

THE PLASMON 8000 SERIES

LD 8100 OPTICAL DISK DRIVE

USER MANUAL

P/N 9662915 B



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WARNING



Always observe the following when installing, operating or maintaining this product:

- This unit must be connected to a power distribution system that has a direct connection to earth ground (Terminated Terra [TT] network/ground connected). This unit is not suitable for use on a floating ground (Interrupted Terra [IT]) network.
- The AC input power cord must be shielded and must have a minimum current rating of 10 A with a nominal cross-section area of 0.75 sq mm (reference: AWG #18) per conductor, 2 wires plus ground and product safety approvals as required for use in the country in which the unit is installed.
- When the unit is mounted in an equipment rack or cabinet, be certain that the internal temperature within the rack or cabinet does not exceed the limits defined in the Product Specification or this document.
- To ensure the integrity of safety features of this unit, maintenance must be performed only by qualified service personnel using designated Plasmon LMS parts.
- In case of fire or other emergency, isolate the units from the main power by disconnecting the power plugs from their site power receptacles. In situations where disconnecting the plugs is not possible or practical, use the system main power disconnect to isolate the units from the main power.
- To prevent fire or shock hazard, do not expose this unit to rain or moisture. Refer servicing to qualified technicians.

(German Translation)

WARNUNG



Bei der Installation, Bedienung und Wartung dieses Produkts, bitte immer die folgenden Vorsichtsmaßnahmen treffen:

- Dieses Gerät muß an ein Stromversorgungssystem angeschlossen werden, das direkt mit einem Erdungsanschluß verbunden ist (Terminated- Terra-Netz [TT]/mit Erdanschluß). Dieses Gerät kann nicht an ein ungeerdetes Netz (Interrupted Terra [IT]) angeschlossen werden.
- Die Verbindungsschnur des Wechselstromeingangs muß entstört sein und ihr Minimalstrom unter folgenden Bedingungen bei 10 A liegen: Der Nennquerschnitt beträgt 0,75 mm je Leiter (Referenz: American Wire Gauge Nr. 18), es bestehen 2 Drähte plus ein Erdanschluß und das Produkt entspricht den im Land, in dem es aufgestellt wird, geltenden Sicherheitsvorschriften.
- Wird das Gerät in ein Gerätegestell oder einen Geräteschrank eingebaut, ist darauf zu achten, daß die interne Temperatur im Gestell oder Schrank nicht über die in den Produktspezifikationen oder diesem Dokument angegebenen Grenzwerte hinausgeht.
- Um ein ordnungsgemäßes Funktionieren der Sicherheitsmerkmale dieses Gerätes zu gewährleisten, dürfen Wartungsarbeiten nur von qualifiziertem Fachpersonal ausgeführt werden. Es sind darüber hinaus nur Ersatzteile zu verwenden, die von der Firma Plasmon LMS angegeben werden.
- Im Falle eines Feuers oder in einem anderen Notfall sind die Geräte vom Hauptnetz zu trennen, indem die Netzstecker aus den Steckdosen am Einbauort gezogen werden. Ist ein Herausziehen der Stecker nicht möglich oder zu umständlich, trennen Sie die Geräte mit Hilfe des System- Hauptnetzabschalters vom Hauptnetz.
- Um Feuer- oder Stromschlaggefahr zu vermeiden, ist dieses Gerät niemals Regen oder Feuchtigkeit auszusetzen. Wartungsarbeiten sind qualifiziertem technischen Personal zu überlassen.

RADIO/TV INTERFERENCE (USA)

The information in this section applies only to units in use within the United States:

This equipment generates and uses radio frequency energy and, if not installed and used properly, that is, in strict accordance with the manufacturer's instruction, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class A computing device in accordance with the specifications of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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 the receiving antenna
- relocate the equipment away from the receiver
- plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. A pamphlet by the FCC 'How to Identify and Resolve Radio-TV Interference Problems' is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 044-000-00345-4.

CDRH COMPLIANCE

LD 8100 contains a Class 1 Laser Product. This product complies with 21CFR Chapter 1, Subchapter J, applicable at date of manufacture.

CANADIAN EMI COMPLIANCE

Canadian Department of Communications standards require that the following statement appear in operating manuals for any digital apparatus imported into Canada:

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

FRENCH TRANSLATION

Cet équipement digital ne dépasse pas les limites de la Classe A pour les interférences radioélectriques des systèmes digitaux fixées par les Règlements concernant les Interférences Radioélectriques établis par le Ministère des Communications du Canada.

All Plasmon LMS products comply with the requirements of this standard.

Agency Compliance and Approval

For details on Agency Compliance and Approval refer to the *LD 8100/LF 8120/LF 8600/LF 8602 Product Specification Manual* (P/N 97663035).

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This User Manual describes unpacking, installing, operating, and maintaining the LaserDrive LD 8100 High-Performance Optical Disk Drive.

RELATED PUBLICATIONS

PUBLICATION	PART NUMBER
LD 8100/LF 8120/LF 8600/LF 8602 Product Specification	97663035
LD 8100/LF 8120/LF 8600/LF 8602 SCSI Interface Specification	97662164
LD 8100 Hardware Maintenance Manual	97663081

NOTICES

Three levels of notices are used throughout this document.

WARNING



A **WARNING** is used to alert the reader of situations or conditions that could potentially result in personal injury, fire hazard or equipment damage.

CAUTION



A **CAUTION** is used to warn of undesirable procedures or of situations in which equipment damage could potentially result.

NOTE

A **NOTE** is used to emphasize an area of text or to provide additional information.

WARRANTY STATEMENT

The LD 8100 is warranted as stated in the purchase agreement between Plasmon and it's customer, or the Plasmon sales order acknowledgment, whichever is applicable.

The Plasmon LMS quality system is in compliance and registered to ISO 9001. The LD 8100 is manufactured from new parts, or remanufactured parts.

LD 8100 warranty does not cover defects or damage caused by the use of unauthorized parts or repairs or improper use or maintenance. Repairs or replacements not covered by the warranty will be invoiced at Plasmon' then current prices.

The warranty is void when installation, service or repairs are performed by un-certified personnel; when the product is affected by unauthorized alterations, modifications or other tampering or misuse; when the product is incorporated into a system which causes or involves any changes in the physical, mechanical or electrical arrangement of the product; or when the product is not used in accordance with its applicable specifications.

The term, authorized personnel, is defined as those persons who have been trained by Plasmon LMS Technical Services.

GENERAL DESCRIPTION

The Plasmon Infinity LaserDrive LD 8100 is a write once read many (WORM), high-capacity optical disk drive which uses a removable 300-mm (12-in.), LM 8000 optical media cartridge with storage capacity of 30 GBytes. The LD 8100 can also read LM 6000 and LM 4000 media. Contact Plasmon LMS for availability and ordering information for the LM 4000 media option.

The LD 8100 is available in a Rack Mount, Desktop, Tower, FileNet® Library and Plasmon Library configurations, offering support for varied operating orientations and installation environments (see figure below).

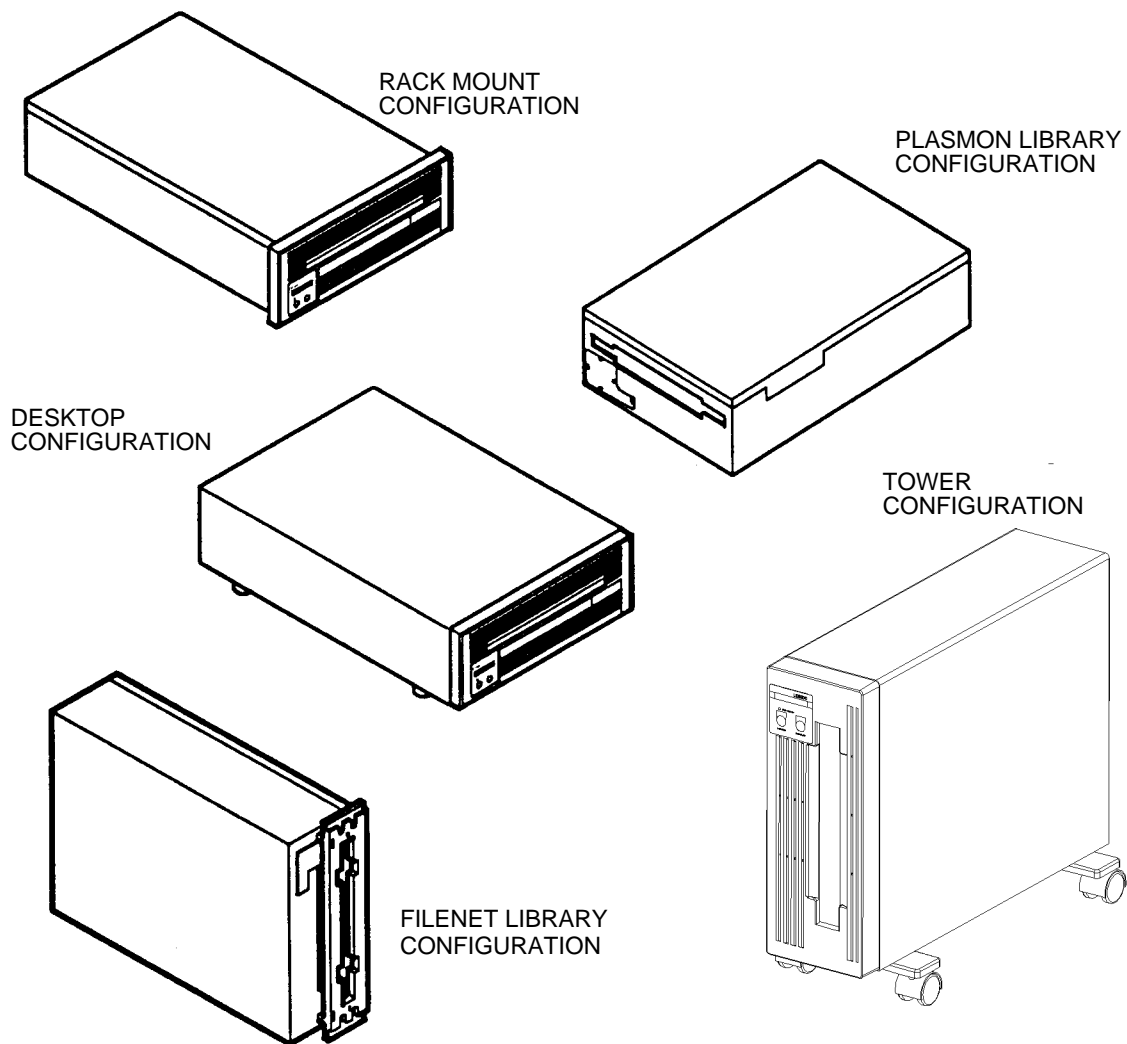


Figure 1. LD 8100 Configurations

The LD 8100 supports a maximum sustained read and write transfer rate of 6.0 MBytes/sec without data verification. The drive will also support a 2.9 MBytes/sec write transfer rate with error correction and defect management to maintain data integrity and manage media flaws.

