DISC1000
DISC3000
DISC4000
DISC7000

User Manual

CHAPTER 1: COPYRIGHTS TRADEMARKS AND CONTACT INFORMATION

- Notice of Copyright
- Disclaimer
- Trademarks
- Contacting DISC

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NOTICE OF COPYRIGHT

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Before contacting DISC Technical Support, please have the following information available

- Model, Serial Number and production date of your Optical Library
- Description of Optical Library environment (Operating System, software revision, and hardware)
- Detailed description of the problem

CHAPTER 2:
SAFETY INSTRUCTIONS

- Intended Use
- Residual Risks
- Safety

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INTENDED USE

The DISCx000 Optical Libraryes are controlled by a host computer or combined server unit (NAS). The Optical Libraryes were designed exclusively to read and write bare media, especially the Blue Laser (PDD, PD, BD) media, and are not intended for any other use.

Improper use of the Optical Library increases residual risk. Any person using the Optical Library should read and understand the User Manual, and in particular, the safety instructions included within the User Manual.

USE OF INTERJECTIVE TERMS

WARNING: This word calls attention to a procedure or practice, which could cause personal injury if not correctly performed.

CAUTION: This word calls attention to a procedure or practice, which could result in damage to the product if not correctly performed.

NOTE: This word draws the users' attention to information that can improve understanding of the product.

Disregarding safety messages could result in personal injury or damage to the Optical Library.

BAN ON ARBITRARY REVERSIONS AND CHANGES

The Optical Library must not be altered or changed in any way that does not comply with applicable safety regulations.

REPAIRS

Repairs must be carried out only by DISC staff, or DISC authorized service providers.

DISC will not be liable for any damage caused from repair by unauthorized individuals.

Repair by unauthorized individuals may void your warranty.

FIRE AND SHOCK HAZARD

To prevent fire and electrical shock, do not expose the unit to rain or moisture.

OPENING THE UNIT

To prevent electrical shock, remove line cord before opening the unit.

CAUTION: *Do not operate the Optical Library while covers are removed. Ambient light and dust will interfere with Optical Library operation, and moving parts increase risk of personal injury.*

The exchange of the air filter can be done as 'hot swap' operation without a need to open the Optical Library!

SAFETY

This product is in the used way a Laser Class 1 device. Disc access is accomplished via a laser beam. The laser beam does not represent any risk for the user.

This product complies with the DHHS Rules 21 CFR chapter 1, sub chapter J, accession number 9520184, applicable at the date of manufacture.

CAUTION: The drives become under Laser Class 2M and 3B radiation if they get opened! *This includes the risk of injury if you stare into the beam or expose something to the beam. You must not remove and open an optical drive of this Optical Library!*

DATA SECURITY

Access to media, packs, and magazines is available only when a release command is sent for the host. It is your responsibility to allow access to the host computer (where the release command is initiated) to authorized personnel only.

ELECTROMAGNETIC COMPATIBILITY

For CE certification, the DISCx000 Optical Library was tested with Adaptec 2940, 3940, 29160, 39160, 29320 and 39320 SCSI host adapters. Use of SCSI host adapters other than those above, particularly with DVD drives, may cause your system to exceed acceptable electromagnetic emissions.

FUSES

The DISCx000 Optical Library must only be connected to electrical circuits secured by a 16 A fuse. For USA and Canada the DISCx000 Optical Library must only be connected to electrical circuits secured by a 20 A fuse.

There are several internal fuses which only may be accessed by certified service staff! Please call your dealer in case of service needs.

Fuse	PCB	Silkscreen Overlay Top Side
Mount Fuse 5A/63V fast-acting	142959-F	SI1; SI2
Mount Fuse 2A/63V fast-acting	142959-F	SI3
Mount Fuse 2A/125V slo-blo	143612-E	SI1

PROFESSIONAL DISC MEDIEN

The bare BD media surfaces are covered by a special 'hard coating' technology. Nevertheless they are sensitive to scratches and fingerprints. Handle writable media with care. Damaged media could result in loss of data.

All bare media shall be handled out site of the Optical Library within a certain cover! To export bare media best use the DISC Offline Packs (removable front site 15 pcs media magazines).

NOTE: *For best performance, DISC recommends that only DISC certified media be used.*

DVD RAM and DVD-R Media

Recordable DVD media (especially DVD-RAM) are very sensitive to scratches and fingerprints. Please handle recordable DVD media with care, damaged or polluted media might end in a loss of data.

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CHAPTER 3: OVERVIEW

- DISCx000 Components
- Installed Equipment
- DISCx000 Front
- DISCx000 Rear

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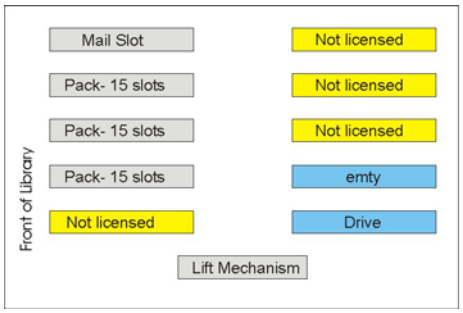
DISC1000 COMPONENTS

- 3 or 4 removable Packs (holding 15 media each)
- 1 Mailslot (for importing and exporting media)
- Up to 2 drives
- CapacityDoubler™ (flipper) unit (optional for DVD-RAM and DVD-R machines only)
- 1 data interfaces (SAS)
- 1 robotic interface (RS232 or LVD SCSI)

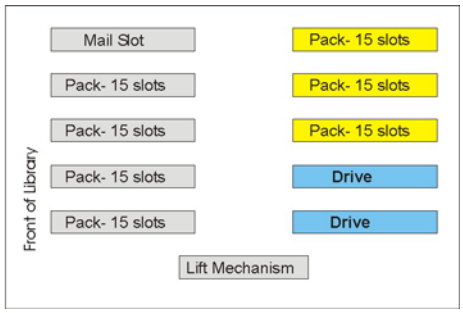
DISC1000-105-2 Optical Libraryes have 4 Packs rather than 3; and will have filled up the empty rear side drive bays with additional Magazines (holding 15 media each).

DISC1000 -45-1



Fixed Number of Media Slots: 45
1 Drive

DISC1000 105-2

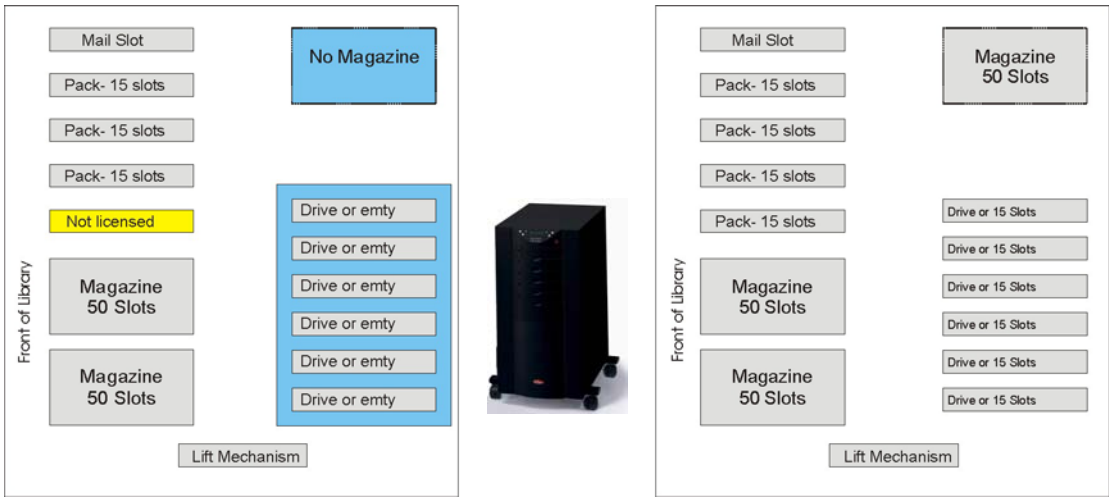


Variable Number of Media Slots: 105
2 Drives

DISC3000 COMPONENTS

- 2 or 3 Magazines (holding 50 media each)
- 3 or 4 removable Packs (holding 15 media each)
- 1 Mailslot (for importing and exporting media)
- Up to 6 drives
- Up to 2 data interfaces (SAS)
- 1 robotic interface (RS232 or SCSI)

The DISC3000 with 145 slots can be upgraded to a DISC3000 with 270 slots or 210 slots and 6 Drives. DISC3000 with 270 slots Optical Libraryes have 4 Packs rather than 3; 3 Magazines rather than 2; and will have filled up the empty rear side drive bays with additional Magazines or Drives.



Slots:

Fixed Number of Media Slots: 145

2 / 4 / 6 Drives

Variable Number of Media

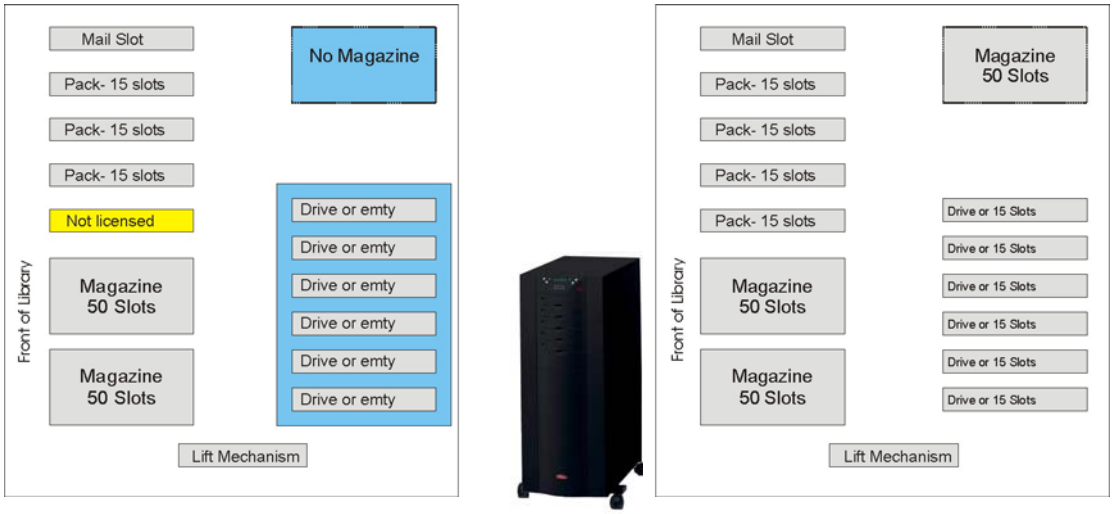
270 slots with 2 drives
210 slots with 6 drives

The position numbers are counted from the bottom to the top.

