LaserCard Mercury 600Q OMC Reader/Writer Installation and Setup Manual

LASER SAFETY STATEMENT

The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration has implemented regulations for laser products manufactured since August 1, 1976. Compliance is mandatory for products marketed in the United States. This product is certified as a “class 1” laser product.

Since radiation emitted inside the Reader/Writer is completely confined within protective housings and external covers, the laser beam cannot escape during any phase of normal user operation.

CLASS 1 LASER PRODUCT INSIDE

CONFORMS TO: IEC 60825-1: 1993, A1: 1997, A2: 2001

830 nm NOMINAL WAVELENGTH, CW (INVISIBLE)

CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

FCC COMPLIANCE STATEMENT

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.

FCC WARNING NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- Properly shielded and grounded cables and connectors must be used for connection to host computer and/or peripherals in order to meet FCC emission limits.

For Canada

This Class (B) digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe (*) est conforme à la norme
NMB-003 du Canada.

DECLARATION OF CONFORMITY

(According to ISO/IEC GUIDE 22 and EN 45014)

Manufacturer's Name: ***Laser Card Systems Corporation***

Manufacturer's Address: ***2751 Marine Way***
Mountain View, CA 94043 USA

DECLARES, THAT THE PRODUCT

Product Name: ***Laser Card Reader/Writer***

Model Number: ***600X (where "X" can be any alpha-numeric character or blank)***

CONFORMS TO THE FOLLOWING EUROPEAN DIRECTIVES

Low Voltage Directive 73 / 23 / EEC
EMC Directive 89 / 336 / EEC
With Amendment 93 / 68 / EEC

Supplementary Information:

Safety : ***EN 60950: 1992, A1, A2, A3, A4, A11; EN 60825-1***

EMC: ***EN 55022 : 1988 Class B, EN 61000-3-2 : 1997, and EN 61000-3-3 : 1997; EN 50024-1 : 1999, EN61000-4-3 : 1997, EN61000-4-6 : 1997, EN61000-4-4 : 1996, EN61000-4-2 : 1996, EN61000-4-11 : 1995, EN61000-4-5 : 1995***

Year Mark First Applied: ***2002***

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directives and Standards.

Place: Mountain View, CA USA

Signature: _____

Date: _____

Full Name: Robert Smith

Position: General Manager

SAFETY INSTRUCTIONS

In order to ensure the safe operation of your Optical Card Reader/Writer, be sure to read the following instructions before going on to read the rest of the manual.

- The case of the Optical Card Reader/Writer is fitted with ventilation holes designed to prevent the internal temperature of the unit from rising too high and ensure proper operation. Never lock or place anything over these holes. Do not place the unit near a radiator or heater or in any other location subject to rapid changes in temperature or humidity.

- Do not use or store the Optical Card Reader/Writer in a location subject to a high degree of humidity or large amounts of dust.

- Note that the Optical Card Reader/Writer is a high-precision instrument, and as such it should not be subjected to vibrations or shocks, nor should it be used in a location where it would be subjected to vibrations or shocks.

- Do not use the Optical Card Reader/Writer in a location near water or any other liquid.

- Under no circumstances should you ever remove the cover of the Optical Card Reader/Writer. Removing the cover would enable dust or dirt to enter the unit and cause damage or breakdown.

- Do not use the Optical Card Reader/Writer in a location where it would be exposed to atmospheric chemicals or in locations where it could come into contact with harmful chemicals.

- Do no use or store the Optical Card Reader/Writer with heavy objects placed on top of the unit.

- Do not place the Optical Card Reader/Writer on a cart or table too weak and unstable to support it, as doing so could cause it to fall and result in major damage to the unit.

- Always be sure to turn off the power and remove the power cable from its socket when cleaning dust or dirt from the exterior of the unit. To clean, wet a soft cloth with water or some other neutral-pH liquid and gently wipe the surface. Do not use benzene, paint thinner, or any other similar solvents, as they may cause the case to warp or to change color. Note that warping and discoloring may also occur as a result of the unit coming into contact with insect sprays, and that you should be careful to ensure that the unit does not come into contact with such sprays as well.

- The Optical Card Reader/Writer is heavy, and can cause injury if dropped on your foot or hands. Exercise all due caution when moving or shifting the unit.