A Drive Operator Console (DOC) located on the front panel of the drive provides user control of drive operation, configuration and test as explained in the Operating Instruction section of this manual.

Operating messages are presented on the alphanumeric display in English, French or German. The language used is selectable.

The Auxiliary Diagnostic Port (ADP) can be used to download updates to the drive firmware in the field. Refer to the LD 8100/ LF 8120/ LF 8600/ LF 8602 Product Specification (P/N 97663035) for more information. The ADP is located on the front panel of the Rack Mount, the Desk Top and the Tower configurations. The ADP may be located on the rear panel of the Plasmon Library and the Filenet configurations. The ADP may also be used as a standard serial port for setting the SCSI ID.

The LD 8100 drive implements the Small Computer System Interface (SCSI) via standard SCSI-2 micro connectors (68 pin) located on the rear panel. Single-ended and differential, High Voltage interface options are available, and the interface can be changed in the field. Both the single-ended and differential controllers support asynchronous or synchronous data transfer operations.

Preventive maintenance for the LD 8100 is minimal. Corrective maintenance is simplified by internal diagnostic firmware which detects, isolates and reports malfunctions to the operator and identifies the Field Replaceable Unit (FRU).

LM 8000 media is interchangeable between the LD 8100, LF 8120, LF 8600, and the LF 8602. The LD 8100 can also read LM 6000 and LM 4000 media. Contact Plasmon LMS for availability and ordering information for the LM 4000 media option. The

DRIVE CHARACTERISTICS

This section describes the LD 8100 Rack Mount, Desktop, Tower, FileNet Library and Plasmon Library configurations. All LD 8100 configurations have the same major internal subassemblies.

RACK MOUNT AND DESKTOP CONFIGURATIONS

The LD 8100 Rack Mount configuration is designed for horizontal operation and slide mounting in an EIA standard 19-in. rack. The Rack Mount configuration is installed in a rack using the Quick Release Rack Mount Kit (refer to the Installation section of this manual).

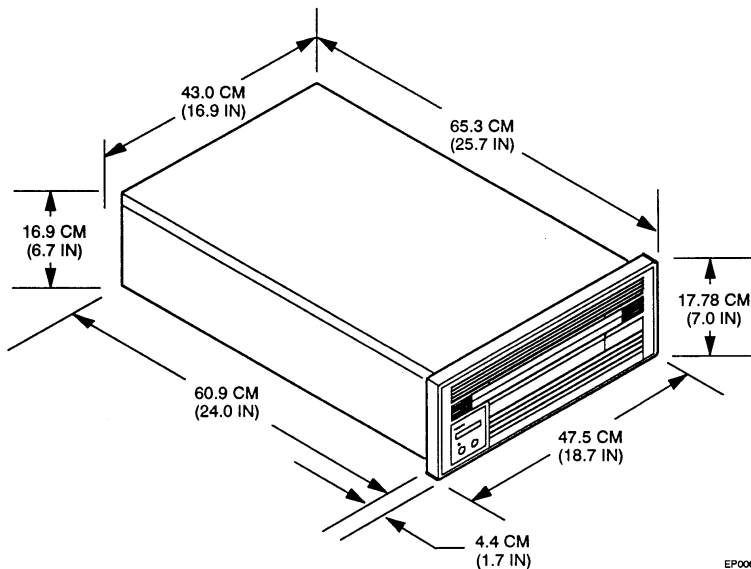
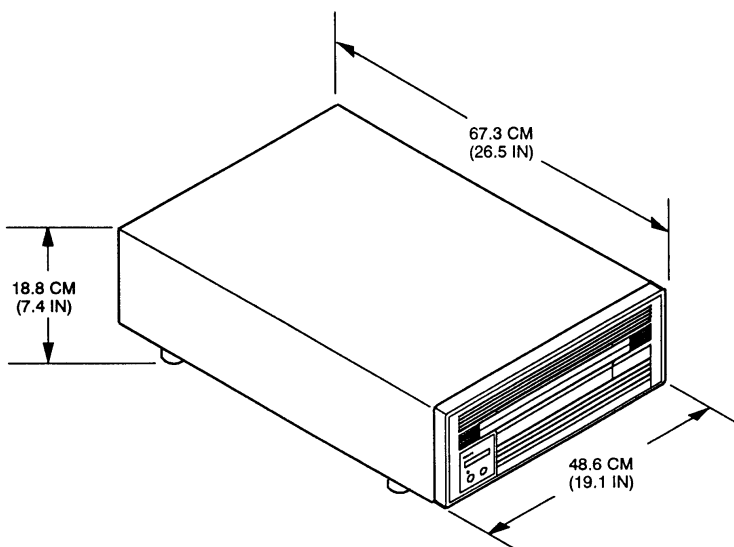


Figure 2. LD 8100 Rack Mount Drive



The LD 8100 Desktop configuration is designed for horizontal operation as a stand-alone device on a table top. The Desktop configuration includes an enclosure and rubber feet.

Figure 3. LD 8100 Desktop Drive

The figure below illustrates the front panel layout. The ADP connector is located beside the DOC but is concealed by the Bezel.

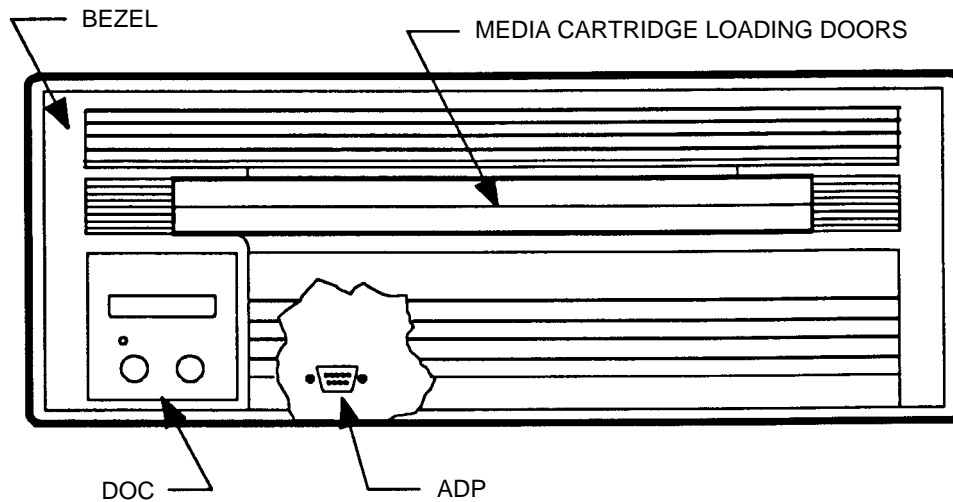


Figure 4. LD 8100 Rack Mount and Desktop Front Panel Layout (Rack Mount Version Shown)

The LD 8100 Rack Mount and Desktop rear panel layout includes a DOC/ADP Blank Panel, MCLI Blank Panel, AC Power Switch, Receptacle, SCSI-2 I/O Panel Assembly and a ground connector. The figure below illustrates the rear panel layout. A Fan Grill and filter element are installed over the fan vent to filter out contaminants from cooling air entering through the rear panel.

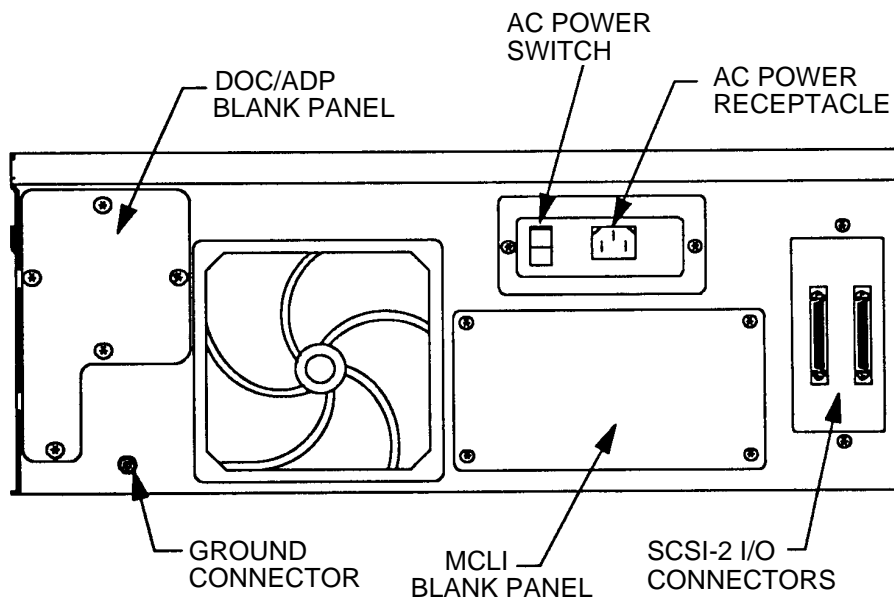


Figure 5. LD 8100 Rack Mount Rear Panel

TOWER CONFIGURATION

The Tower configuration (see figure below) is designed for vertical operation as a stand-alone device on an open floor or beside a desk. The Tower configuration includes an enclosure for both the LD 8100 and the pedestal. The pedestal is supported by four casters which can be locked to prevent unintentional movement.