DISC4000 COMPONENTS

- 4 or 5 Magazines (holding 50 media each)
- 4 removable Packs (holding 15 media each)
- 1 Mailslot (for importing and exporting media)
- Up to 6 drives
- Up to 2 data interfaces (SAS)
- 1 robotic interface (RS232 or LVD SCSI)

The DISC4000 with 260 slots can be upgraded to a DISC4000 with 400 slots or 340 slots and 6 Drives. This Optical Libraries have 5 Magazines rather than 4; and will have filled up the empty rear side drive bays with additional Magazines or Drives.



Fixed Number of Media Slots: 260
2 / 4 / 6 Drives

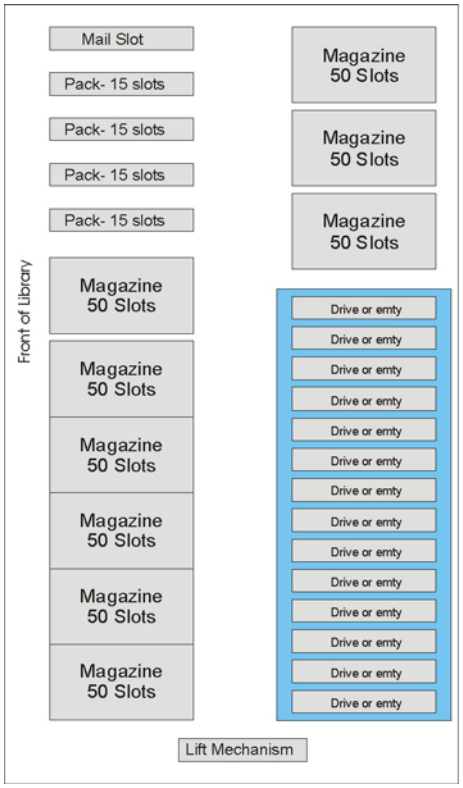
Variable Number of Media Slots:
400 slots with 2 drives
340 slots with 6 drives

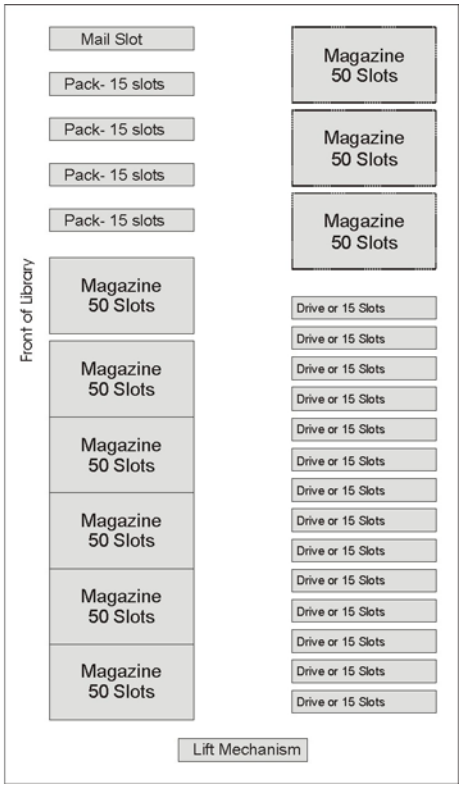
The position numbers are counted from the bottom to the top.

DISC7000U) COMPONENTS

- 9 Magazines (holding 50 media each)
- 4 removable Packs (holding 15 media each)
- 1 Mailslot (for importing and exporting media)
- Up to 10 drives
- Up to 3 data interfaces (SAS)
- 1 robotic interface (RS232 or LVD SCSI)

The DISC7000 with 510 slots can be upgraded to a DISC7000 with 690 slots or 510 slots and 14 Drives. This Optical Libraries will have filled up the empty rear side drive bays with additional Magazines or Drives.





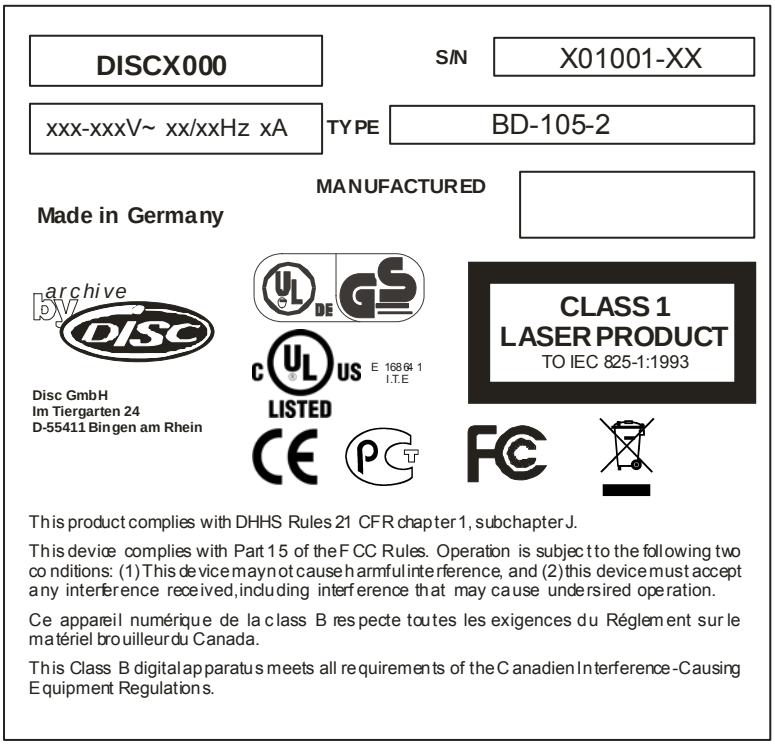
Fixed Number of Media Slots: 510
2 / 4 / 6 / 8 / 10 / 12 or 14 Drives

Variable Number of Media Slots:
690 slots with 2 drives
510 slots with 14 drives

The position numbers are counted from the bottom to the top.

INSTALLED EQUIPMENT

Refer to the serial number plate on your Optical Library for model and equipment information.



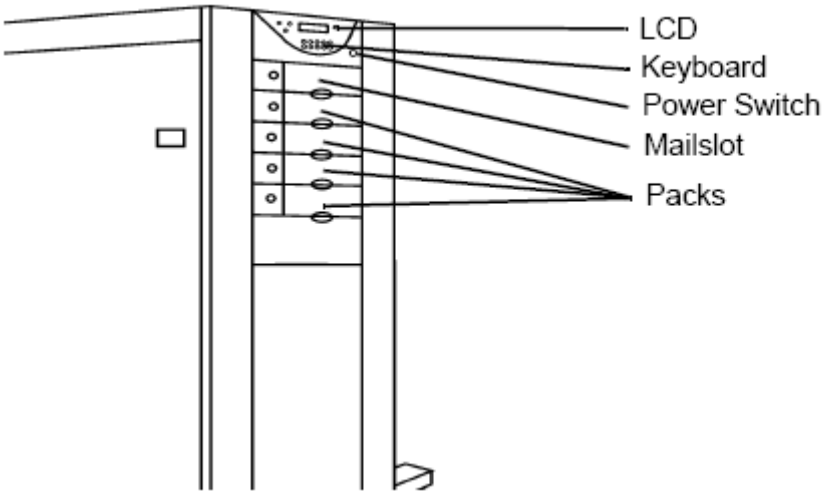
STRUCTURE OF MODEL DESIGNATION

DISCx000-T-XXX YY-R-b	
DISCx000	Model
T	Technology type
XXX	Number of existing media slots
YY	Number of built-in drives
R	Redundant PSU
b	Options

EXAMPLE OF MODEL DESIGNATION

DISC3000 -BD-225-4-R	
BD	BD-drives
225	225 trays
4	4 BD drives
R	Redundant power supply unit

DISCx000 FRONT

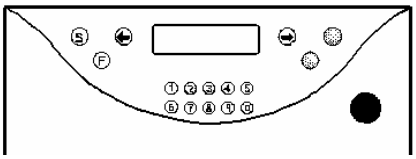


1. LCD (display)
2. Keyboard
3. Power switch
4. Mailslot (for importing and exporting media)
5. Pack (for multiple import or export of 15 media)

KEYBOARD

The keyboard is used to operate the Optical Library without the aid of any external host software for Optical Library control. The keyboard is also used to activate service and event logging functions.

LCD



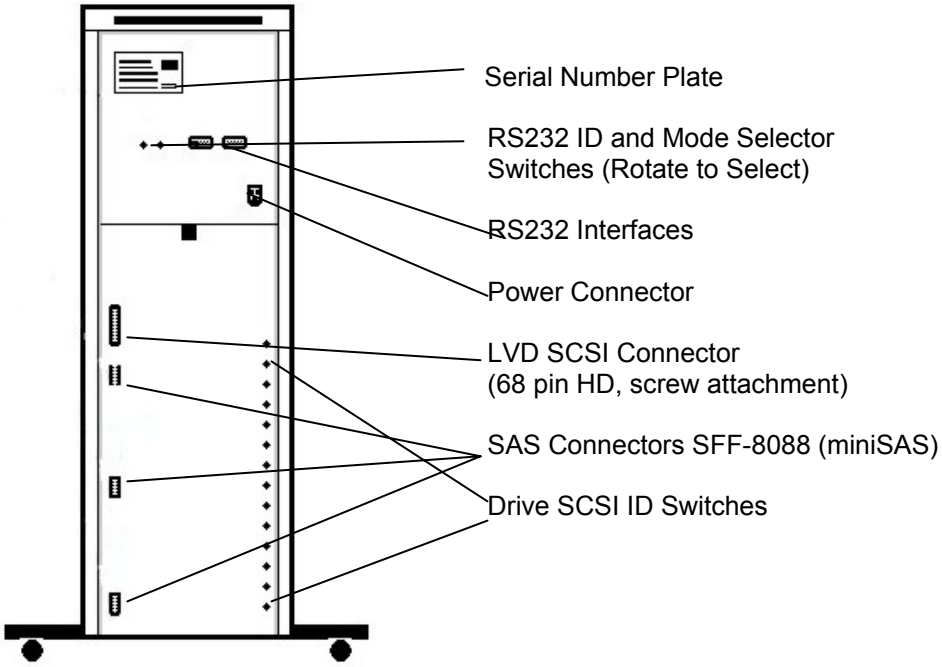
The Liquid Crystal Display provides information about Optical Library status during operation. When the Optical Library is first powered on, the firmware revision displays for 5 seconds.