- If you notice that the unit has broken down or that anything else is wrong (i.e., if you notice that the unit has overheated or generating a strange odor), turn off the power switch and remove the power cable from its socket immediately and contact LaserCard Systems for assistance.

- Be sure that the power used conforms to the requirements specified on the lower panel of the unit.

- Never place or leave anything lying on top of the power cord. Also never lay the power cord in a location where people would walk over it.

- Never insert any optical cards other than those specified into the optical card reader.

- Never insert anything into the gaps or grooves of the cover or come into contact with the ventilation duct, as doing so may result in personal injury or damage to the unit.

TABLE OF CONTENTS

LASER SAFETY STATEMENT i

NOTICE AND FCC WARNING ii

DECLARATION OF CONFORMITY iii

SAFETY INSTRUCTIONS iv

Chapter 1 / Items Included 1

1.1 Packing Material 1
1.2 Opening Packing Box 1
1.3 Optional Part Numbers 2

Chapter 2 / Names and Functions of Reader/Writer Parts 3

2.1 Front Panel 3
2.2 Rear Panel 3

Chapter 3 / Installing the Hardware 4

3.1 Getting Started 4
3.2 Selecting and Setting SCSI ID's 4
3.3 Connecting the SCSI Signal Cable 5
3.4 SCSI Termination 6
3.5 Setting and Releasing the Automatic Shipping Lock 7

Chapter 4 / Installing the File System Device Driver 7

4.1 Introduction 7
4.2 Windows 9x, Me Setup 7
4.3 Windows NT Setup 8
4.4 Windows 2000 and XP Setup 8

Chapter 5 / Procedures for Handling Optical Cards 9

5.1 Precautions When Handling Optical Cards 9

Chapter 6 / Troubleshooting 10

6.1 Troubleshooting and Proposed Solutions 10

Appendix A / General Specifications for the Reader/Writer 11
Appendix B / MTBF Specifications for the Reader/Writer 11
Appendix C / General Specifications for Optical Memory Cards 12

Chapter 1 / Items Included

1.1 Packing Material

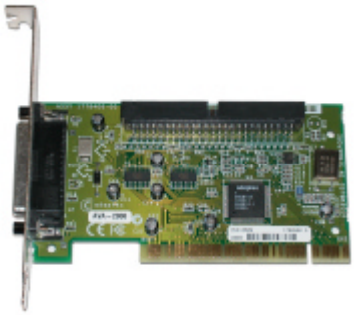
Please be sure to use the original packaging, when transporting the LaserCard Mercury 600Q Optical Card Reader/Writer.
(Failure to do so may result in the lose of manufacturer warranty.)

1.2 Opening Packing Box

After opening the shipping container, verify the contents.
(Please note that the number and type of accessories included may differ in accordance with the kit part number ordered.)

LaserCard 600Q Optical Card Reader/Writer
LSC Part Number: 10-01-022

AC Power Adapter
LSC Part Number: 61-01-202

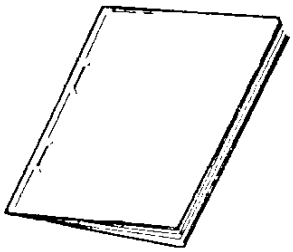


Adaptec AVA-2906 SCSI Adapter
LSC Part Number: 10-02-007

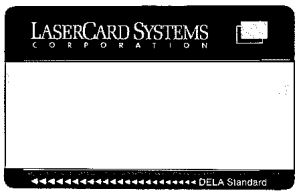
SCSI Adapter Cable
LSC Part Number: 10-03-103

Power Cord - Selectable
See Optional Part Numbers

LaserCard Developers Toolkit CD
LSC Part Number: 30-CD-005



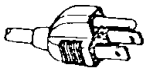
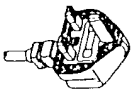
Installation and Setup
Manual



Optical Memory Cards
LSC Part Number: 40-BX-XXX

1.3 Optional Part Numbers

Table 1: List of available plugs for power cords. (Must be specified at time of order)