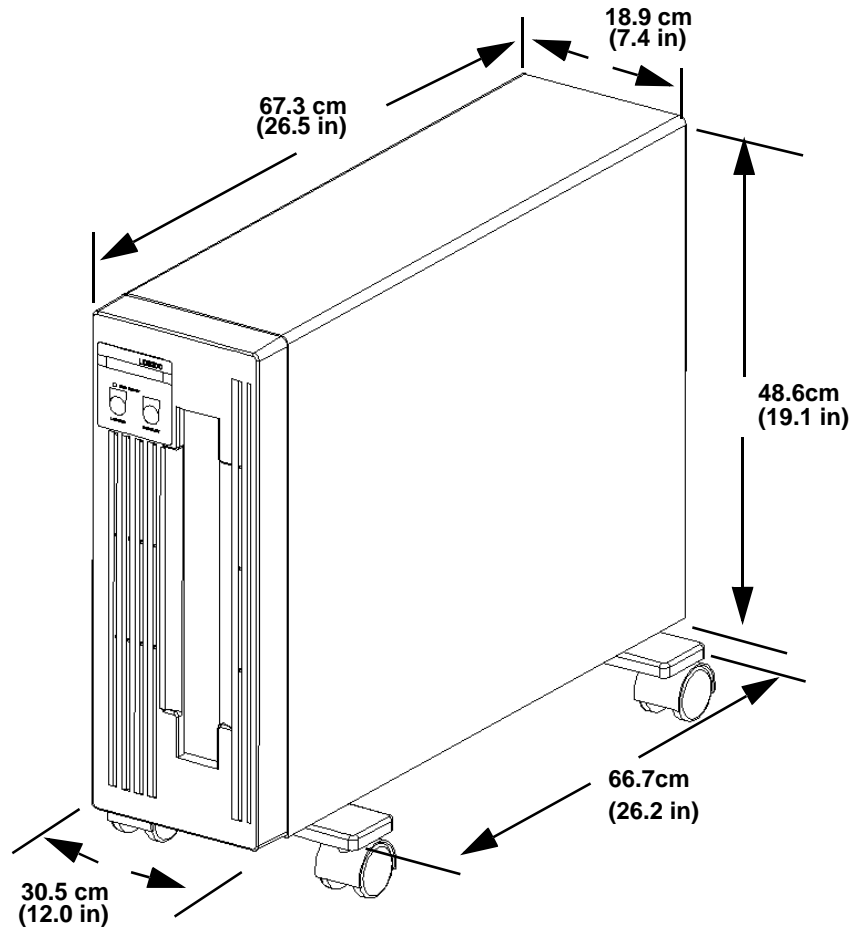
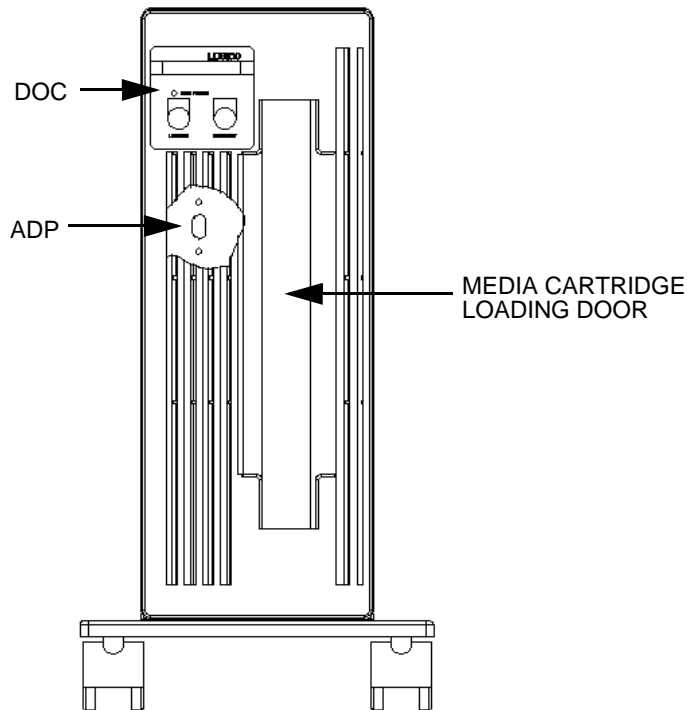


Figure 6. LD 8100 Tower Configuration

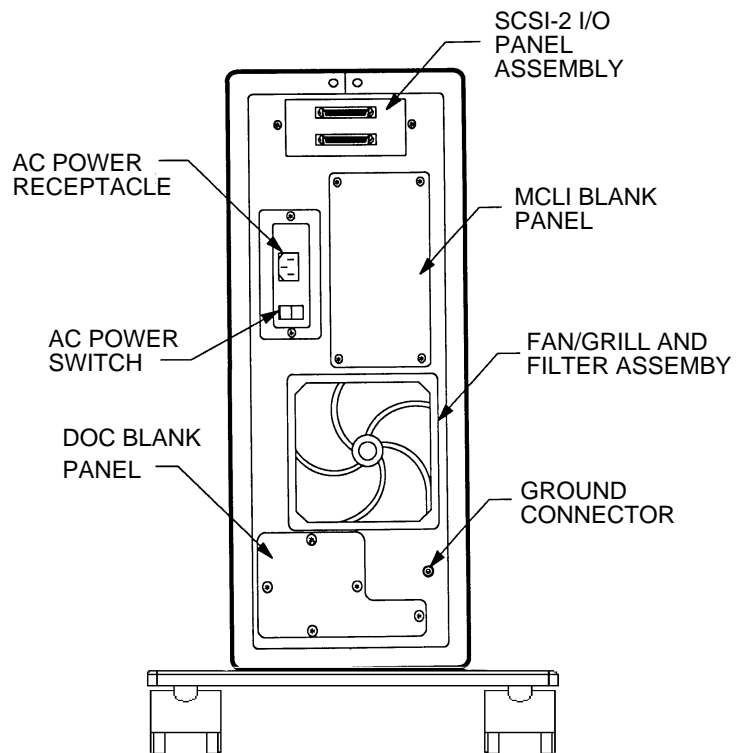


The illustration to the left shows the front panel of the LD 8100 Tower configuration and identifies the location of the DOC and ADP connector. The ADP connector is located below the DOC but is concealed by the bezel.

Figure 7. LD 8100 Tower Front Panel Layout

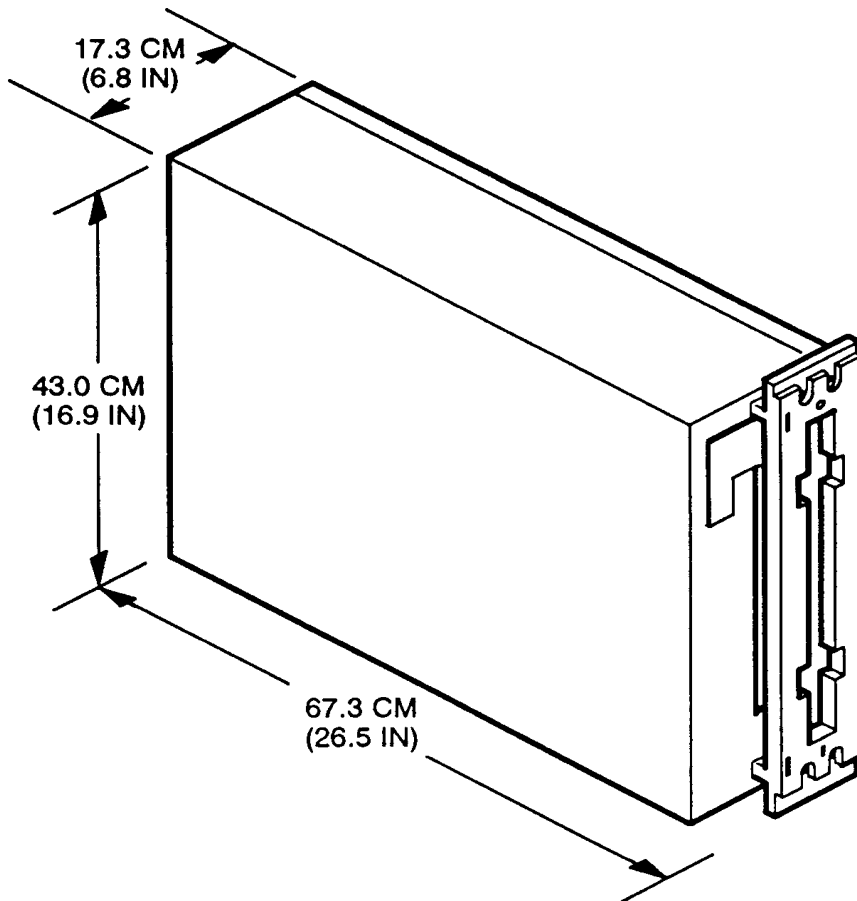
The figure to the right illustrates the rear panel of the LD 8100 Tower configuration and identifies the location of the AC power switch, Receptacle, ground connector, SCSI-2 I/O Panel Assembly, DOC/ADP Blank Panel and MCLI Blank Panel. A Fan Grill and filter element are installed over the fan vent to filter contaminants from cooling air entering through the rear panel.

Figure 8. Rear View of LD 8100 Tower



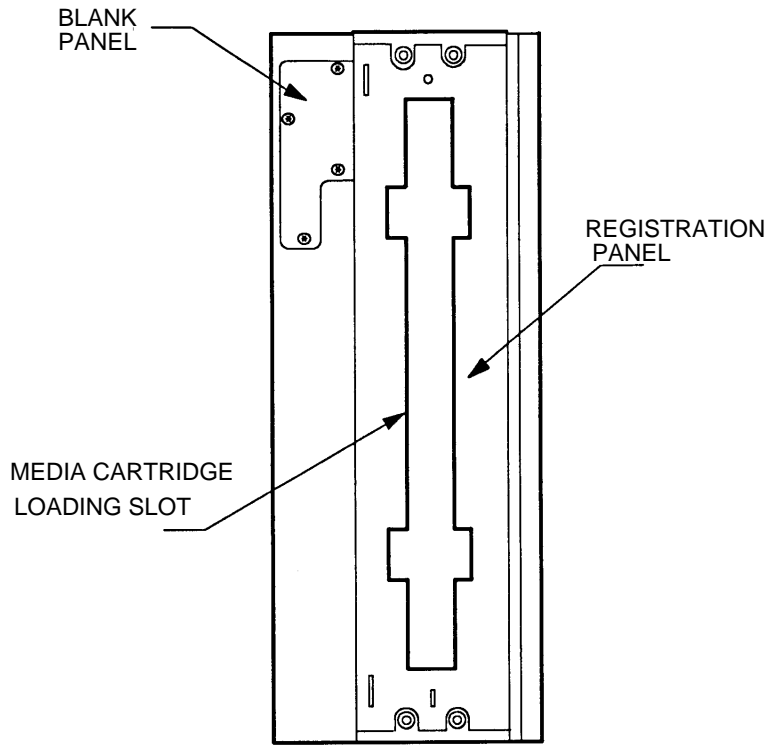
FILENET LIBRARY CONFIGURATION

The FileNet Library configuration (see figure below), does not have a Bezel and is designed for vertical or horizontal mounting and for operation in a FileNet Library. The FileNet Library configuration has the same major assemblies as the other LD 8100 configurations but is configured for use in a FileNet Library by adding the MCLI connector and Registration Panel.



EP004213

Figure 9. FileNet Library Configuration



The figure on the left illustrates the front panel of the FileNet Library configuration and identifies the location of the DOC/ADP Blank Panel. The DOC and ADP connector are located on the rear panel, so the DOC/ADP Blank Panel is used to cover the DOC and ADP mounting holes. A special Registration Panel is installed on the FileNet Library configuration in place of the Bezel.

Figure 10. LD 8100 FileNet Library Front Panel

The figure on the right illustrates the rear panel of the LD 8100 FileNet Library configuration and identifies the location of the AC Power Switch, Receptacle, ground connector, SCSI-2 I/O Panel Assembly, DOC, ADP connector and the MCLI connector. A Fan Grill and filter element are installed over the fan vent to filter contaminants from cooling air entering through the rear panel.