DISC 4000
V4508 - 09/02/05

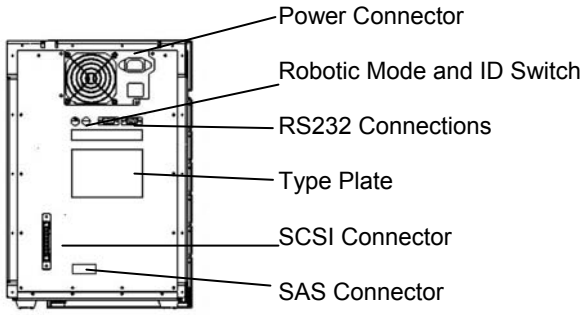
The LCD is also used to display and/or edit values in the Service Mode, as well as to display Event Codes in the Event Logging Mode.

DISCx000 REAR

SAS equipped DISC3000 - 7000



SAS equipped DISC1000



The DISC1000 is by default equipped with 1 LVD SCSI bus and 1 SAS bus.

The DISC3000 and DISC4000 are by default equipped with 1 LVD bus and 1 or 2 SAS busses, depending upon the number and type of drives in the Optical Library

The SAS connector is SFF-8088 (miniSAS)

The LVD SCSI connector is screwable 68 pin HD (female) type.

CHAPTER 4: SETUP

- Checking the Delivery
- Removing the Transportation Fixtures
- Mounting the Stands
- Placing the Optical Library
- Operation Modes
- Setting the Drive SCSI IDs
- Connecting to a Host Computer
- Connecting Line Voltage

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CHECKING THE DELIVERY

Review the following table to ensure that you have all the required equipment.

Equipment	Quantity
Power Cord	1 or 2
Power Cord USA (only USA)	1 or 2
Ferrite	1(2 by dual redundant power supply unit)
RS232 Cable	1
USB to LVD converter *	1
Quick Installation Guide	1
User Manual CD	1
Allen type screw driver	1
Allen Type screws	4-6 (missing screws to fully fix the right side cover)
Stands	4 (only by DISC3-7000)
Optical Library	1

* Optional

REMOVING THE TRANSPORTATION FIXTURES

NOTE: *More detailed information about removing transportation fixtures can be found on the label affixed to the Optical Library.*

▼ Removing the Transportation Fixtures DISC3-7000

1. Remove the two screws that affix the right cabinet cover of the Optical Library.

2. Remove the right cabinet cover.

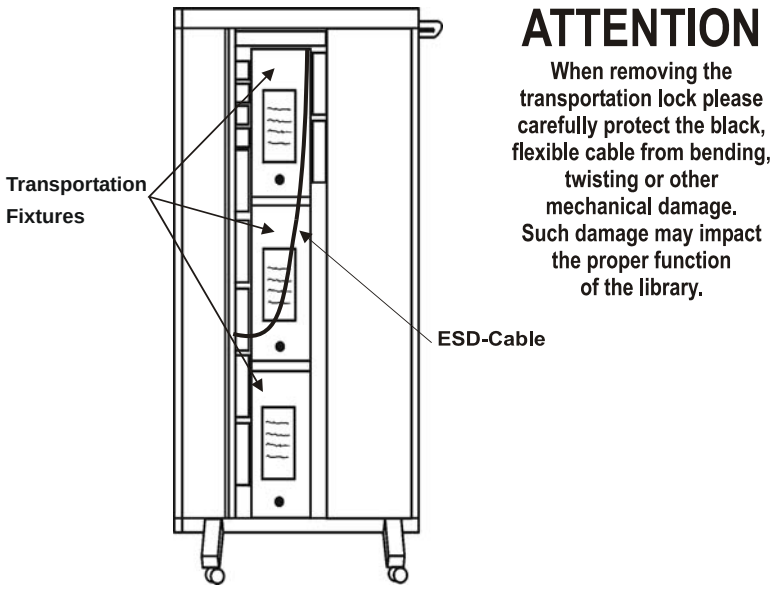
3. Remove the transportation fixtures inside the Optical Library.

▼Removing the Transportation Fixtures DISC1000

1. Remove the 14 screws that affix the right cabinet cover of the Optical Library.

2. Remove the right cabinet cover.

3. Remove the transportation fixtures inside the Optical Library.



CAUTION: *Powering on the Optical Library with transportation fixtures inside can damage the robotics.*
Do not operate the Optical Library while covers are removed. Ambient light will interfere with Optical Library operation, and moving parts increase risk of personal injury.

MOUNTING THE STANDS

WARNING: *Do not operate the Optical Library without the stands installed.*

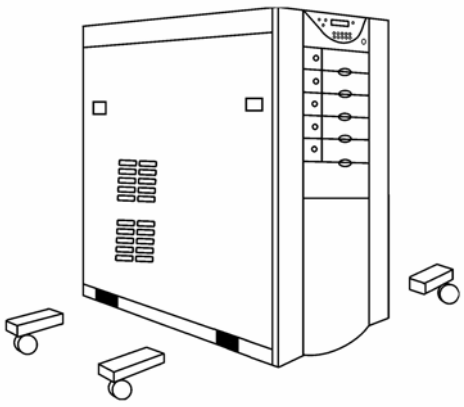
Regulations require the stands to be installed!

▼ Mounting the Optical Library Stands DISC3-7000

NOTE: *Two people are required to perform this procedure.*

1. Tilt the Optical Library to the left.
2. Push the front stand for the right side into the slot near the bottom of the Optical Library until it “clicks” in.
3. Push the rear stand for the right side into the slot near the bottom of the Optical Library until it “clicks” in.
4. Tilt the Optical Library to the right.
5. Push the front stand for the left side into the slot near the bottom of the Optical Library until it “clicks” in.
6. Push the rear stand for the left side into the slot near the bottom of the Optical Library until it “clicks” in.

NOTE: *The roles of a DISC7000 have to stand to the outside. Take care to mount the stands angled to the right side*



PLACING THE OPTICAL LIBRARY

The DISCx000 Optical Libraries are intended for use in office or computer lab environments.

CAUTION: *After delivery, the Optical Library should be allowed to come to room temperature before operation.*

When placing the Optical Library...

Avoid places with:

- extreme temperature
- excessive sun exposure
- high humidity
- contact with water
- contact with chemicals
- extreme vibration

The right location has:

- stable, even support
- sufficient space to pull out and service the unit
- ambient maximum of 37° C

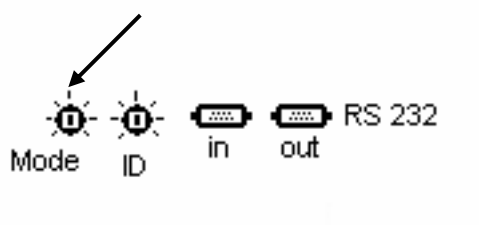
CAUTION: *To ensure sufficient cooling airflow and to have enough work space to exchange the air filter, at least 50 cm free space has to be left at the right side of the Optical Library.*

OPERATION MODES

Several operation modes are available which can be selected using the Mode Select switch on the rear of the Optical Library.

The function of the ID Switch depends upon the mode selected.

Which mode must be selected depends upon the host application used to control the Optical Library.



Mode	Function	Function of ID Switch
0	0 RS232 mode	RS232 ID (robotic)
1	SCSI mode	SCSI ID (robotic)
2-F	DISC internal use only	----------

RS232 MODE

The RS232 mode must be selected if the Optical Library is controlled via the serial interface (RS232). The factory default RS232 ID is 00. The available range for the RS232 ID is 00 to 15, and can be changed using a small flat-head screwdriver. The ID need only be changed when more than one Optical Library is connected to the serial bus.

CAUTION: *Do not connect more than 3 Optical Libraries to the serial bus. If more than 3 Optical Libraries are connected to the serial bus, signal attenuation will occur, causing Optical Library malfunctions.*

The maximum serial cable length of the serial bus is 15 meters, and must not be exceeded.

SCSI MODE

The SCSI mode must be selected if the Optical Library is controlled via the SCSI bus. The ID switch is used to select the robotics SCSI ID. The range for SCSI IDs is 00 to 07.

SCSI CABLE REQUIREMENTS

CAUTION: *Only shielded high quality SCSI cables should be used. For additional SCSI cable information, see the SCSI-3 specification.*

Your Optical Library uses Low Voltage Differential (LVD) technology, ensure that all SCSI cables and terminators support LVD.

SCSI CABLE LENGTH

To connect the Optical Library to the SCSI host adaptor only cables that do not exceed 10 meters cable length may be used

SETTING DRIVE IDS

The ID switches on the rear of the Optical Library are used to set drive IDs (only DISC 3-7000).

The ID range for each drive is 00 to 07. Each drive on any given bus must have a unique ID. (If more than one SAS bus is installed you use a small screwdriver to adjust the switches to the desired IDs.) The factory default for DISC1000 is ID 01 and 02.

NOTE: *Most host applications require to have the ascending order of Drive IDs according to the physical position of the drive within the Optical Library (counted from bottom to top)!.*

CONNECTING THE ROBOTIC TO A HOST COMPUTER

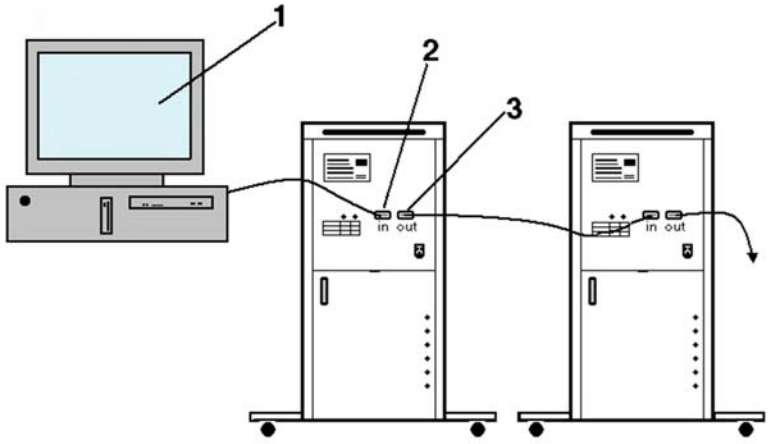
CONNECTING THE SERIAL INTERFACE

CAUTION: *Turn off the Optical Library and host computer before connecting cables.*

Depending upon host software used to control the Optical Library, either the serial interface or SCSI interface must be connected to the host computer. This section pertains to systems connected to the host via a serial interface. If your host software requires a SCSI connection, see “Connecting the SCSI Interface” on page 36 and disregard the remainder of this section.