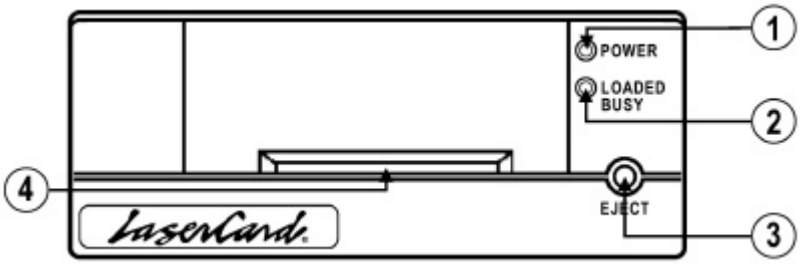
Country	Plug	Part Number
U.S.A., Japan Canada		10-04-001
Germany and other European countries		10-04-002
United Kingdom		10-04-003

Notes:

(1) The AC adapter included with the reader/writer can be operated on any AC power source from 100V to 240V. It is the responsibility of the customer to order the proper power cord in accordance to the country in which it will be operated.

Chapter 2 / Names and Functions of Reader/Writer Parts

2.1 FRONT PANEL



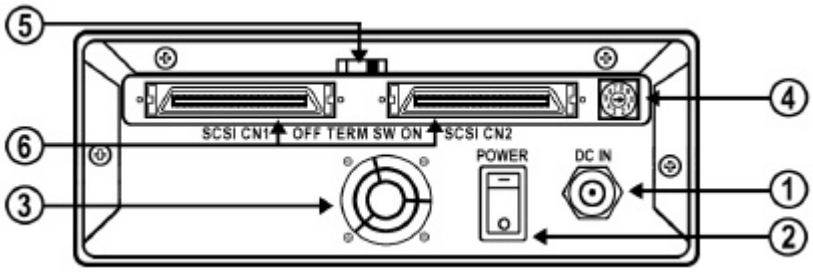
(1) Power ON indicator (green)
This indicator lights up when the unit has been plugged in and the power switch set to the on position. It turns off when the power switch is set to off.

(2) Loaded/Busy indicator (green, orange, red)
This indicator lights up and turns green when an optical card is inserted into the reader/writer and turns off when the card is ejected.
The color switches to orange when the unit is busy and it switches to red whenever a drive error occurs.

(3) Eject switch
Press this switch to eject an optical card from the reader/writer.

(4) Mask
This is where optical cards are to be inserted into the reader/writer.

2.2 REAR PANEL



(1) Power Plug
Insert the power plug from the AC adapter included with the reader/writer in order to provide power to the unit.

(2) Power switch
This is used to turn the power to the reader/writer on and off.

(3) Cooling fan ventilation holes
The fan is used to dissipate the heat generated within the reader/writer during use. Never block the ventilation holes in any way.

(4) Switches used for setting SCSI ID
These switches are used to set the target ID required when connecting the reader/writer to a computer over a SCSI (Small Computer System Interface) interface. See Section 3.5, Selecting and Settings SCSI ID's, for a detailed explanation of how to set these switches.

(5) Termination switch (TERM SW)
This switch is used to indicate whether or not the LC305 is to be used as the final device in a SCSI chain.

(6) SCSI connector
This connector is used to connect the reader/writer to a personal computer or to another SCSI peripheral. Be sure to use the signal cable included with the unit to make the connection.

Chapter 3 / Installing the Hardware

3.1 Getting Started

The installation guide for the Adaptec AVA-2906 SCSI host adapter is included on the LaserCard Mercury 600Q Demonstration/Developer CD. Please refer to this document for detailed instructions and troubleshooting information on installing this product.