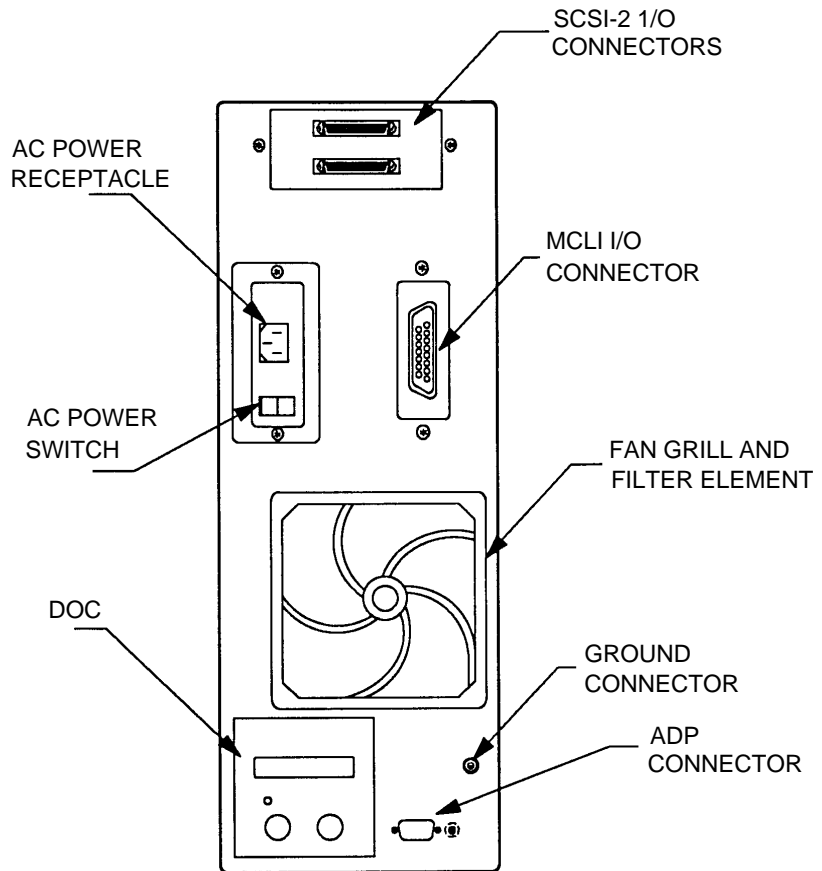
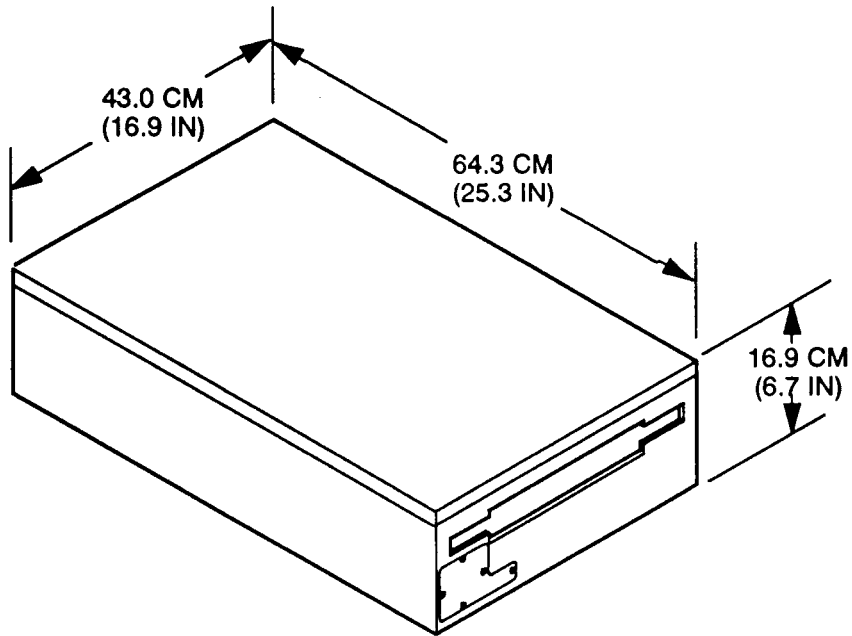


Figure 11. LD 8100 FileNet Library Rear Panel

PLASMON 1800 LIBRARY CONFIGURATION

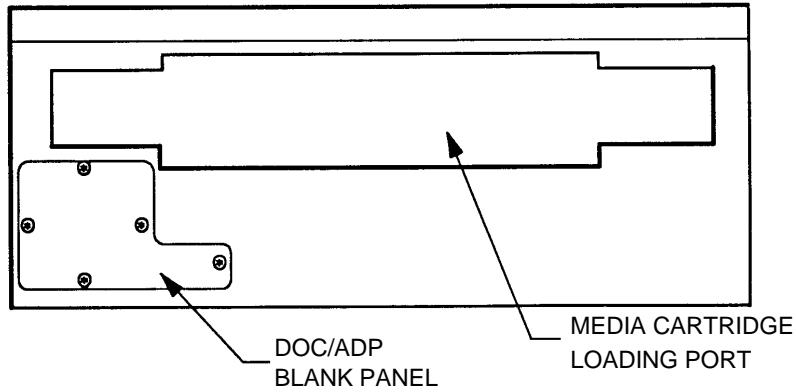
The Plasmon Library configuration (see figure below), which does not have a Bezel or Registration Panel, is designed for horizontal mounting and operation in a Plasmon 1800 Series Library. The Plasmon Library configuration has the same major assemblies as the other LD 8100 configurations but is adapted for use in a Plasmon 1800 Library by adding an MCLI connector.



EP004211

Figure 12. Plasmon 1800 Series Library Drive

The figure below illustrates the front panel of the Plasmon Library configuration and identifies the location of the DOC/ADP Blank Panel. The DOC and ADP connector are located on the rear panel. The DOC/ADP Blank Panel is used to cover the DOC and ADP mounting holes.



EP004286

Figure 13. LD 8100 Plasmon Library Front Panel

The figure below illustrates the rear panel of the LD 8100 Plasmon Library configuration and identifies the location of the AC Power Switch, AC Receptacle, ground connector, SCSI-2 I/O Panel Assembly, DOC, ADP connector and the MCLI connector. A Fan Grill and filter element are installed over the fan vent to filter contaminants from cooling air entering through the rear panel.

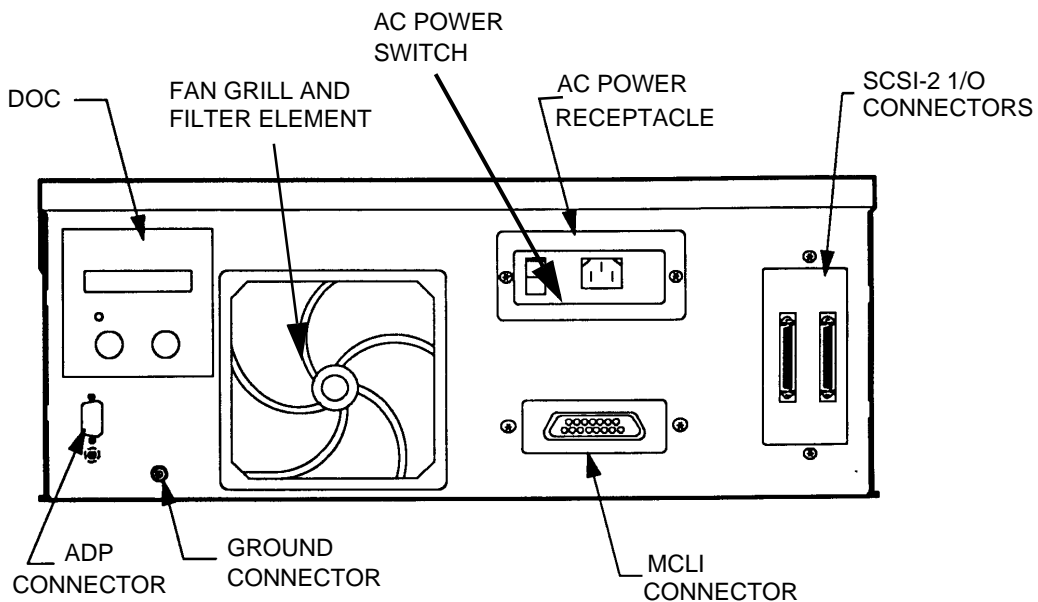


Figure 14. LD 8100 Plasmon Library Rear Panel

DIMENSIONS AND WEIGHTS

The following table lists the dimensions of the LD 8100 Rack Mount, Desktop and Tower, FileNet and Plasmon Library configurations. These dimensions do not include extending media cartridges or interface cabling. Refer to the *LX 8000 Series Product Specification* (P/N 97663035) for the dimensions of the FileNet and Plasmon Library configurations with a media cartridge and interface cabling.

Table 1. Dimensions of the LD 8100 Configurations

DIMENSION	RACKMOUNT	DESKTOP	TOWER	FILENET	PLASMON
Chassis Length:	60.9 cm (24.0 in)	64.3 cm (25.3 in)	64.3 cm (25.3 in)	64.3 cm (25.3 in)	64.3 cm (25.3 in)
With Mounting Kit:	65.3 cm (25.7 in) ¹	67.3 cm (26.5 in) ²	67.3 cm (26.5 in) ²	67.3 cm (26.5 in) ³	
			66.5 cm (26.2 in) ⁴		
Chassis Width:	43.0 cm (16.9 in)	43.0 cm (16.9 in)	16.9 cm (6.7 in)	16.9 cm (6.7 in)	43.0 cm (16.9 in)
With Mounting Kit:	47.5 cm (18.7 in) ¹	48.6 cm (19.1 in) ²	18.8 cm (7.4 in) ²		
			30.5 cm (12.0 in) ⁴		
Chassis Height:	16.9 cm (6.7 in)	16.9 cm (6.7 in)	48.6 cm (19.1 in)	43.0 cm (16.9 in)	16.9 cm (6.7 in)
With Mounting Kit:	17.8 cm (7.0 in) ¹	18.8 cm (7.4 in) ⁵	63.2 cm (24.8 in) ⁶	43.8 cm (17.2 in) ³	
Mounting Depth	60.9 cm (24.0 in) ⁷				

1 Includes the Bezel.

2 Includes the Bezel and chassis cover.

3 Includes the Registration Panel.

4 The pedestal and pedestal skin.

5 Includes the rubber feet.

6 Includes the chassis skin, pedestal and casters.

7 Depth to which the drive extends into the mounting rack.

The following weight specifications do not include interface cabling or optical media:

Rack Mount	30.5 kg	(67 lbs)	
Desktop	35.9 kg	(79 lbs)	Includes Enclosure
Tower	41.8 kg	(92 lbs)	Includes Enclosure and Pedestal
FileNet Library	31.4 kg	(69 lbs)	Includes Registration Panel
Plasmon Library	30.5 kg	(67 lbs)	

TEMPERATURE, HUMIDITY AND ALTITUDE

The following table lists the LD 8100 operating, nonoperating, storage and transit limits for temperature, humidity, and altitude.