All mechanical operations including loading and unloading media, and importing and exporting media can be controlled via the RS232 interface.

By default, the RS232 ID for the robotics is set to 00. This setting need only be changed when more than one Optical Library is connected to the serial bus.



1. Host Computer

2. RS232 cable in (RS232 cable from host computer to Optical Library in)

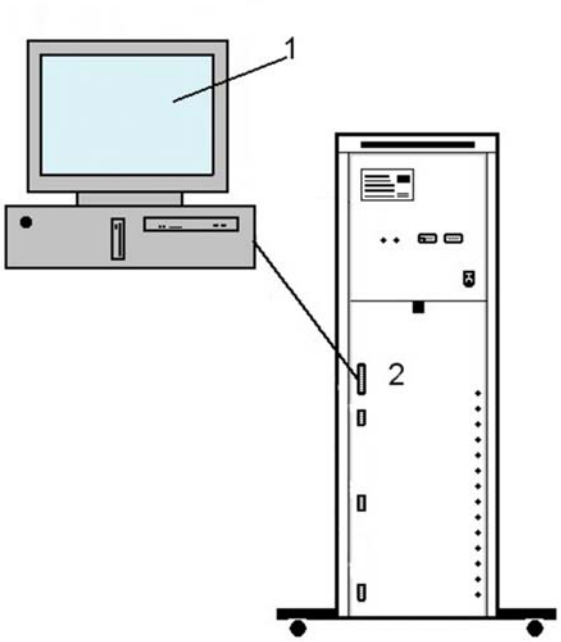
3. Daisy-chain connection for additional Optical Libraries (Optical Library out from first unit to Optical Library in on next unit)

CONNECTING THE SCSI Robotic INTERFACE

CAUTION: *Turn off the Optical Library and host computer before connecting cables.*

If the Optical Library shall be operated in SCSI mode (robotic is controlled via the SCSI bus), the robotic interface is connected to SCSI bus A.

CAUTION: *LVD equipped Optical Libraryes are internally terminated, and therefore do not support daisy-chaining. Max. external cable length is 10m!*



1. Host computer

2. Connection SCSI Bus

CAUTION: *LVD equipped Optical Libraries require term power from the bus. The host computer must be powered on for the Optical Library to start up or operate.*

CONNECTING THE Robotic via the LVD SCSI to USB CONVERTER

With a SAS-based DISC library, the external LVD connector on the back of the DISC library will internally only be connected to the robotics controller.

If a SAS-based DISC library was purchased with an LVD SCSI to USB converter, the robotics controller can be connected to a USB port and in that case an LVD HBA is not needed.

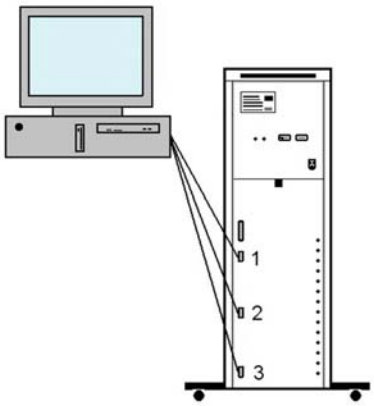
The LVD SCSI to USB converter will be delivered without an AC adapter, because the power for the converter will be supplied by the robotics controller via the termination power lines of the LVD SCSI bus.

If the converter is connected to the DISC Library and the USB cable is connected to the host system and both systems (DISC library and host system) are powered on, the LVD light on the converter should light up (green).

The driver software included with the converter will make the robotics controller appear as a regular SCSI device to the Jukebox Manager software.

Connecting the drives to a Host Computer

Turn off the Optical Library and the host computer when connecting the SAS cables.



1. Connection SAS Bus 1
2. Connection SAS Bus 2
3. Connection SAS Bus 3

The DISCx000(U) series do have upto 3 SAS connectors for the drives which has to be connected to the SAS Host Bus Adapters

SAS Configuration

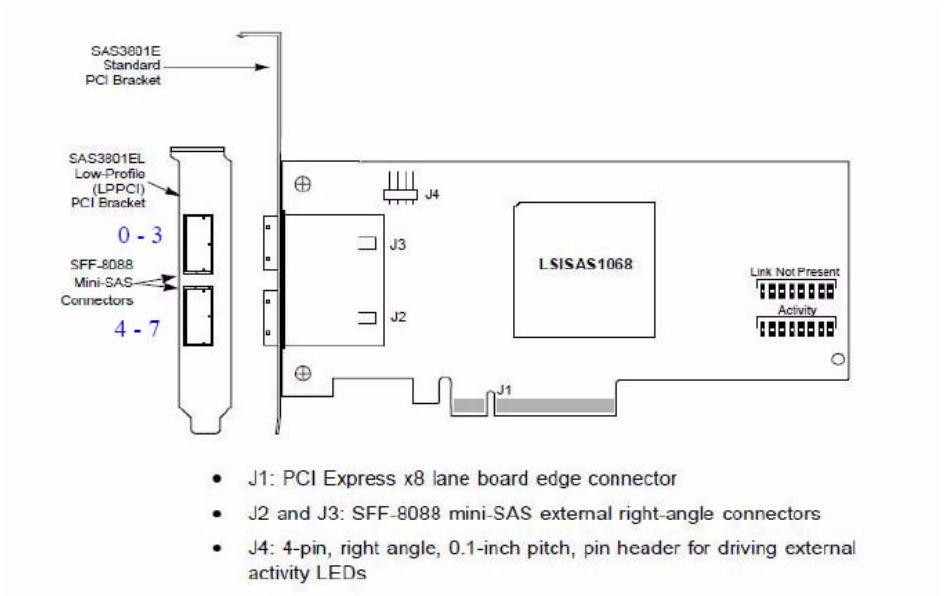
The concept of Serial Attached SCSI (SAS) differs from the concept of the conventional parallel SCSI technologies (like LVD SCSI). This may cause the configuration of a system like a DISC optical library to be confusing. The main difference with SAS is that each target device will have its own link to the HBA, instead of multiple devices sharing a parallel bus like LVD SCSI. Another important difference is the SCSI ID of a SCSI target device. With parallel SCSI, the SCSI target devices have switches or jumpers which can be used to configure the SCSI target ID. With SAS, the HBA determines which SCSI target IDs are assigned to the connected SAS device.

SAS Host Bus Adapter (HBA)

The DISC libraries have been qualified to work with the following LSI Logic Host Bus Adapters (HBAs)

The LSISAS380IE (PCI-Express) or LSISAS380IX (PCI-X)
The LSISAS3442E-R (PCI-Express) or LSISAS3422X-R (PCI-X)

The LSISAS380IE and the LSISAS380IX HBAs have two SFF-8088 type mini SAS connectors. The SAS port physical channel numbering of these connectors is as shown in the picture.



- J1: PCI Express x8 lane board edge connector
- J2 and J3: SFF-8088 mini-SAS external right-angle connectors
- J4: 4-pin, right angle, 0.1-inch pitch, pin header for driving external activity LEDs

So the top miniSAS connector has four SAS ports with the physical channel numbers 0 - 3 and the lower miniSAS connector (closer to the PCIe connector) has four ports with physical channel numbers 4 – 7.

The LSISAS3442E-R and LSISAS3442X-R HBAs have one external SFF-8740 type SAS connector. This connector has four SAS ports with physical channel numbers 4 – 7.

External SAS Cables

The maximum supported length of the external cable is 3 meters.

The DISC libraries are equipped with the miniSAS SFF-8088 type connector. The type of external SAS cable needed, depends on which HBA is used.

HBA	Host Side Connector	Target Side Connector
LSISAS3801E	SFF-8088 (miniSAS)	SFF-8088 (miniSAS)
LSISAS3801X	SFF-8088 (miniSAS)	SFF-8088 (miniSAS)
LSISAS3442E-R	SFF-8470	SFF-8088 (miniSAS)
LSISAS3442X-R	SFF-8470	SFF-8088 (miniSAS)

Connecting the Drives to a SAS Host Bus Adapter

When connecting a DISC Library via SAS, there are several options possible:

Connect a DISC library with upto 4 drives
Connect a DISC library with 4 to 8 drives
Connect a DISC library with more then 8 drives

DISC Library with upto 4 Drives

When connecting a DISC Library with upto 4 drives , the SCSI Target IDs will be assigned depending on the LSI Logic HBA used and which external SAS connector is used. Please not that drive 1 is always the lowest drive in a DISC library. When using an LSISAS3442E/X or the lower connector of the LSISAS3801e/X HBA, the target IDs will be assigned to the drives as shown in Table 1.

Table 1: LSISAS3442E/X or Lower SAS Connector of LSISAS3801E/X

Drive #	SCSI Target ID
D4	7
D3	6
D2	5
D1	4

DISC Library with 4 to 8 Drives

When Connecting a DISC library with 4 to 8 drives, it is recommended to use a LSISAS3801E/X HBA. The external SAS cable should be connected as shown in Figure 1:

- Connect the lower SAS connector of the DISC7000 to the higher port of the LSISAS3801 HBA
- Connect the higher SAS connector of the DISC7000 to the lower port of the LSISAS3801 HBA

The LSI SAS HBA will assign the SCSI target IDs as shown in Figure 1 if the external SAS cables are connected correctly.