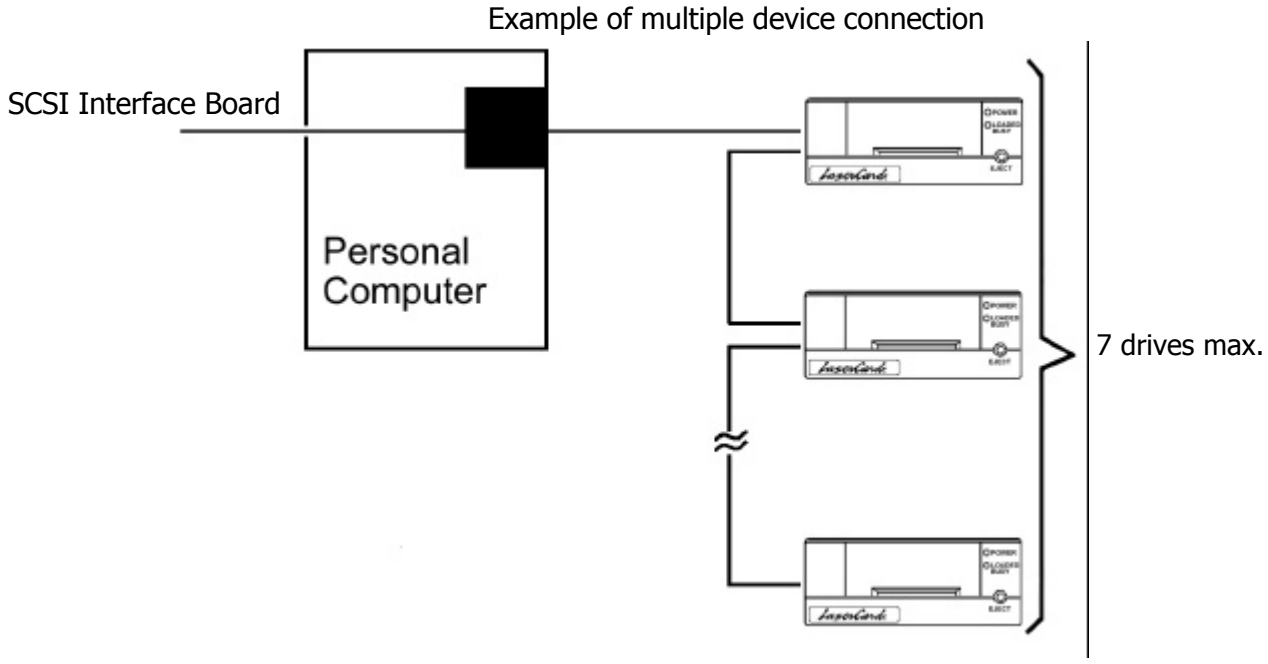
Points to Remember during Installation
Please be careful to remember the following points when installing your reader/writer.

- Do not install in a place where the vent at the rear of the unit would be blocked.
- Do not place in a location subject to high levels of humidity.
- Do not place in a location subject to extremes of high or low temperatures.
- Do not place in direct sunlight or near any heaters or any other equipment of appliances which give off heat.
- Do not place in a location where the unit would come into contact with oil, grease, or suspended particles of dust and dirt.
- Do not place in a location where the unit would be subjected to vibrations nor on an unstable or uneven surface.
- Do not place any other items or equipment on top of the reader/writer.
- Do not place in a location containing devices giving off high levels of noise.
- Do not place the unit on a slanted surface or turn it upside down.
- The reader/writer should be used at indoor room temperature.
- Please make sure that there is no AC line noise or electrostatic noise.

3.2 Selecting and Setting SCSI ID's

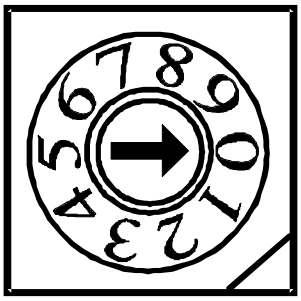
You must assign a different SCSI ID to each device on the AVA-2906 SCSI bus. The default SCSI ID for the AVA-2906 host adapter is SCSI ID 7.

Illustration of connection to personal computer



Selecting the SCSI ID for the Reader/Writer

When shipped from LaserCard Systems, the reader/writer has the rotary ID switch set as shown in the figure below. Be sure to confirm the switch settings and change if necessary prior to operation.



The default SCSI ID number for the reader/writer is 0.

When connecting multiple SCSI devices to a single SCSI adapter you must set the devices ID's in the 0-6 range making sure ID number assignments are not duplicated.

Notes:

1. Turn off power before changing the setting for the reader/writer's ID switches. Doing so with the power on will have no effect on the settings.
2. Move the switches using the tip of a watch screwdriver.

3.3 Connecting the SCSI Signal Cable

SCSI devices are cabled together in a single, connected series called the SCSI bus. The SCSI bus cables must run sequentially from one device to the next.

The host adapter is at the end of the SCSI bus if either the internal or the external SCSI connector is unused. The host adapter is in the middle of the bus if the internal and external SCSI devices are installed.