Table 2. Temperature, Humidity and Altitude Limits

CONDITION	OPERATING	NONOPERATING	STORAGE/TRANSIT ¹
Temperature	10° to 42° C ² (50° to 108° F)	-40° to 66° C (-40° to 151° F)	-40° to 66° C (-40° to 151° F)
Maximum Rate of Change	11° C/hr (20° F/hr)	20° C/hr (36° F/hr)	20° C/hr (36° F/hr)
Humidity (Noncondensing)	10 to 99%	5 to 95%	5 to 95%
Maximum Rate of Change	10%/hr	10%/hr	10%/hr
Maximum Wet Bulb Temperature ³	28° C (82° F)	46° C (115° F)	46° C (115° F)
Minimum Dew Point	2° C (35.6° F)	2° C (35.6° F)	2° C (35.6° F)
Altitude	-300 to 3000 m (-984 to 9840 ft)	-300 to 3000 m (-984 to 9840 ft)	Storage: -300 to 3000 m (984 to 9840 ft) Transit: -300 to 12,000 m (-984 to 40,000 ft)

¹ Storage specifications are for 90 days maximum in Plasmon LMS packaging. No condensation is permitted. Transit specifications are based on a maximum 1-week period in a factory-sealed container.

² Maximum operating temperature is 42°C (107.6°F) for a free-standing drive at sea level unless otherwise stated. Maximum operating temperature is derated linearly above 300 m altitude to 38°C (100.4°F) at 2,000 m altitude.

³ See the LD 8100/LF 8600/LF 8602 Product Specification (P/N 97663035) for more information concerning the temperature and humidity operating range.

MEDIA ENVIRONMENTAL CHARACTERISTICS

The following table presents the LM 8000 Media environmental characteristics.

Table 3. Media Operation, Storage and Transportation Environments

SPECIFICATION	OPERATION AND SHORT TERM STORAGE (2 years maximum)	TRANSPORTATION (2 weeks maximum)	LONG TERM STORAGE
Temperature	10°C to 47°C 50°F to 116.6°F	-20°C to +55°C -4.0°F to 131.0°F	10°C to 30°C 50°F to 86.0°F
Relative Humidity (no condensation)	5% - 80%	5% - 90%	5% - 80%
Wet Bulb Temperature	26°C max. (78.8°F)	26°C max. (78.8°F)	26°C max. (78.8°F)
Temperature Gradient	10°C/hr max. (18.0°F/hr max.)	31°C/hr max. (55.8°F/hr max.)	5°C/hr max. (9.0°F/hr max.)
Air Pressure	N/A	N/A	N/A
Solar Radiation	N/A	Case to be kept closed	Not to be stored in direct sunlight

SHOCK AND VIBRATION

The following table lists the conditions and limits for shock and vibration.

Table 4. Shock and Vibration Criteria and Limits

CONDITION	OPERATING	NONOPERATING ¹	STORAGE/TRANSIT ²
Swept Vibration (bidirectional) 1 Octave/Min	5 to 250 Hz 0.1 g peak, 250 to 500 Hz 0.20 g peak	5 to 44 Hz, 0.03 in double amplitude, 44 to 500 Hz 3.0 g peak	5 to 44 Hz, 0.03 in double amplitude, 44 to 500 Hz 3.0 g peak
Shock ³ (host retries may be required and drive performance may degrade during test)	10 - msec half sine pulse of 5.0 g peak with pulses applied every 3 sec		
Unpacked (3 axis)		5 - msec half sine pulse of 20 g peak	
Packed on Pallet			46 - cm (18 - in) drop test flat

¹ With media removed

² In Plasmon LMS-approved packaging

³ Shock repetition rate should be limited to allow mechanical system transients to subside between pulses.

AC POWER REQUIREMENTS

The LD 8100 has an AC power switch with an integral grounded power connector and fuses located on the rear panel. Two spare fuses are included within the power connector. Refer to Replacing Fuses section for the fuse replacement procedure.

The required fuses are 5A slow blow, 5 x 20 mm, hot and neutral.

The power supply will operate with the line voltages listed in the following table. The power supply is auto ranging and does not require mechanical switching for input voltage or frequency selection.

Table 5. Typical RMS Line Current and Power Requirements

AC LINE VOLTAGE	READY	SURGE PEAK <1s (SPIN-UP)	READY + 1 SPIN-UP/DN CYCLE EVERY 10 s	MIN SERVICE RATING
95.0V TO 128V	1.3A / 101W	10A	2.0A / 160W (1)	15A
173.0 TO 269V	0.7 / 110W	5A	1.0A / 160W	15

¹ This current measurement determines the stated power and maximum heat dissipation of the Drive (546 BTU/hr) based on RMS current over the 10S cycle derated by the Power Factor. It also determines the 2.0 A UL plate rating.

AC GROUND

The LD 8100 AC power cord connects the LaserDrive to safety ground through the site AC power system. The site AC power system must tie this safety ground connection to earth ground. All site AC power connections must be maintained on the same safety ground. The line ground connector located on the rear panel can also be used to tie chassis ground to earth ground. This ground connector is a 6-mm (0.24-in) M4 stud with a nut and lock washer.

AC POWER CORD

The type of AC power cord that is supplied with the LD 8100 is based on the configuration ordered and the destination country.

POWER SUPPLY OUT-OF-RANGE PROTECTION FEATURES

The LD 8100 power supply provides over and under voltage protection, over current protection, and over temperature protection. Should an out-of-range condition be detected, the LD 8100 will shut down the DC outputs of the power supply. Once the situation has been corrected, power can be restored by turning the AC power switch to the off position and then to the on position again.

HEAT DISSIPATION

The drive will typically present a heat load of 95 calories/hr (376 BTU/hr) during a read/write operation. When media cartridges are inserted, loaded, spun up, spun down, unloaded and removed at the rate of one per 10 seconds, the drive will typically present a heat load of 137 calories/hr (546 BTU/hr).

TILT RANGE

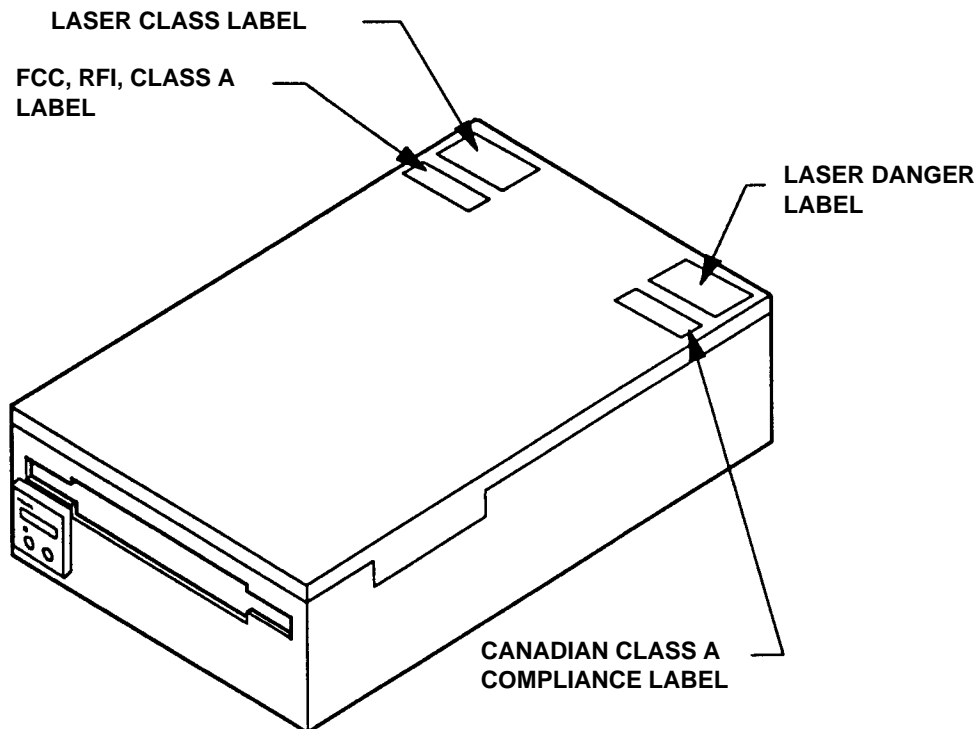
The LD 8100 Rack Mount, Desktop and Plasmon Library configurations will operate over a tilt range of 10° from the horizontal position. The Tower and FileNet Library configuration will operate over a tilt range of 10° from the vertical position. The LD 8100 is not designed for dynamic tilt environments.

PARTICULATE LIMITS

The LD 8100 is designed for use in an office or computer room. The environment must have a low dust level. The LD 8100 filters incoming air for cooling to reduce the quantity of particles entering the drive; however, the filter is not effective against small particles (including tobacco smoke) which will become deposited on optical components and media, causing degradation in drive performance. Refer to the Operator Maintenance section for media cleaning and air filter cleaning instructions.

WARNING LABELS

The LD 8100 is classified as a laser product. As such, it is subject to United States Federal requirements covering laser products. The warning labels shown in the figure below are necessary to ensure compliance with Federal regulations and must not be removed from the LD 8100.



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Figure 15. Locations of the LD 8100 Warning Labels

UNPACKING AND REPACKING INSTRUCTIONS

If the Laser Drive's shipping carton shows evidence of rough handling or damage, return the unit in its carton to your supplier and request a replacement.

UNPACKING THE LD 8100

Each LD 8100 is shipped on a pallet in a shipping carton with foam packing material which protects the unit from shock and vibration.

After you receive your LD 8100, inspect the shipping carton for damage before unpacking the unit to substantiate a claim with the carrier if the unit is damaged. Retain all original packing materials and receipts for possible reshipment.

WARNING



The LD 8100 must be unpacked, repacked and transported by two persons. Physical injury can result if one person attempts to transport or lift the LD 8100. A wheeled cart is recommended for transporting the LD 8100 within a building. Precautions should be taken to guard against sudden bumps and jarring.