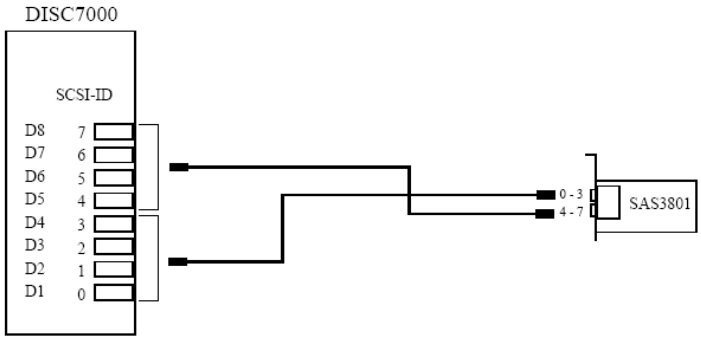


Figure 1: DISC7000 with 8 Drives

DISC Library with more than 8 Drives

When connecting a DISC Library with more than 8 drives at least two HBAs are needed. As an example we will be configure a DISC7000 with 10 drives. It is recommended to use two LSISAS3801E/X HBAs. It is important to connect the external SAS cables to the correct SAS connectors. The external SAS cable should be connected as shown in Figure 2:

- Connect the lower SAS port of the DISC7000 to the higher port of the first LSISAS3801 HBA
- Connect the middle SAS port of the DISC7000 to the lower port of the first LSISAS3801 HBA
- Connect the higher SAS connector of the DISC7000 to the higher SAS connector of the second LSISAS3801 HBA

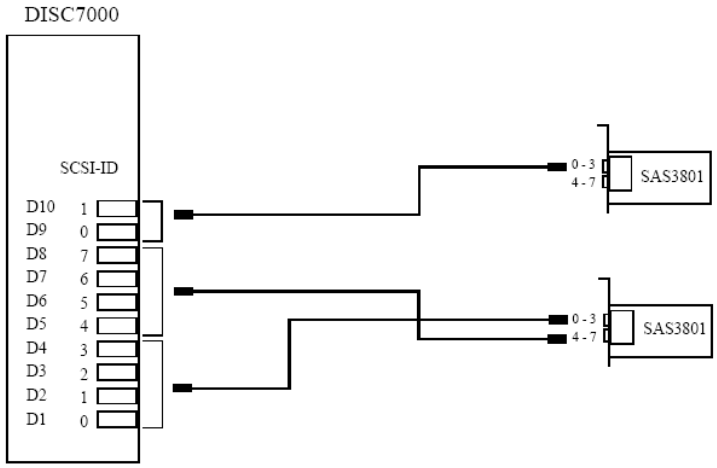


Figure 2: DISC7000 with 10 Drives

The LSI SAS HBA will assign the SCSI target IDs as shown in the picture if the external SAS cables are connected correctly.

It does not matter which HBA is chosen as the first or second HBA, but it is important to connect the SAS cables to the correct port. Because the SAS port of the HBA determines the SCSI target ID of the connected drive.

SAS HBA Settings

The LSI Logic SAS HBAs can be configured such that a SAS device connected to a physical channel will get a SCSI target ID assigned which is the same as the physical channel number. This target ID will always be the same, even when e.g. drives are replaced. This feature is desirable when connecting a DISC optical library,
To configure this feature, we need to set the physical mapping to *DirectAttached*. This can be configured by using the LSI Logic utility called 'LSI Util'. It can be downloaded from the LSI Logic webside (www.lsi.com, search for "LSI Util")

The current version is LSI Util 1.62. Use this utility to set the Physical Mapping to '1' (DirectAttached) via the menu option 13:

Do this for all LSI Logic SAS HBAs which will be used to connect the DISC library. Afterwards, a reboot of the system is needed to activate the new settings.

Jukebox Manager Software Drive Configuration

When configured the DISC library in the Jukebox Management Software, the drives should be assigned according to the SCSI target IDs and SCSI port numbers assigned by the Operating Systems and/or SAS HBA

As an example, the DISC7000 with 10 drives would have the following drive configuration:

Drive #	SCSI Port	SCSI Target ID
D10	4	1
D9	4	0
D8	5	7
D7	5	6
D6	5	5
D5	5	4
D4	5	3
D3	5	2
D2	5	1
D1	5	0

CONNECTING LINE VOLTAGE

Before connecting the Optical Library to the electrical outlet, mount the ferrite to the power cord as close to the Optical Library as possible.

All DISC Optical Libraries have auto-switching power supplies. No adjustment is needed to switch between 110 volt and 220 volt electrical systems.

All DISCx000 Optical Libraries can either be equipped with a standard or dual redundant power supply unit.

In case one of the PSU modules is failing or temporarily not connected, the Optical Library can run with the remaining one. An acoustic alarm (beep) is given until the failing module has been exchanged or the missing mains cable is connected again.

CAUTION: *If your Optical Library is equipped with a redundant PSU you always should connect both line voltage cables! In order to get a high availability system it is recommended to connect each line voltage cable to a different power circuit.*

WARNING: *The Optical Library is not electrically disconnected from line voltage when powered down. To electrically disconnect the Optical Library from line voltage you must disconnect the power cord.*

CAUTION: *The DISCx000 Optical Library must be connected to an electrical circuit that is secured with a 16 Amp fuse.*

WARNING: *In case of a failing PSU the Optical Library case has to be opened for exchange. Opening of the covers and service interaction must be done by skilled service staff only!*

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CHAPTER 5: OPERATING THE OPTICAL LIBRARY

- Powering on the Optical Library
- Handling Media
- Importing and Exporting Media
- The Mailslot
- Using Packs

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POWERING ON THE OPTICAL LIBRARY

Always power on the Optical Library before the host computer. Failure to do so may result in the host not recognizing the Optical Library, and being unable to interface with it.

CAUTION: *LVD equipped Optical Libraries require term power from the bus. The host computer must be powered on simultaneously for the Optical Library to start up or operate.*

To power on the unit, press the red power button on the front of the Optical Library. The display will show:

Booting ...

...and then change to: **Reading License Data...**

...and finally change to:

DISC4000
V4508 N1170

During boot-up the robotics will rezero. While this is occurring, you will hear mechanical noises from the unit.

The Optical Library robotics are normally controlled via a host software application. For information on how to operate the Optical Library using a host, see your host software user manual. For information on how to operate the Optical Library without a host, see “Operate Menu” on page 60.

CAUTION: *Do not operate the Optical Library while covers are removed. Ambient light will interfere with Optical Library operation, and moving parts increase risk of personal injury.*

HANDLING MEDIA

HANDLING EXPOSED MEDIA

Exposed media should be handled without touching the readable areas of the disc. Scratches, fingerprints, or any other artifact on the disc reading surface may cause loss of data. Best wear cotton gloves when handling the bare media and keep them only within a well suited case like a 'jewel case' or the DISC Offline Packs!

NOTE: *The PDD media are protected by a special hard coated surface. You may clean them carefully using a soft, damp cloth without cleaning agent!*

HANDLING PACKS

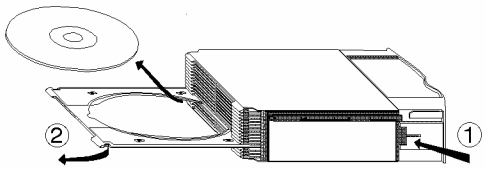
Media trays within packs are secured by the casing and will not fall out as long as all trays are in the pack (with or without media in all trays).

Packs with missing trays must be handled carefully. The remaining trays are locked into the pack but the medium below the removed tray is exposed and may move or fall out!

▼ Removing Trays from a Pack

1. Press the red button at the left side of the Pack.

2. Pull out the tray.



IMPORTING AND EXPORTING MEDIA

Media is imported and exported in one of two ways:

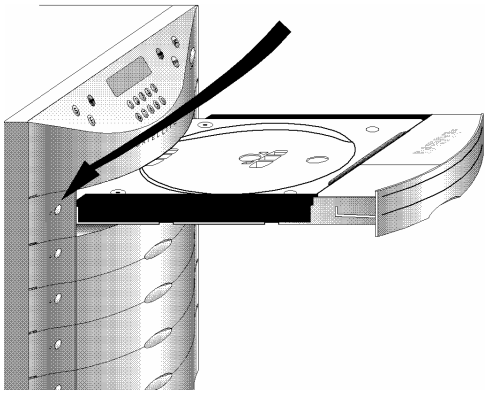
- Through the Mailslot
- Through Packs

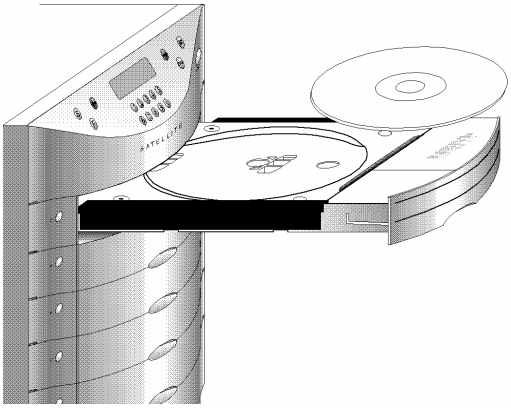
Which method you use will depend on the circumstance, and whether or not you have a host controlling the Optical Library.

THE MAILSLOT

When using host software to control the Optical Library, the mailslot will automatically open when an import or export command is sent from the host. After importing or exporting a medium, the host application usually closes the mailslot automatically as well. If your host does not automatically close the mailslot drawer, you can close it by pressing the [Enter] key, or gently pushing the front of the drawer.

For information on importing and exporting media without using a host application, see “Operate Menu” on page 60.





CAUTION: *Even if the bare PDD media are protected by a special hard coating, you must not import media with polluted ore scrached surface into the library! Avoid to touch the read/write area of the media with your fingers! Place exposed media immediately into a well suited case or cartridge!*

USING PACKS

DISC Media Packs are devices that contain 15 separate trays for media, surrounded by a case. You can quickly import or export multiple discs at once using packs, that would otherwise take much longer to import or export through the Mailslot. The Packs are also the best way to carry around or store the bare media.

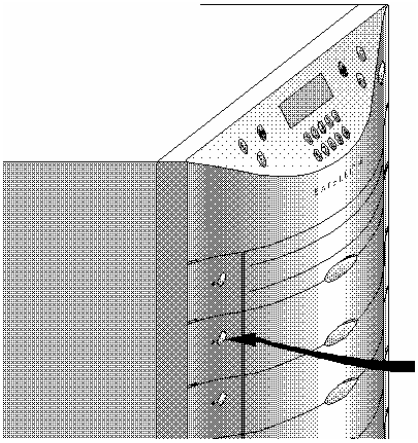
Every Pack has a world wide unique serial number which is stored in a 512k Smart Card chip and labeled with barcode on the Pack case. Therefore they easily can be handled and kept track by corresponding software applications.