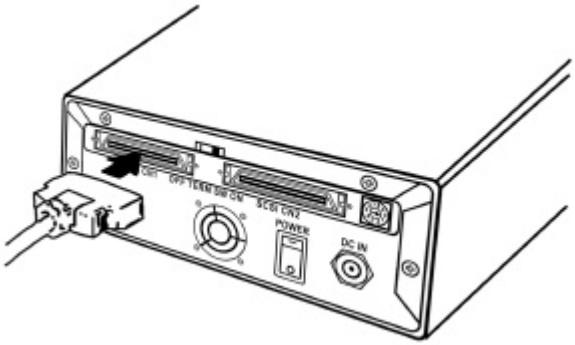
Caution: AVA-2906 host adapters support only single-ended SCSI devices. Differential SCSI devices may be damaged if connected to the host adapter. The peripheral documentation will tell you whether the device is single-ended or differential.

1. Lay out the cables and find the pin-1 element of each cable and peripheral connector. One internal cables, pin 1 is usually marked with a small contrasting color on one edge of the ribbon cable, and a small triangle marks pin 1 on the SCSI connector. External cable connectors can only be plugged-in one way, so pin-1 orientation is automatic.

2. Attach one end of the SCSI cable to the DB-25 connector on the host adapter.

Caution: The DB-25 end of the signal cable is an industry standard connector for many other ports on a personal computer. **DO NOT** plug this connector into any other port other than the SCSI adapter port. Doing so may result in damage to the unit.

3. The other end of the SCSI cable is constructed with a SCSI-II high density 50-pin connector. Attach this end of the cable to either CN1 or CN2 on the back of the reader/writer. Be sure to push the SCSI connector firmly onto the connector until it locks into place.



Be sure to maintain correct pin-1 orientation throughout the bus. The AVA-2906 uses a 25-pin DB25 external connector and a 50-pin flat ribbon-type internal connector.

3.4 SCSI Termination

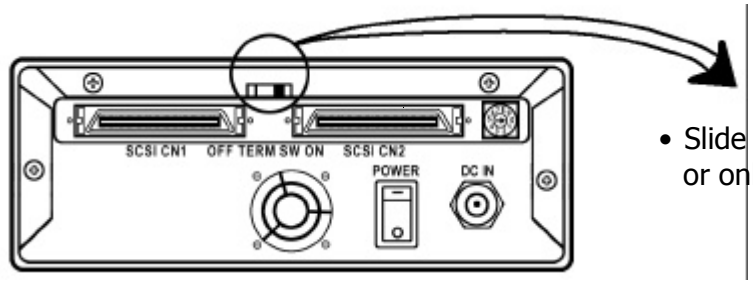
The last physical SCSI device on either end of the SCSI bus must have a set of resistors called terminators. Terminators must be removed from, or disabled on, all other devices on the SCSI bus.

The AVA-2906 and most SCSI peripherals have built-in terminators that can be enabled or disabled. Terminate only the devices at each end of the SCSI bus.

Terminating the Reader/Writer

When the reader/writer is to being used as the final or only SCSI device in the SCSI chain, make sure the termination switch located on the rear panel is set to the right most position. When the reader/writer is originally shipped from LaserCard Systems, the termination switch will be in this position.

When multiple reader/writer's are being connected to a single SCSI adapter, make sure the reader/writer in the middle of the SCSI chain have their corresponding termination switches set to the left most position.



- Slide to the right when using as the final or only device in a SCSI chain

- Slide to the left when using as a device located in the middle of a SCSI chain

3.5 Setting and Releasing the Automatic Shipping Lock

The reader/writer has been equipped with an automatic shipping lock that is designed to protect the optical head mechanism of the reader/writer when the unit is being transported. It is automatically engaged when the power is turned off and disengaged when the power is turned on. Once the power has been turned off and the lock is engaged the head needs to be moved to the lock position. Gently lift the reader/writer and tilt the unit back and to the side to move the head to the lock position. The unit is now ready for transport.

Chapter 4 / Installing the File System Device Driver

4.1 Introduction

Once the SCSI adapter board has been properly installed and the reader/writer has been connected to the adapter. The next step in the installation of the system software is to install the system device driver for the reader/writer. This device driver is not part of the LaserCard File System. This driver establishes the communication protocol between the operating system and SCSI mini-port driver.