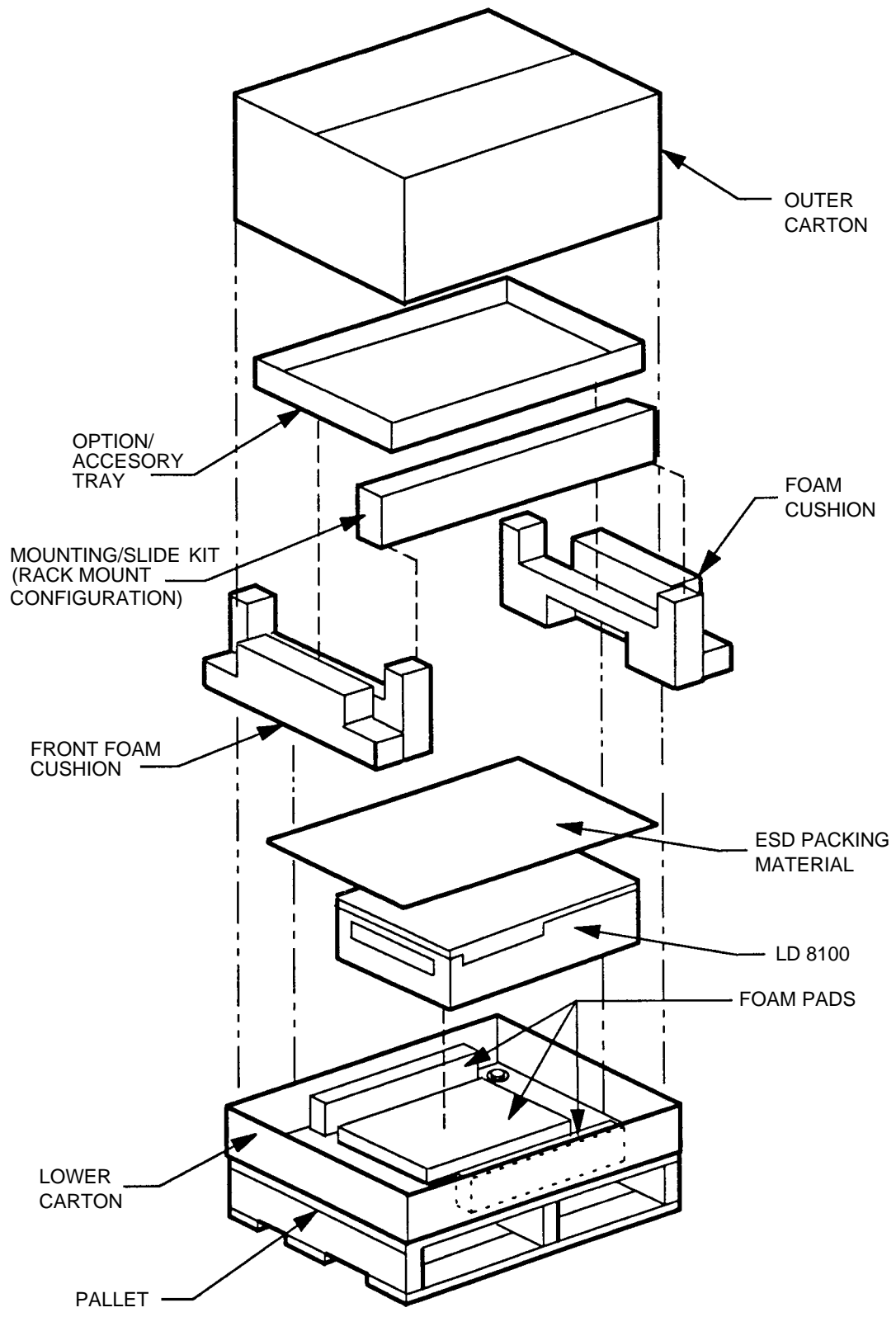
DESKTOP, RACK MOUNT AND LIBRARY CONFIGURATIONS

To unpack the LD 8100 Desktop, Rack Mount and Library configurations, refer to the next figure and perform the following procedure:

- 1) Cut the bands that secure the outer carton to the lower carton.
- 2) Lift the outer carton away from the lower carton and pallet.
- 3) Remove the small options and accessories tray.

The shipping carton will also contain a Quick Release Rack Mount Kit if it is ordered with the LD 8100 Rack Mount configuration. If you are unpacking an LD 8100 Rack Mount configuration, check for the Quick Release Rack Mount Kit carton and remove it at this time.

- 4) Lift both foam cushions away from the LD 8100.
- 5) Remove the ESD packing material.
- 6) Carefully lift and remove the LD 8100 from the shipping carton and place it on a flat surface.



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Figure 16. Unpacking the LD 8100 Desktop, Rack Mount and Library Configurations

TOWER CONFIGURATION

To unpack the LD 8100 Tower configuration, refer to the next figure and perform the following procedure:

- 1) Cut the bands that secure the carton to the lower portion pallet.
- 2) Carefully lift the carton up and away from the pallet while supporting the wooden hinged ramp.
- 3) Lower the ramp to the floor.
- 4) Remove the options and accessories tray.
- 5) Lift both foam cushions away from the LD 8100.
- 6) Remove the ESD packing material.

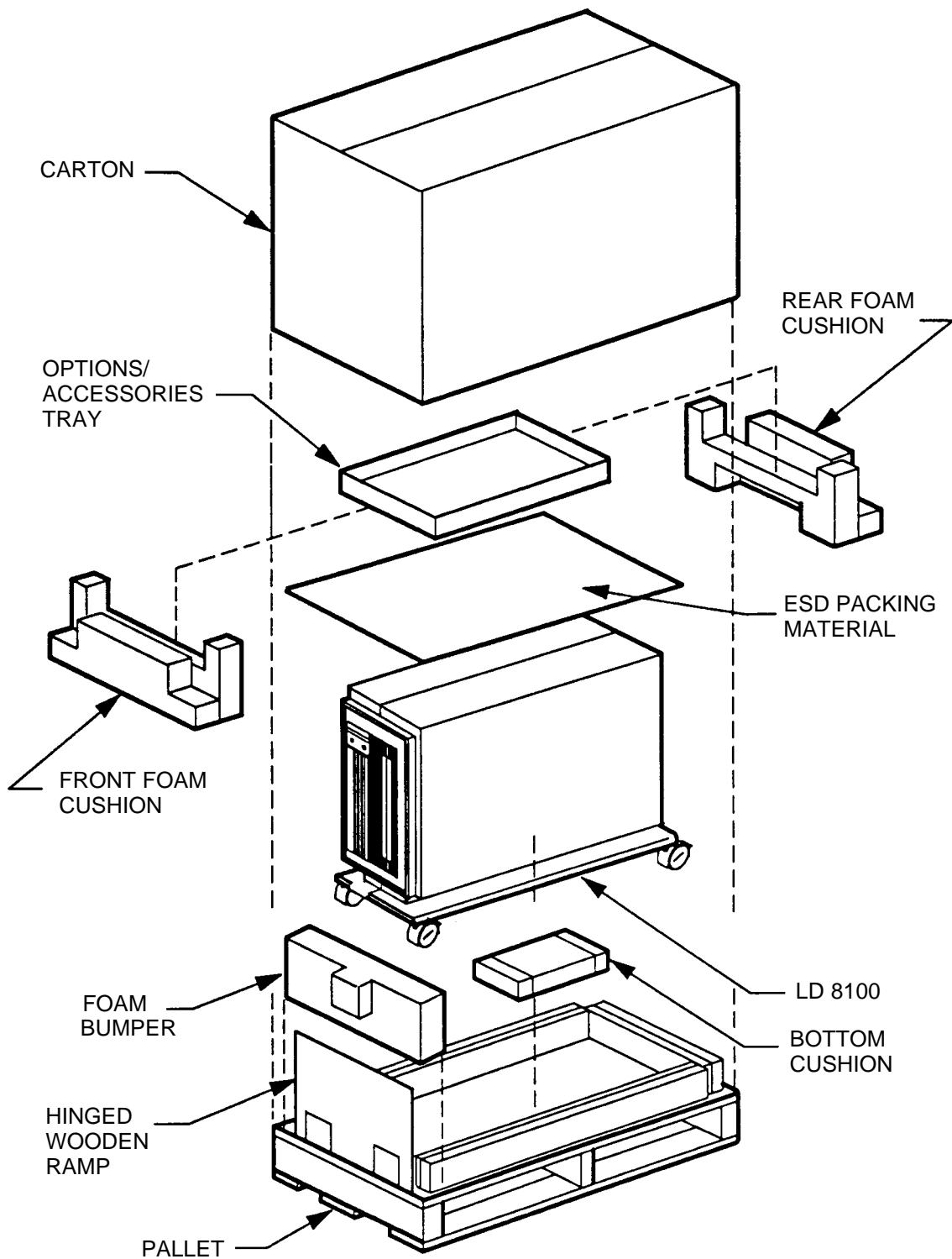
WARNING



The LD 8100 must be unpacked, repacked and transported by two persons. Physical injury can result if one person attempts to transport or lift the LD 8100. A wheeled cart is recommended for transporting the LD 8100 within a building. Precautions should be taken to guard against sudden bumps and jarring.

Ensure that all four casters are locked. Lift the front end of the LD 8100 high enough to remove the bottom cushion.

- 7) Remove the foam bumper.
- 8) Remove the bottom cushion.
- 9) Lower the LD 8100 onto the pallet.
- 10) Unlock the casters and roll the LD 8100 down the ramp to its installation location.
- 11) Lock the casters once you have the LD 8100 situated at its installation location.



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Figure 17. Unpacking and Repacking the LD 8100 Tower Configuration

INSPECTING THE LD 8100

The following items should be included with each LD 8100:

- one LD 8100 drive
- one AC power cord
- one User Manual

These items are available as options:

- LM 8000 media cartridges
- I/O cables
- terminators

After unpacking the LD 8100, check for:

- damage to the chassis cover, chassis and bezel
- damage to connectors
- dislocated or broken controls and indicators

Report all discrepancies, missing items and damaged equipment to your supplier.

If condensation exists on the drive, allow the moisture to evaporate by exposing the LD 8100 to the operating environment for at least 6 hrs before powering on the unit.

REPACKING THE LD 8100

The LD 8100 should be repacked using the original packing material. Perform the following procedures to repack the LD 8100 for shipment.

CAUTION



To prevent lifter mechanism damage, the **BASEPLATES** must be in the parked position before preparing the unit for shipment.

The baseplates must be in the parked position before the drive can be reshipped to prevent lifter mechanism damage. To park the baseplates, select the "Park Drive" option in the Diagnostic menu or perform the manual procedure.

Shipping the LD 8100 without parking the baseplates may result in damage to the drive, which is not covered under warranty.

DESKTOP, RACK MOUNT AND LIBRARY CONFIGURATIONS

- 1) Remove any media cartridge from the drive. (To remove a cartridge from a drive that is not operational, refer to the Manual Release Mechanism section).
- 2) Select the "Park Drive" option, as explained in the Performing Diagnostic Operation section of this manual, to prepare the LD 8100 for shipment. If the drive is not functional, follow these steps:
 - a.) Ensure that the AC power switch is set to the OFF (O) position.
 - b.) Remove the Bezel Assembly by grasping both sides of the Bezel Assembly and pulling it up, away from the chassis.
 - c.) Turn the Manual Release Knobs located at the front of the drive in a counterclockwise direction until free rotation is restricted.