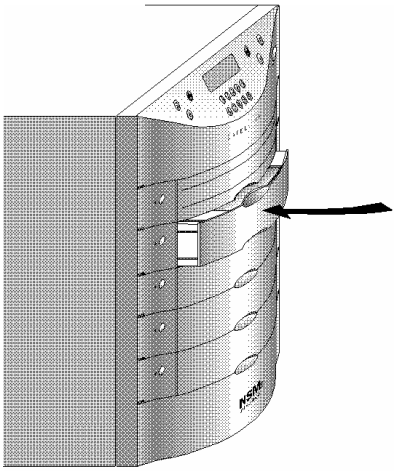
REMOVING PACKS

Packs can be removed when the status indicator is green or yellow. Packs are hot swappable, meaning that the packs can be removed or inserted while the machine is in operation. For more information on handling packs once they are removed from the Optical Library, see “Handling Packs” on page 46

NOTE: *For safety reasons, adjacent packs cannot be removed at the same time.*

NOTE: *Magazines are fixed to the Optical Library, and cannot be removed. To remove media from magazines, either move the media to a pack for removal, or remove it using the mailslot.*





Action	Status	Display
Press the pack button	The LED starts to flash yellow; all media are returned to the pack. LED flashes green; the pack is now ready to be removed.	The display reads... Please push pack <number of pack being removed>
Push the front of the pack towards the Optical Library.	The pack releases from the Optical Library. The LED is not lit.	The display reads... Please remove pack <number of pack being removed>

NOTE: *If the Optical Library is controlled by a host application, direct pack access from the Optical Library front panel may be disabled (visible at the status LED that turns to amber in this case). If your host software runs in this manner, packs can only be released by the host computer.*

INSERTING PACKS

Action	Status	Display
	LED is dark.	
Push the pack into the Optical Library.	LED flashes yellow, then changes to green Optical Library scans the pack for media.	

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CHAPTER 6:
THE USER INTERFACE

- User Interface Diagram
- Activating the User Interface
- User Interface Modes and Commonly Used Functions

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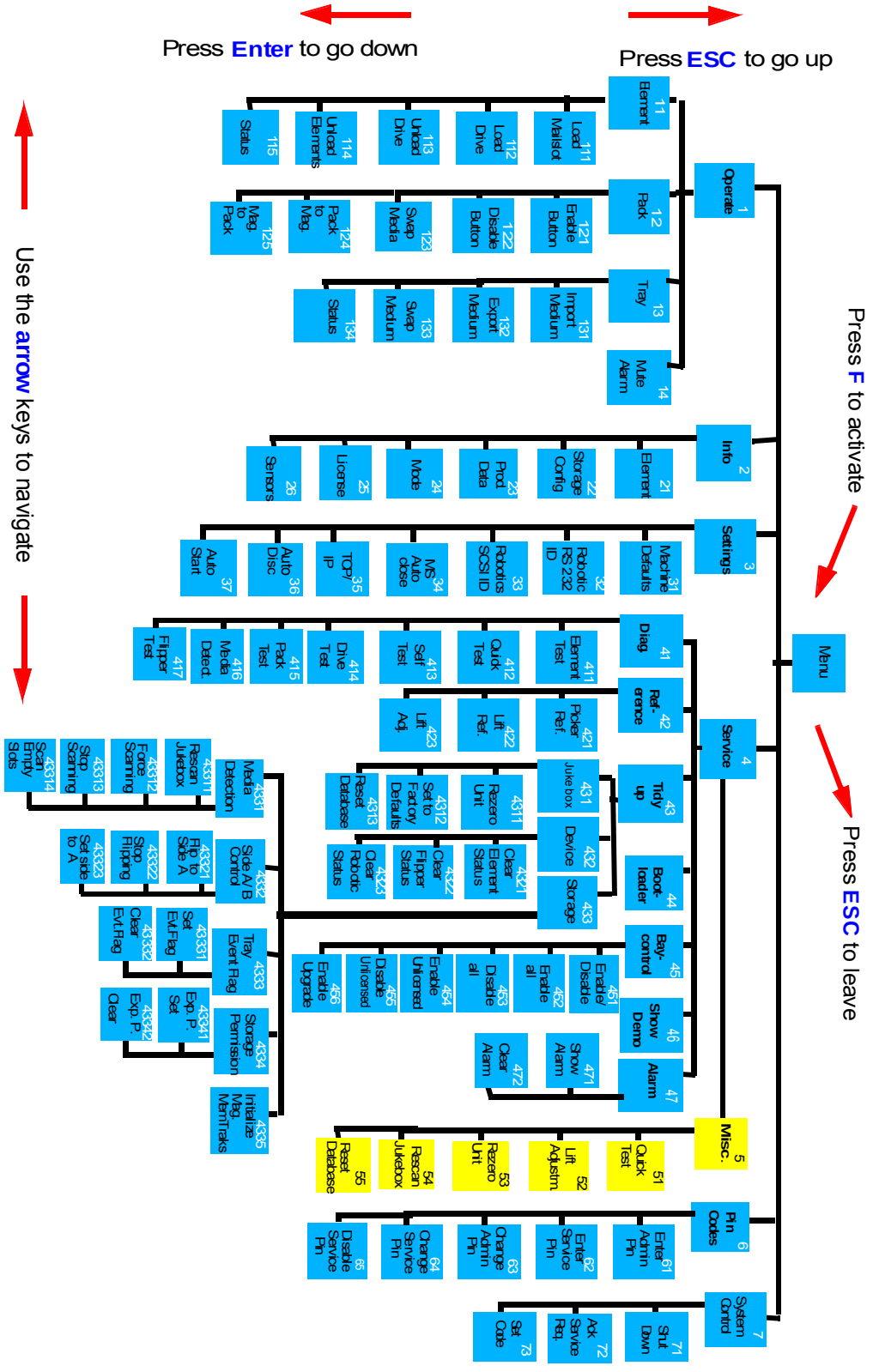
THE USER INTERFACE



ACTIVATING THE USER INTERFACE

The Optical Library User Interface Function Menu is activated by pressing the **F** key.

To **navigate** horizontally through the User Interface, press the □and□ **arrow** keys. To navigate vertically, press **Esc** (up) and **Enter** (down). If you know the number of the desired function, you can press [F] followed by the function number to go directly to that screen. Function numbers are listed on the User Interface Diagram. For more information, see “The User Interface” on page 53.

To **exit** the User Interface, go to the menu root (1) and press **Esc**. The User Interface will also automatically exit after 10 minutes when no button is pressed within a submenu.

USER INTERFACE MODES

The Optical Library User Interface is used to configure and operate the Optical Library without using a host computer.

The User Interface has 3 modes:

- User Mode
- Admin Mode
- Service Mode

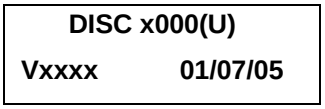
Access to User Mode is available to any user. You must first enter the correct Admin PIN to access the Admin Mode and the correct Service PIN to access the Service Mode.

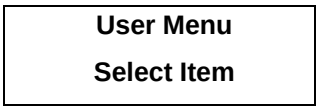
Service Mode is for trained technicians only, and should not be accessed if you are not a DISC authorized service provider.

Refer to the table below to determine what functional areas are part of which mode:

User Interface Mode	Functional Areas Available
User-Mode	Info PIN Codes
Admin-Mode	Operate Settings
Service-Mode	Service Demo System Control

USER-MODE





In the **User Mode**, only the **Info** and **PIN Codes** menus and few parts of the **Operate** menu (e.g. import and export of media) are available. In this mode, no settings can be changed or operations performed except for entering or changing Admin or Service Codes (in the PIN Codes menu).

The availability of functions in the User Mode may vary when being controlled by a host application

INFO MENU

The Info Menu provides information about the Optical Library configuration and capacity.

The following information is available in the Info Menu:

Info Menu Sub-Menu	Available Information
Element Config. .	Optical Library Equipment Information Mailslot available (yes/no) Position of drives in Optical Library Type of drives SCSI IDs of drives
Storage Config.	Optical Library Capacity Information Number of media in Optical Library (number of CDs/DVDs) Total number of slots in Optical Library
Prod. Data	Optical Library Production Data Information Vendor ID Product ID Revision level Production date Part number Serial number FW (firmware) revision FW (firmware) date
Mode	Optical Library Robotics Mode Information RS232 or SCSI mode
License	Optical Library License Information License Level used Interface Board used License Key Unit data

PIN CODES MENU

The PIN Codes menu allows you to enter or change the Optical Library PIN Codes. This is required in order to enter Admin or Service areas of the User Interface, or if you wish to change the PIN for either Admin or Service UI functions.

To access Admin areas of the UI, enter the Admin PIN and press Enter. The default Admin PIN is 9999.

To access Service areas of the UI, enter the Service PIN and press Enter. To change the Admin PIN, enter the new Admin PIN and press Enter. You must first enter the original Admin PIN before you are allowed to change to a new Admin PIN.

To change the Service PIN, enter the new Service PIN and press Enter. You must first enter the original Service PIN before you are allowed to change to a new Service PIN.

ADMIN MODE

The **Admin Mode** is activated by entering the **Admin PIN** from the PIN Codes menu of the User Mode.

In the Admin Mode, the **Operate** and **Settings** menus become available. All necessary settings for installing the Optical Library can be configured in this mode. It is also possible to fully operate the Optical Library without using a host application in this mode.

The default **Admin PIN** is **9999**. To deactivate the Admin PIN so no code is required to access the Admin Mode, change the PIN to 0000.

OPERATE MENU

The Operate menu offers several functions to control or operate the Optical Library without host software.

CAUTION: *Disconnect the Optical Library from the host before executing any Operate menu commands.*

The Operate Menu has 3 sub-menus:

- Element
- Pack
- Tray

Refer to the User Interface Diagram on page 54 to determine which sub-menu contains the command you wish to execute.

Once you select the function within the Operate menu that you desire, the Optical Library User Interface will prompt you for pertinent information needed to execute the command. Typical information that you will be prompted for includes:

The address of a tray

- Location (front or rear of the Optical Library).
- Position (bay) of the magazine
- Position of the tray within the magazine.