It is critical at this point to verify that the SCSI adapter is installed correctly and working properly. Please verify this through the Control Panel/Device Manager.

All of the files necessary for this step of the installation can be found on the LaserCard Systems Developer CD.

NOTE – Installations for the various Microsoft operating systems are significantly different for one another. Please follow the instructions provided below. If you are upgrading a system that has a previous LaserCard driver installed, you 'MUST' uninstall the currently installed driver before installing the updated version.

4.2 Windows 9x, Me Setup

NOTE – If you are upgrading a system that has a previously installed version of the Windows 9x Virtual Device Driver (.vxd), you must first uninstall the 'vxd' and delete any copies located in other folders.

The International Standards Organization (ISO) has recently defined the optical memory card devices as SCSI device type 0x0f(hex). Previously, the optical card reader/writer was lumped together with other Write Once Read Many (WORM) devices as SCSI device type 0x04(hex). As Microsoft operating systems have matured, built-in hardware device driver support has played a significant role. This has created device driver conflicts between optical memory devices and CD recordable devices. Our latest set of device drivers and installation tools has now resolved many of these conflicts.

To correctly install the virtual device drivers for Windows 9x, and Me:

- Install the SCSI controller into the host PC. DO NOT connect the optical card reader/writer at this time. Verify that the SCSI controller is properly connected and the device driver for the controller is working properly. This can be accomplished by verifying the SCSI adapter connection in the System Device Manager.

- Run the 'Setup.Exe' file provided on the LaserCard Developers CD. You will find this installation file in the \Win9x folder located off of the root directory of the CD. The setup program must be run BEFORE connecting the R/W to the host computer. The system may request a reboot of the host computer once the installation is complete.
- Connect the R/W to the SCSI controller using the supplied SCSI cable. Turn the R/W 'ON' and reboot the host computer. Once the system has completed rebooting check the System Device Manager to make sure the Optical Card Reader group can be found and that the R/W within this group is properly installed.

4.3 Windows NT Setup

NOTE – If you are upgrading a system that has a previously installed version of the Windows NT Device Driver (.sys), you must first uninstall the driver and delete any copies located in other folders.

The International Standards Organization (ISO) has recently defined the optical memory card devices as SCSI device type 0x0f(hex). Previously, the optical card reader/writer was lumped together with other Write Once Read Many (WORM) devices as SCSI device type 0x04(hex). As Microsoft operating systems have matured, built-in hardware device driver support has played a significant role. This has created device driver conflicts between optical memory devices and CD recordable devices. Our latest set of device drivers and installation tools has now resolved many of these conflicts.

Windows NT does not support Plug-n-Play hardware. In order to best support Windows NT we have supplied a Setup routine that will install the drivers and properly configure the Windows NT registry.

To correctly install the device driver for Windows NT:

- Install the SCSI controller into the host PC. DO NOT connect the optical card reader/writer at this time. Verify that the SCSI controller is properly connected and the device driver for the controller is working properly.
- Connect the R/W to the SCSI controller using the supplied SCSI cable. Turn the R/W 'ON' and run the 'Setup.Exe' file provided on the LaserCard Developers CD. You will find this installation file in the \WinNT folder located off of the root directory of the CD. The system may request a reboot of the host computer once the installation is complete.

4.4 Windows 2000 and XP Setup

These systems fully support Plug-n-Play hardware. Each of these systems has its own method of detecting and responding to 'New Hardware Found'.

When the operating system requests a device driver to be installed, simply point the browser to the \Win2K_WinXp folder of the LaserCard Developers CD. The operating system will locate and install the proper system driver and prompt the user to restart the system.

If the operating system 'DOES NOT' request a file location for the new driver and continues to the desktop, verify that the proper Optical Memory Card Driver was located and installed. Go to the Control Panel/Device Manager and make certain that the device group 'Optical Memory Card Drive' was added and the OMC R/W is installed within this group.