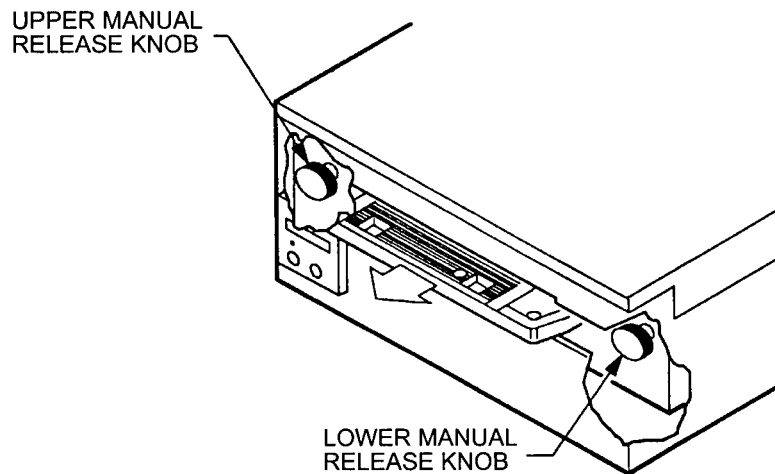
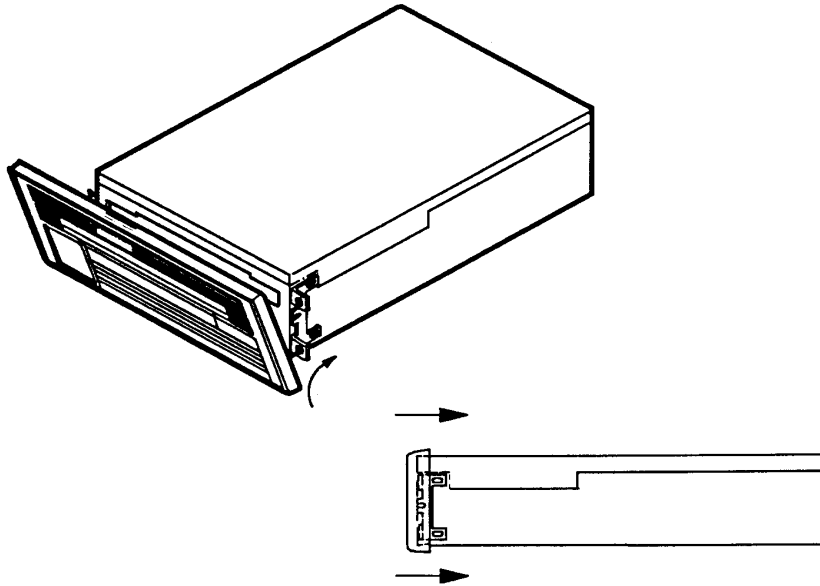


Figure 18. Closing the Upper and Lower Baseplates Before Shipment

- d.) Reinstall the Bezel Assembly onto the front panel by positioning the Bezel Assembly near the front of the drive with the bottom of the Bezel angled in closer to the drive. This ensures that the bottom Velcro fasteners of the Bezel Assembly are aligned with the bottom Velcro fasteners of the drive. Begin sliding the Bezel Assembly onto the drive, lifting the Bezel Assembly so that the bottom flange of the Assembly contacts the bottom surface of the drive. Press the Bezel Assembly firmly onto the front of the unit. This action will center the Velcro fasteners for greater adhesion.



EP004497

Figure 19. Re-installing Bezel Assembly

- 3) Remove all the packing material from the carton except the packing material in the bottom of the carton.

WARNING



The LD 8100 must be repacked and transported by two persons. Physical injury can result if one person attempts to transport or lift the LD 8100. A wheeled cart is recommended for transporting the LD 8100 within a building. Precautions should be taken to guard against sudden bumps and jarring.

- 4) Place the LD 8100 into the lower carton.
- 5) Place the ESD packing material on top of the drive.
- 6) Position the foam cushions around the drive.
- 7) Place the power and interface cables, User Manual and other accessories into the options and accessories tray and place this tray on the foam cushions.
- 8) If packing an LD 8100 Rack Mount configuration, place the Slide Mounting Kit onto the foam cushions at this time.
- 9) Place the outer carton over the tray and drive.
- 10) Strap the carton to the pallet at each end.

TOWER CONFIGURATION

- 1) Remove any media cartridge from the drive.

CAUTION



To prevent lifter mechanism damage, the **BASEPLATES** must be in the parked position before the drive can be shipped. To park the baseplates, select the "Park Drive" option in the Diagnostic menu or perform the manual procedure.

- 2) Select the "Park Drive" option, as explained in the Performing Diagnostic operation section of this manual, to prepare the LD 8100 for shipment. If the drive is not functional, follow these steps:
 - a.) Ensure that the AC power switch is set to the OFF (O) position.
 - b.) Remove the Bezel Assembly.
 - c.) Turn the Manual Release Knobs located at the front of the drive in a counterclockwise direction until free rotation is restricted.
 - d.) Re-install the Bezel Assembly onto the front panel.

WARNING



The LD 8100 must be repacked and transported by two persons. Physical injury can result if one person attempts to transport or lift the LD 8100. A wheeled cart is recommended for transporting the LD 8100 within a building. Precautions should be taken to guard against sudden bumps and jarring.

- 3) Unlock the casters and carefully roll the drive to its packing site.
- 4) Remove all packing material from the carton except the bottom cushion
- 5) Lower the carton's ramp to the floor.
- 6) Carefully roll the Tower up the ramp and onto the bottom cushion and lock the casters.
- 7) Move the ramp into its vertical position in the pallet.
- 8) Place the ESD packing material on top of the drive and position the foam bumper, front foam cushion and rear foam cushion.
- 9) Place the power and interface cables, User Manual and other accessories into the options and accessories tray and place this tray on the foam cushions.
- 10) Place the carton over the drive.
- 11) Strap the carton to the pallet at each end.

INSTALLATION AND DE-INSTALLATION

INSTALLATION REQUIREMENTS

Adequate clearances must be provided around the LD 8100 during installation to prevent crimping and bending of cables and to ensure that future servicing can be performed safely. These clearances are also required to properly ventilate the LD 8100 and to provide operator access to the Drive Operator Console (DOC) and to the front bezel for inserting and removing cartridges.

CAUTION



When the LD 8100 is mounted in an equipment rack or cabinet, ensure that the internal temperature within the rack or cabinet does not exceed the operating limits defined in the Product Specification and this document. Vertically stacked units require special attention at the top area where higher temperatures exist.

The LD 8100 must be connected to a power distribution system that has a direct connection to earth ground (Terminated Terra [TT] network/ground connected). This unit is not suitable for use on a floating ground (Interrupted Terra [IT] network).

Ensure the drive is connected to a power distribution system with an adequate current-handling capacity.

The following table lists the clearances required for air circulation, cartridge insertion/removal, maintenance and cable routing.

Table 6. LD 8100 Installation Clearances

LD 8100 CONFIGURATION	FRONT	REAR ¹	SIDES ²	TOP ³	BOTTOM
Desktop	51 cm (20 in.) ⁴	12.7 cm (5 in.)	12.7 cm (5 in.)	90 cm (36 in.)	
Rack Mount	116 cm (46 in.) ⁵	12.7 cm (5 in.)	12.7 cm (5 in.)	90 cm (36 in.)	12.7 cm (5 in.) ²
Tower	51 cm (20 in.) ⁴	12.7 cm (5 in.)	12.7 cm (5 in.)	12.7 cm (5 in.)	
Library	116 cm (46 in.)	12.7 cm (5 in.)	12.7 cm (5 in.)	90 cm (36 in.)	12.7 cm (5 in.)

¹ Required to avoid bending or crimping cables. ² Required for proper ventilation. ³ Required to remove covers for servicing. ⁴ Required to access DOC and for media loading and unloading. ⁵ Required to fully extend the LD 8100 Rack Mount on its slides.

Ensure the installation site is able to support a volumetric air flow of 3.2 m³/min (112 cfm). Also ensure that the operating environment is free from dust and particulates, such as tobacco smoke.

WARNING



To prevent fire or shock hazard, do not expose the LD 8100 to rain or moisture. Refer servicing to qualified technicians. In case of fire or other emergency, isolate the units from the main power by disconnecting the power plugs from their site power receptacles. In situations where disconnecting the plugs is not possible or practical, use the system main power disconnect to isolate the unit from the main power. Use of controls or adjustments, or performance of procedures other than those specified herein may result in exposure to hazardous laser radiation. Do not stare directly into the laser beam or its reflection on any reflecting mirror-like surface. Visible laser radiation can be emitted if the unit is opened.

QUICK RELEASE RACK MOUNT KIT INSTALLATION

This procedure provides the instructions for installing an LD 8100 into a standard EIA 19-in. rack. Before the LD 8100 is installed, ensure that the site installation requirements are met (refer to the Installation Requirements section in this manual). The Desktop, Tower, FileNet Library and Plasmon Library configurations are shipped with the appropriate enclosure and hardware installed; the Mounting Kit for the Rack Mount configuration must be installed in the field. A minimum of 116 cm (46 in.) is required at the front of the rack during installation and to fully extend the LD 8100 on the slides.

WARNING



Installing the LD 8100 into a rack requires two people to lift the drive into mounting position. After the LD 8100 is installed in the rack, the drive must be properly grounded to avoid exposing personnel to electric shock during operation.

The Quick Release Rack Mount Kit consists of the following:

- one left Slide Assembly
- one right Slide Assembly
- four Mounting Brackets
- six M4 x 6 screws
- eight M4 X 8 screws
- eight M4 nuts

- eight M4 spring lock washers
- eight M4 flat washers
- eight 10-32 x 5/16 in. screws
- eight M5 X 8 screw/washer assemblies
- four 10-32 nut plates
- eight No. 10 flat washers

Refer to the next figure for an illustration of the Quick Release Kit's major parts.