This type of query is answered by entering the 5 digit location address, and pressing Enter. Location address parameters are listed in the table below:

Address Digit	This Digit Represents...	Available Range to Input
1	Location (front or rear of Optical Library)	1 (front) or 2 (rear)
2 and 3	Position (bay) of magazine.	1 to 17
4 and 5	Position of tray inside magazine.	01 to 50

```
Element
Load Mailslot
```

```
Tray          1=Front
>X----<       2=Rear
```

```
Tray           Bay
>-YY--<        1-17
```

```
Tray           Tray
>---ZZ<        1 - 50
```

The available commands within the Operate menu, along with their functions are listed in the table below:

Command	**Functionality**
Load Mailslot (F111)	Used to import and export a single medium. After completing the command, press enter to import or export another medium, or simply enter the address of the next medium. After you are finished importing and exporting media, close the mailslot door by gently pushing it.
Load Drive (F112)	Used to move and load a medium to any drive.
Unload Elements (F114)	Used to return all media from drives and the mailslot to their home storage positions..
Enable Button (F121)	Used to release a pack when the pack buttons are disabled by a host application. This command will override the host and Machine Default.
Disable Button (F122)	Used to disable a pack that has been released with the Enable function. This will return control of the pack back to the host application.

Command	Functionality
Swap Media (F123)	Used to exchange the contents of a pack (front of the Optical Library) with the contents of a magazine (rear of the Optical Library). Parameters include: source pack (front or rear of Optical Library; bay) and the destination magazine (front or rear of Optical Library; bay; number of first slot to use).
Pack to Mag. (F124)	Used to move all media in packs (front of Optical Library) to magazines (rear of Optical Library). This is the fasted way to import large quantities of media to the Optical Library in parallel.
Mag. to Pack (F125)	Used to move all media in magazines (rear of Optical Library) to packs (front of Optical Library). This is the fasted way to export large quantities of media from the Optical Library in parallel. The operation stops when all trays in packs are full, and continues as soon as an empty pack is inserted.
Import Medium (F131)	Used to import several media serially into the Optical Library. After import of the first medium, close the mailslot with the Enter key. The next empty tray is automatically loaded to the mailslot for the next import. After you have imported the final medium, press the Esc key to stop the operation.
Export Medium (F132)	Used to export several or all media. Opposite of Import Medium (F131)
Swap Medium (F133)	Used to move a single medium to another storage location. Parameters include: source tray (front or rear of Optical Library; bay of magazine; position of tray inside magazine), and destination tray (front or rear of Optical Library; bay of magazine; position of tray inside magazine).

SETTINGS MENU

MACHINE DEFAULTS

The Machine Defaults are special presets that can be used by a host application to configure the Optical Library. All Optical Libraryes are originally set to Machine Default 21.

A host application may change the Machine Default to another value. It is also possible to manually change the Machine Default using the Service Mode Machine Default menu (F31) in the User Interface.

CAUTION: *All software that wants to operate the Optical Library in SCSI mode requires the Machine Defaults to be set to 21 (factory default) before the installation.*

NOTE: *In some Machine Defaults, the packs can only be controlled by the host application.*

AUTO DISC

The **Auto Disc** function (F36) is used to automatically load a specific disc into a drive when the Optical Library is powered up. One use of Auto Disc is to start the complete system from a bootable disc.

Parameters for Auto Disc include the position of the drive (bay) to load to, and the address of the medium (front or rear of Optical Library; bay number; tray number) to be loaded into the drive.

AUTO START

The Auto Start function (F37) is used to automatically mount media that are inside drives when the Optical Library is powered up.

TCP/IP (FOR USE AT EMBEDDED NAS MACHINES ONLY)

The TCP/IP function is used to preset the static IP address and configure network parameters if the Optical Library is equipped with an internal NAS server unit.

Parameter	Function
IP Address Read	Displays the current IP Address settings.
IP Address Set	Used to set the NAS IP Address. Factory default is 000.000.000.000.
Subnet Mask Read	Displays the current Subnet Mask settings.
Subnet Mask Set	Used to set the NAS Subnet Mask. Factory default is 000.000.000.000.
Gateway Addr. Read	Displays the current default Gateway settings.
Gateway Addr. Set	Used to set the default Gateway Address. Factory default is 000.000.000.000.
Access IP List	Only used with eCabinet storage accessories. Used to set IP addresses for eCabinets accessing the Optical Library. The factory default for all addresses is 000.000.000.000.
IP Settings Clear	Resets all addresses to factory default of 000.000.000.000.

SERVICE MODE

NOTE: *Unauthorized use of Service Mode functions may damage the Optical Library and void your warranty.*

The **Service Mode** is activated by entering the **Service PIN** from the PIN Codes menu of the User Mode.

In the Service Mode, all functions and submenus become available. The functions available in the Service Mode should only be used by trained technicians.

To deactivate the Service PIN so that no code is required to access the Service Mode, change the PIN to 0000.

NOTE: *For more information about the Service Mode, see the DISCx000 Service Manual.*

APPENDIX B: AGENCY APPROVALS

- FCC Declaration
- Declaration of Conformity

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AGENCY APPROVALS

FCC DECLARATION

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 on and off, 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.

Important: This product was FCC verified under test conditions that include the use of shielded cables and connectors between system components. It is important that you use shielded cables and connectors to reduce the possibility of causing interference to radios, televisions, and other electronic devices.

Should you have any problems contact your dealer.

DECLARATION OF CONFORMITY - DISC1000

CE

EG-Konformitätserklärung	**EC-Declaration of Conformity**	**CE-Déclaration de Conformité**
mit den Richtlinien 89 / 336 / EWG und 73 / 23 / EWG.	per 89 / 336 / EEC and 73 / 23 / EWG.	avec 89 / 336 / CEE et 73 / 23 / EWG.
Hiermit wird bestätigt, dass das Produkt PDD Optical Library **DISC 1000**	This is to confirm that the product PDD Optical Library **DISC 1000**	Nous déclarons que le produit Optical Library PDD **DISC 1000**
mit den folgenden Normen bzw. normativen Dokumenten übereinstimmt:	is in compliance with the following standards or other normative documents:	est conforme aux normes ou autres documents normatifs suivants:
EN 55022: 1998 + A1: 2000 Grenzwerte und Messverfahren für Funkstörungen von informationstechnischen Einrichtungen.	**EN 55022: 1998 + A1: 2000** Limits and methods of radio interference characteristics of information technology equipment.	**EN 55022: 1998 + A1 2000** Limites et méthodes de mesure des charactéristiques de perturbation radioélectriques produites par les appareils de traitement de l´information.
EN 50024: 1998 + A1: 2001 Störfestigkeit von informationstechnischen Einrichtungen.	**EN 50024: 1998 + A1: 2001** Information technology equipment-Immunity Characteristics- Limits and methods of measurement.	**EN 50024: 1998 + A1: 2001** Appareils de traitements l´information - characteristiques d´immunité - limites et méthodes de mesure.
EN 61000-3-2: 2000 **EN 61000-3-3: 1995 + A1: 2001**	**EN 61000-3-2: 2000** **EN 61000-3-3: 1995 + A1: 2001**	**EN 61000-3-2: 2000** **EN 61000-3-3: 1995 + A1: 2001**
EN 60950, UL 1950, CUL C22.2No.950 Sicherheit von Einrichtungen der Informationstechnik.	**EN 60950, UL 1950, CUL C22.2No.950** Safety of information technology equipment.	**EN 60950, UL 1950, CUL C22.2No.950** Sécurité des matériels de traitement de l´information.
Das Qualitätssicherungssystem von **DISC** garantiert die Konformität.	**DISC** quality assurance system assures compliance.	La système d´assurance de la qualité de **DISC** garantit la conformité.
Hersteller:	Manufacturer:	Fabricant:
DISC Archiving Systems B.V. **Waaderweg 52G** **2031 BP Haarlem, Netherlands**	**DISC Archiving Systems B.V.** **Waaderweg 52G** **2031 BP Haarlem, Netherlands**	**DISC Archiving Systems B.V.** **Waaderweg 52G** **2031 BP Haarlem, Netherlands**
Ausstelldatum: 01.01.2010	**Date of issue of the declaration: 01-01-2010**	**Date d´établissement 7e la declaration: 01.01.2010**

Kees Machielsen
Managing Director

DECLARATION OF CONFORMITY - DISC3000

CE

EG-Konformitätserklärung	**EC-Declaration of Conformity**	**CE-Déclaration de Conformité**
mit den Richtlinien 89 / 336 / EWG und 73 / 23 / EWG.	per 89 / 336 / EEC and 73 / 23 / EWG.	avec 89 / 336 / CEE et 73 / 23 / EWG.
Hiermit wird bestätigt, dass das Produkt PDD Optical Library **DISC 3000**	This is to confirm that the product PDD Optical Library **DISC 3000**	Nous déclarons que le produit Optical Library PDD **DISC 3000**
mit den folgenden Normen bzw. normativen Dokumenten übereinstimmt:	is in compliance with the following standards or other normative documents:	est conforme aux normes ou autres documents normatifs suivants:
EN 55022: 1998 + A1: 2000 Grenzwerte und Messverfahren für Funkstörungen von informationstechnischen Einrichtungen.	**EN 55022: 1998 + A1: 2000** Limits and methods of radio interference characteristics of information technology equipment.	**EN 55022: 1998 + A1 2000** Limites et méthodes de mesure des charactéristiques de perturbation radioélectriques produites par les appareils de traitement de l´information.
EN 50024: 1998 + A1: 2001 Störfestigkeit von informationstechnischen Einrichtungen.	**EN 50024: 1998 + A1: 2001** Information technology equipment-Immunity Characteristics- Limits and methods of measurement.	**EN 50024: 1998 + A1: 2001** Appareils de traitements l´information - characteristiques d´immunité - limites et méthodes de mesure.
EN 61000-3-2: 2000 **EN 61000-3-3: 1995 + A1: 2001**	**EN 61000-3-2: 2000** **EN 61000-3-3: 1995 + A1: 2001**	**EN 61000-3-2: 2000** **EN 61000-3-3: 1995 + A1: 2001**
EN 60950, UL 1950, CUL C22.2No.950 Sicherheit von Einrichtungen der Informationstechnik.	**EN 60950, UL 1950, CUL C22.2No.950** Safety of information technology equipment.	**EN 60950, UL 1950, CUL C22.2No.950** Sécurité des matériels de traitement de l´information.
Das Qualitätssicherungssystem von **DISC** garantiert die Konformität.	**DISC** quality assurance system assures compliance.	La système d´assurance de la qualité de **DISC** garantit la conformité.
Hersteller:	Manufacturer:	Fabricant:
DISC Archiving Systems B.V. **Waaderweg 52G** **2031 BP Haarlem, Netherlands**	**DISC Archiving Systems B.V.** **Waaderweg 52G** **2031 BP Haarlem, Netherlands**	**DISC Archiving Systems B.V.** **Waaderweg 52G** **2031 BP Haarlem, Netherlands**
Ausstelldatum: 01.01.2010	**Date of issue of the declaration: 01-01-2010**	**Date d´établissement 7e la declaration: 01.01.2010**