Chapter 5 / Procedures for Handling Optical Cards

5.1 Precautions When Handling Optical Cards

(1) Prior to Using the Cards

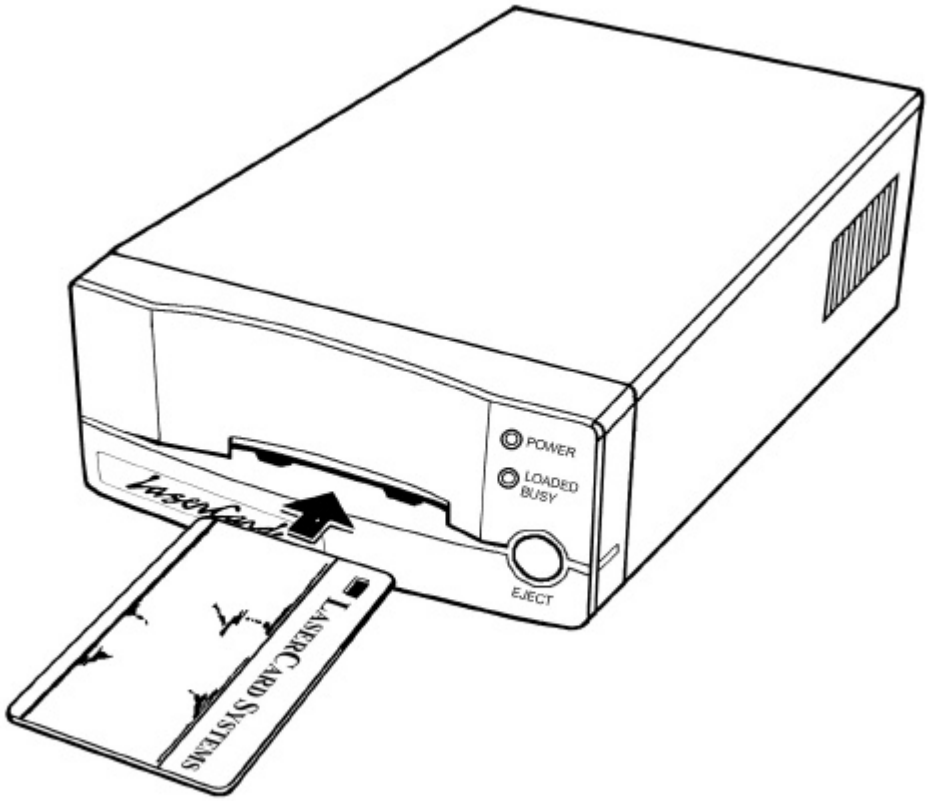
(a) The presence of dirt, dust or scratches on the surface of the optical card when they are loaded in the reader/writer may cause read or write errors. Remove the dirt by wiping with either a dry soft cloth or one lightly wet with isopropyl alcohol.

(b) Make sure the optical cards are allowed to adjust to the temperature of the operating environment, as significant temperature differences between places of storage and use may cause condensation on the cards making them temporarily unusable.

(c) Note that excessive warping of the cards may render them unusable.

(2) Inserting Cards into the Reader/Writer

When inserting optical cards into the reader/writer, be sure to insert the card with the optical media side of the card facing upwards as shown below. Insert it straight in the direction indicated by the arrow or other printed markings on the card.



(3) Unused Card Storage

Always be sure to return cards not in use to their protective sleeves for storage. Do not store cards in places subject to extremely high or low temperatures or high humidity.

Chapter 6 / Troubleshooting

6.1 Troubleshooting and Proposed Solutions

Please refer to the table below to check for possible solutions to common occurrence problems with your reader/writer.

