85 % (Humid Variations : 20%/h or less)
Related Safety Standard	All of Areas: RoHS compliant North America: UL/CSA, FCC Class A Europe :CE (CB、 EN class B), LED regulation
Environment Standard	North America: Energy Star Europe: ErP directive
Options	Motorized Roll Film Carrier Kit Manual Roll Film Carrier Kit A Type Adapter Kit M Type Adapter Kit Manual Switch Kit

For Key Operator's Use

When you need to call for service, turn OFF the Power Switch first, and unplug the Power Cord from the Outlet. Then the Key Operator should be prepared to provide the following information to your Local Authorized Dealer.

1. Your Company Name, address, telephone number, department name, floor number, machine location, etc.
2. Model name, serial number, condition or system(s) indication(s) on the display. Etc.

For your reference purpose.

Model Name	SL1000	Serial No. _____
Attached Accessories		Serial No. _____
		Serial No. _____
		Serial No. _____
Application	SL-Touch for SL1000	Version. _____
Installation Data		
Authorized Dealer's Name TEL. No. Address		

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