Kees Machielsen
Managing Director

DECLARATION OF CONFORMITY - DISC4000

CE

EG-Konformitätserklärung	**EC-Declaration of Conformity**	**CE-Déclaration de Conformité**
mit den Richtlinien 89 / 336 / EWG und 73 / 23 / EWG.	per 89 / 336 / EEC and 73 / 23 / EWG.	avec 89 / 336 / CEE et 73 / 23 / EWG.
Hiermit wird bestätigt, dass das Produkt PDD Optical Library **DISC 4000**	This is to confirm that the product PDD Optical Library **DISC 4000**	Nous déclarons que le produit Optical Library PDD **DISC 4000**
mit den folgenden Normen bzw. normativen Dokumenten übereinstimmt:	is in compliance with the following standards or other normative documents:	est conforme aux normes ou autres documents normatifs suivants:
EN 55022: 1998 + A1: 2000 Grenzwerte und Messverfahren für Funkstörungen von informationstechnischen Einrichtungen.	**EN 55022: 1998 + A1: 2000** Limits and methods of radio interference characteristics of information technology equipment.	**EN 55022: 1998 + A1 2000** Limites et méthodes de mesure des charactéristiques de perturbation radioélectriques produites par les appareils de traitement de l´information.
EN 50024: 1998 + A1: 2001 Störfestigkeit von informationstechnischen Einrichtungen.	**EN 50024: 1998 + A1: 2001** Information technology equipment-Immunity Characteristics- Limits and methods of measurement.	**EN 50024: 1998 + A1: 2001** Appareils de traitements l´information - characteristiques d´immunité - limites et méthodes de mesure.
EN 61000-3-2: 2000 **EN 61000-3-3: 1995 + A1: 2001**	**EN 61000-3-2: 2000** **EN 61000-3-3: 1995 + A1: 2001**	**EN 61000-3-2: 2000** **EN 61000-3-3: 1995 + A1: 2001**
EN 60950, UL 1950, CUL C22.2No.950 Sicherheit von Einrichtungen der Informationstechnik.	**EN 60950, UL 1950, CUL C22.2No.950** Safety of information technology equipment.	**EN 60950, UL 1950, CUL C22.2No.950** Sécurité des matériels de traitement de l´information.
Das Qualitätssicherungssystem von **DISC** garantiert die Konformität.	**DISC** quality assurance system assures compliance.	La système d´assurance de la qualité de **DISC** garantit la conformité.
Hersteller:	Manufacturer:	Fabricant:
DISC Archiving Systems B.V. **Waaderweg 52G** **2031 BP Haarlem, Netherlands**	**DISC Archiving Systems B.V.** **Waaderweg 52G** **2031 BP Haarlem, Netherlands**	**DISC Archiving Systems B.V.** **Waaderweg 52G** **2031 BP Haarlem, Netherlands**
Ausstelldatum: 01.01.2010	**Date of issue of the declaration: 01-01-2010**	**Date d´établissement 7e la declaration: 01.01.2010**

Kees Machielsen
Managing Director

DECLARATION OF CONFORMITY - DISC7000

CE

EG-Konformitätserklärung	**EC-Declaration of Conformity**	**CE-Déclaration de Conformité**
mit den Richtlinien 89 / 336 / EWG und 73 / 23 / EWG.	per 89 / 336 / EEC and 73 / 23 / EWG.	avec 89 / 336 / CEE et 73 / 23 / EWG.
Hiermit wird bestätigt, dass das Produkt Optical Library **DISC 7000**	This is to confirm that the product Optical Library **DISC 7000**	Nous déclarons que le produit Optical Library **DISC 7000**
mit den folgenden Normen bzw. normativen Dokumenten übereinstimmt:	is in compliance with the following standards or other normative documents:	est conforme aux normes ou autres documents normatifs suivants:
EN 55022: 1998 + A1: 2000 Grenzwerte und Messverfahren für Funkstörungen von informationstechnischen Einrichtungen.	**EN 55022: 1998 + A1: 2000** Limits and methods of radio interference characteristics of information technology equipment.	**EN 55022: 1998 + A1 2000** Limites et méthodes de mesure des charactéristiques de perturbation radioélectriques produites par les appareils de traitement de l´information.
EN 55024: 1998 + A1: 2001 Störfestigkeit von informationstechnischen Einrichtungen.	**EN 55024: 1998 + A1: 2001** Information technology equipment-Immunity Characteristics- Limits and methods of measurement.	**EN 55024: 1998 + A1: 2001** Appareils de traitements l´information - characteristiques d´immunité - limites et méthodes de mesure.
EN 61000-3-2: 2000 **EN 61000-3-3: 1995 + A1: 2001**	**EN 61000-3-2: 2000** **EN 61000-3-3: 1995 + A1: 2001**	**EN 61000-3-2: 2000** **EN 61000-3-3: 1995 + A1: 2001**
EN 60950, UL 1950, CUL C22.2No.950 Sicherheit von Einrichtungen der Informationstechnik.	**EN 60950, UL 1950, CUL C22.2No.950** Safety of information technology equipment.	**EN 60950, UL 1950, CUL C22.2No.950** Sécurité des matériels de traitement de l´information.
Das Qualitätssicherungssystem von **DISC** garantiert die Konformität.	**DISC** quality assurance system assures compliance.	La système d´assurance de la qualité de **DISC** garantit la conformité.
Hersteller:	Manufacturer:	Fabricant:
DISC Archiving Systems B.V. **Waaderweg 52G** **2031 BP Haarlem, Netherlands**	**DISC Archiving Systems B.V.** **Waaderweg 52G** **2031 BP Haarlem, Netherlands**	**DISC Archiving Systems B.V.** **Waaderweg 52G** **2031 BP Haarlem, Netherlands**
Ausstelldatum: 01.01.2010	**Date of issue of the declaration: 01-01-2010**	**Date d´établissement 7e la declaration: 01.01.2010**

Kees Machielsen
Managing Director

APPENDIX A: TECHNICAL DATA

- Technical Specifications
- OEM Specifications
- Slot Upgrades

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TECHNICAL SPECIFICATIONS

	DISC1000	DISC3000	DISC4000	DISC7000
Interfaces				
RS232				
RS232 ID	0	0	0	0
Baud rate	9600 Baud	9600 Baud	9600 Baud	9600 Baud
Number of start bits	1	1	1	1
Number of data bits	8	8	8	8
Number of stop bits	1	1	1	1
Parity check	No parity	No parity	No parity	No parity
ID Range	0–15	0–15	0–15	0–15
U160 SCSI LVD				
SCSI Robotics ID	0	0	0	0
ID Range	1–7 8–15 optional	1–7 8–15 optional	1–7 8–15 optional	1–7 8–15 optional
SAS				
Drive ID Range	0-7	0-7	0-7	0-7
Operating Conditions				
Ambient temperature	10°C – 37°C [50°F – 99°F]	10°C – 37°C [50°F – 99°F]	10°C – 37°C [50°F – 99°F]	10°C – 37°C [50°F – 99°F]
Operating temperature	[50°F – 91,4°F]	[50°F – 91,4°F]	[50°F – 91,4°F]	[50°F – 91,4°F]
Gradient of temperature	11°C/h [19,8°F/h]	11°C/h [19,8°F/h]	11°C/h [19,8°F/h]	11°C/h [19,8°F/h]
Relative humidity, operating	10% – 68% non condensing	10% – 68% non condensing	10% – 68% non condensing	10% – 68% non condensing
Power Supply				
Line voltage	90 V – 120 V/4 A	90 V – 120 V/5 A	90 V – 120 V/5 A	90 V – 120 V/10 A
Frequency range Power consumption, normal	220 V – 240 V/4 A 50/60 Hz	220 V – 240 V/4 A 50/60 Hz	220 V – 240 V/4 A 50/60 Hz	220 V – 240 V/5 A 50/60 Hz
Power consumption, max.	140 W 345 W	140 W 345 W	155 W 450 W	180 W 920 W

	DISC1000	DISC3000	DISC4000	DISC7000
Dimensions and Weight				
Width JB / JB incl. Stands Height Depth Weight (without media)	300 mm 410 mm 680 mm 35 kg	365/620,5 mm 780 mm 730 mm 54 kg	365/620,5 mm 980 mm 730 mm 72 kg	365/835 mm 1500 mm 730 mm 95 kg

FUSES

Internally used Fuses	PCB	Silkscreen Overlay Top Side
Mount Fuse 5A/63V quick-acting	Main Controller	S11; S12
Mount Fuse 2A/63V quick-acting	Main Controller	S13
Mount Fuse 2A/125V slo-blo	LKU Board	S11

OEM SPECIFICATIONS

	DISC1000	DISC3000	DISC4000	DISC7000
Robotics				
Media Exchange Time (avg) Reliability (MSBF)	2 second 2.500.000 cycles	3 second 2.500.000 cycles	4 second 2.500.000 cycles	6 second 2.500.000 cycles
Drives				
Read/write drive	CD, DVD BD	CD, DVD BD	CD, DVD BD	CD, DVD BD

SLOT UPGRADES

DISC DISC1000 , DISC3000 , DISC4000 and DISC7000 Optical Libraryes are available in the following capacities:

DISC1000U - 45 media slots
DISC1000 - 105 media slots

DISC3000 - up to 270 media slots

DISC4000 - up to 400 media slots

DISC7000U - 510 media slots
DISC7000 - up to 690 media slots

The basic Optical Library is the DISCx000 version, the upgrade to full capacity is optional.

Slot upgrades must be completed in the factory or on site by specially trained service staff. The slot upgrade is not available as a standard field upgrade kit.

For more information about slot upgrades, contact your DISC sales office.

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