PROBLEM	CAUSES	SOLUTIONS	REF. SECTION
The Power On indicator fails to light up when the power is turned on.	Power cord is not properly plugged in.	Plug the power cord in once more, being careful to insert it firmly into the wall outlet and AC adapter	
	AC adapter not properly plugged in.	Check to make sure that AC adapter is firmly connected to the Reader/Writer.	
Cards are ejected immediately after being inserted.	The card has been inserted in the wrong direction.	Insert the card once more, making sure that it is inserted with the optical media face up with the wide print to the right edge.	See Section 5.1
	There is dirt or dust on the surface of the card.	Wipe the surface of the card clean and insert it once more.	See Section 5.1
	There is a scratch on the surface of the card or the card is bent or warped.	Try inserting the card into the unit several times, and if it still cannot be read, contact you service representative for assistance.	See Section 5.1
The unit fails to operate properly in response to commands issued from the host computer.	SCSI ID settings are incorrect.	Turn off the power to the reader/writer and then turn off the power to the host computer, and the set the SCSI ID to the proper ID number before turning the power to the reader/writer and the host computer back on.	See Section 3.2
	The SCSI chain has been improperly terminated.	Follow the procedure given above to turn off the power, and turn the knob of the termination switch to the correct position before turning the power to the reader/writer and the host computer back on.	See Section 3.4
	The SCSI interface board has not been installed properly.	Follow the procedure given above to turn off the power, and reinstall the SCSI interface board correctly before turning the power to the reader/writer and the host computer back on.	See Section 3.1
	The switch settings of SCSI interface board are conflicting with another adapter in the host computer.	Follow the procedure given above to turn off the power, and set the jumper pins on the SCSI adapter board to another setting.	See Section 3.1
	The SCSI cable has not been properly connected.	Follow the procedure given above to turn off the power, and connect the SCSI cable correctly before turning the power to the reader/writer and the host computer back on.	See Section 3.3

In the event that a problem not corresponding to any of those described above occurs and the problem persists even after you have attempted to find a solution, turn the power to the reader/writer off immediately and contact a service representative.

Appendix A / General Specifications for the Reader/Writer

1. Card Types:	Optical cards conforming to ISO/IEC 11694-1~4 (Annex B) standards, and approved for use by LaserCard Systems Corporation
2. Communications Systems:	SCSI-II (meets the specification give in ISO/IEC 9316 standard)
3. Power Requirements:	DC12V – 4.0Amp, continuous input power
4. Power Consumption:	Wait state: 0.2 – 0.1A Operating state: 0.8 – 0.4A Peak state: 1.2 – 0.5A
5. Write Speed:	5.6k bytes/sec
6. Read Speed:	11.2k bytes/sec
7. Error Rate:	Less than 10^{-12} (Difference collecting cycle code)
8. Random Access Core Date:	Yes
Access Time	Overall Width: 100msec Track-to-track: 1.7msec
9. Operating Temperature and Humidity Ranges:	Temperature: +5°C ~ +40°C Humidity: 20 ~ 80%RH (When no condensation.)
10. Storage Temperature and Humidity Ranges:	Temperature: -5°C ~ +55°C Humidity: 20 ~ 90%RH
11. Installation Conditions:	Horizontally, indoors, in places free from vibration or shock.
12. Weight:	2.6kg
13. External Dimensions:	137(W) x 250(D) x 64(H) mm

Appendix B / MTBF Specifications for the Reader/Writer

Complete System	The LaserCard Mercury 600Q Reader/Writer system has a predicted MTBF of 200,000 cycles at 100% duty cycle.
Sub-Systems	
1. Pulley Base (card load/unload)	The card carriage sub-system (card load/eject) has a MTBF of 450,000 - 650,000 cycles
2. Card Carriage (shuttle)	The card shuttle sub-system (track length or x-linear movement) has a MTBF of 120,000,000 cycles. (includes card shuttle/linear bearing/flex circuit subsystem)
3. Optical Head	The optical head has a MTBF of 40,000 hours*. *based on units receiving manufacturer's recommended cleaning maintenance schedule.

Appendix C / General Specifications for Optical Memory Cards

1. Format:	Optical cards conforming to ISO/IEC 11694-1~4 (Annex B) standards, and approved for use by Lasercard Systems Corporation
2. External Dimensions:	54.0(W) x 85.6(D) x 0.76(T) mm
3. Data Capacity:	(1) 2.86 Mbytes (35mm Format) (2) 1.10 Mbytes (16mm Format)

LASERCARD SYSTEMS CORPORATION
A Subsidiary of Drexler Technology Corporation

Main Office / USA
2644 Bayshore Parkway, Mountain View, CA 94043
TEL: 650 969-4428 FAX: 650 969-3140
www.lasercard.com

Technical Support
2751 Marine Way, Mountain View, CA 94043
TE: 650 969-4259 FAX: 650 969-4963

France
Le Savoy, 38 avenue Franklin Roosevelt F-77210 Avon/Fontainbleau
TEL: +33 1 64 23 41 23 FAX: +33 1 64 23 41 67