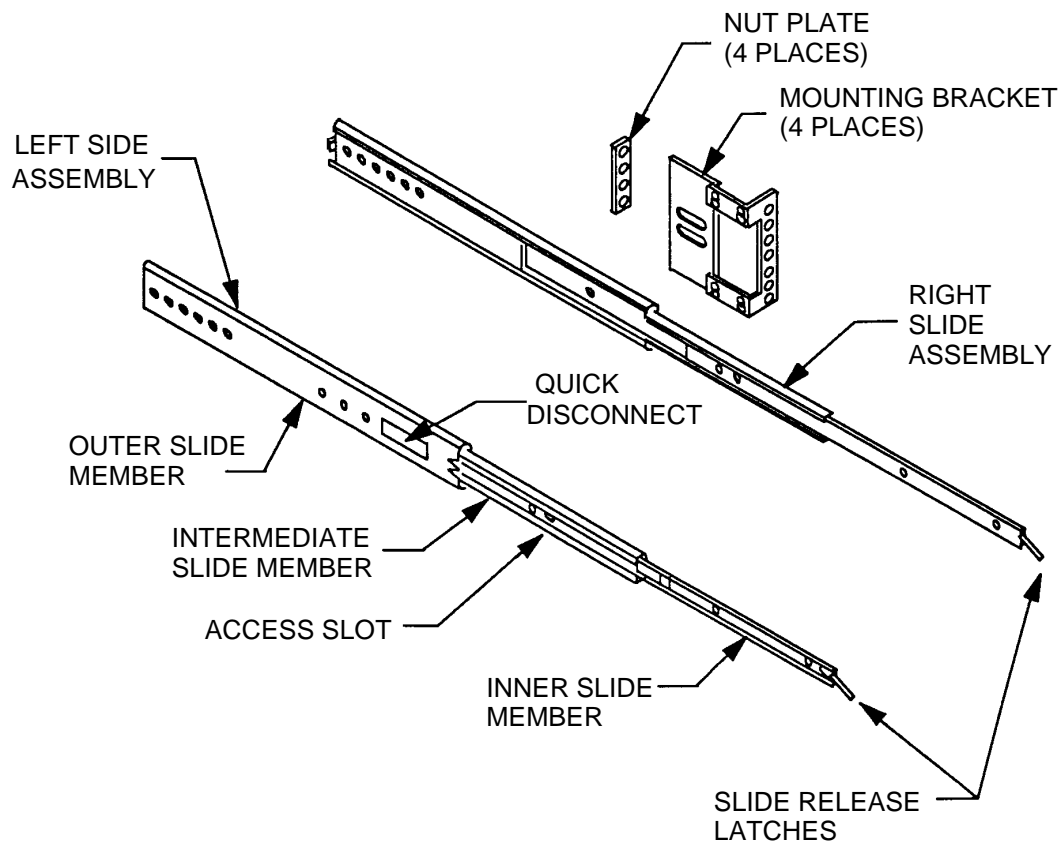
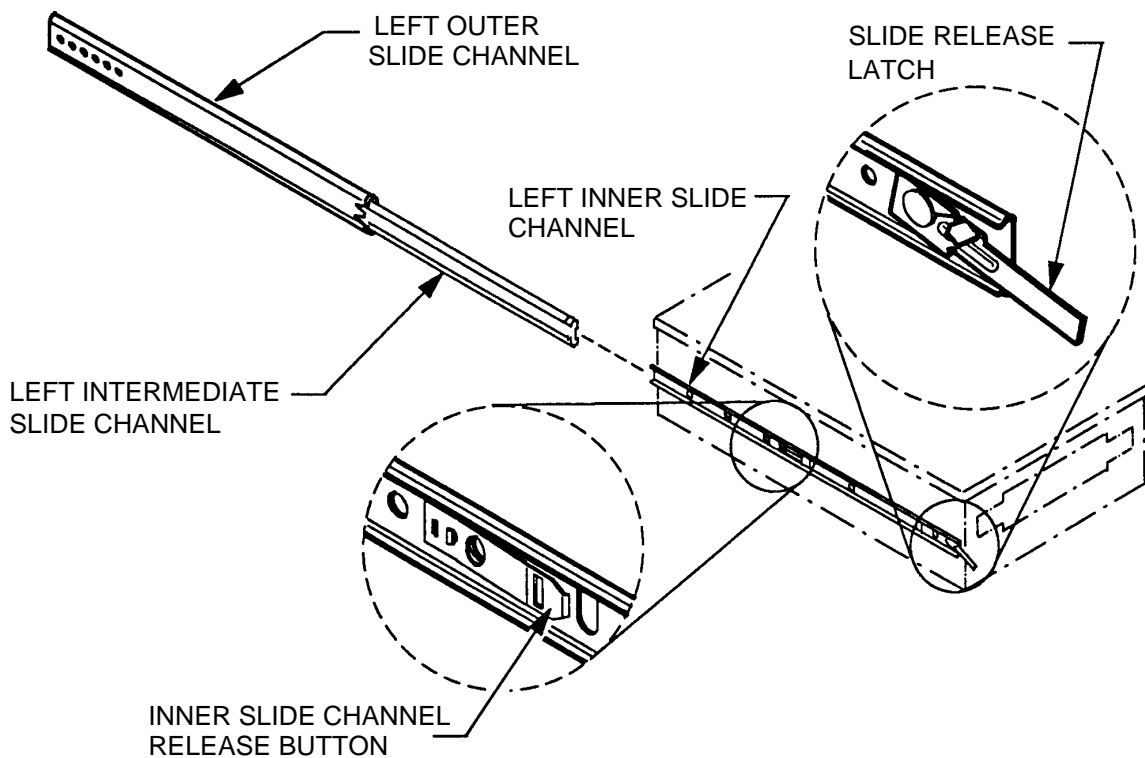


Figure 20. Contents of Rack Mount Quick Release Kit

Each Slide Assembly is composed of an Inner Slide Channel, Intermediate Slide Channel and an Outer Slide Channel. The left and right slide assemblies are mirror images of each other, but care must be exercised to ensure that both slide assemblies are properly oriented when installed into a rack.

The first step in the installation involves separating the left and right Inner Slide Channels from their respective slide assemblies. The Inner Slide Channels are locked to the Intermediate Slide Channels by the Slide Release Latch and the Inner Slide Release Button. The Slide Release Latch is located at the front of the Inner Slide Channel and the Inner Slide Button is located on the inside of the Inner Slide Channel.



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Figure 21. Separating the Inner Slide Channel from the Intermediate Slide Channel

- 1) Lift up the Slide Release Latch at the front of the Inner Slide Channels and pull the Inner Slide Channels out until they stop.
- 2) Depress the Inner Slide Channel Release Buttons and then pull the Inner Slide Channels out of the Intermediate Slide Channels.

The left and right Inner Slide Channels must be mounted to the chassis of the LD 8100 Rack Mount configuration before it can be installed into the rack. When mounting the Inner Slide Channels to the LD 8100 chassis, be sure to mount them on the correct sides. When the Inner Slide Channels are correctly mounted, the release latches will be pointing down at the front of the drive as shown in the figure below.

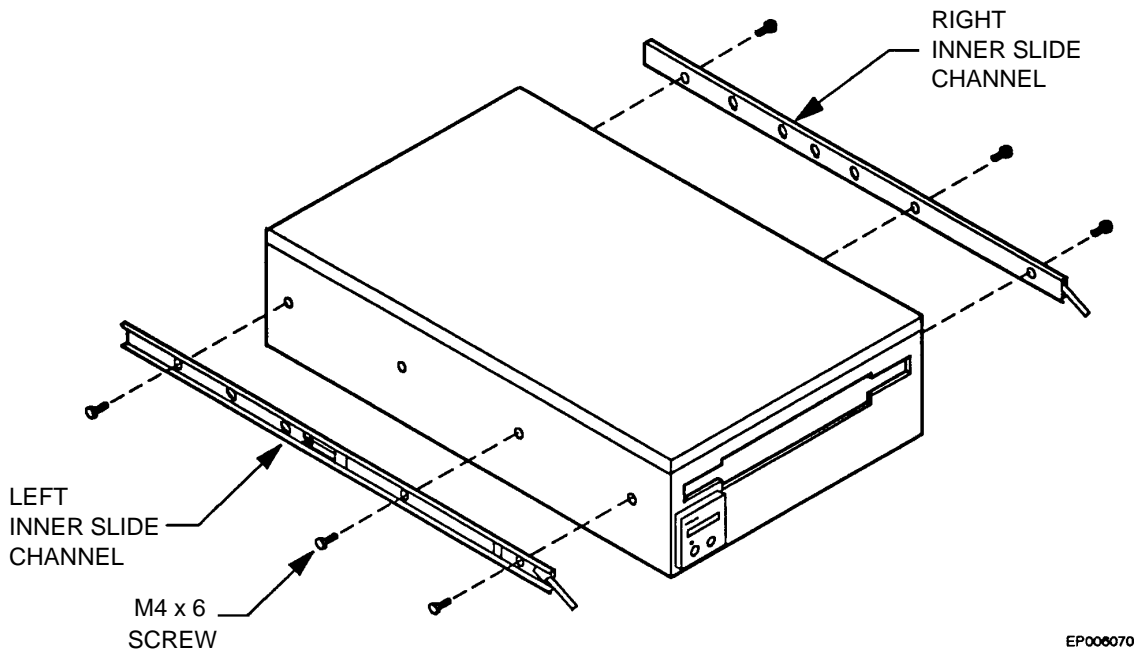


Figure 22. Mounting the Inner Slide Channels to the Chassis

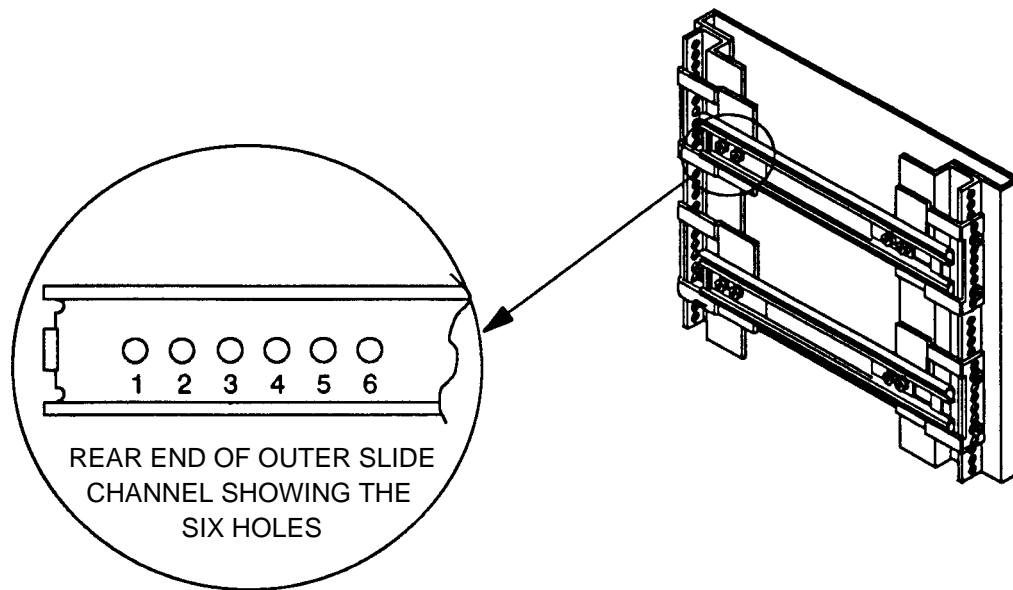
- 3) Secure the Inner Slide Channels to the Chassis with three M4 X 6 screws in each as shown in the above figure.

The Front and Rear Mounting Brackets are identical and differ only in orientation during installation. The most critical part of the assembly process involves selecting the appropriate mounting holes when mating the Rear Mounting Brackets to the left and right Outer Slide Channels and ensuring that the Front Mounting Brackets are properly positioned before the mounting screws are tightened.

After they are properly positioned, the Front Mounting Brackets have to be securely fastened to the Outer Slide Channel to prevent them from moving. The same is **not** true for the Rear Mounting Brackets; their mounting hardware must be loosely installed so that the position of the Rear Mounting Brackets can be adjusted when the slide kit is installed into a rack.

There are six mounting holes on the rear end of each Outer Slide Channel that are used to attach the Rear Mounting Brackets. Different pairs of holes can be selected when attaching the Rear Bracket to accommodate different depth cabinets. The next figure shows the approximate adjustment range of each pair of holes. The range indicated represents the distance between the mounting surfaces of the front and back cabinet rails.

- 4) Locate the appropriate pair of mounting holes at the rear of the left Outer Slide Channel, as determined from your cabinet. Slide assembly installed into Rack.



HOLES USED	APPROXIMATE ADJUSTMENT RANGE
1 - 2	76 - 81 cm (30 - 32 in.)
2 - 3	74 - 79 cm (29 - 31 in.)
3 - 4	71 - 76 cm (28 - 30 in.)
4 - 5	69 - 74 cm (27 - 29 in.)
5 - 6	66 - 71 cm (26 - 28 in.)

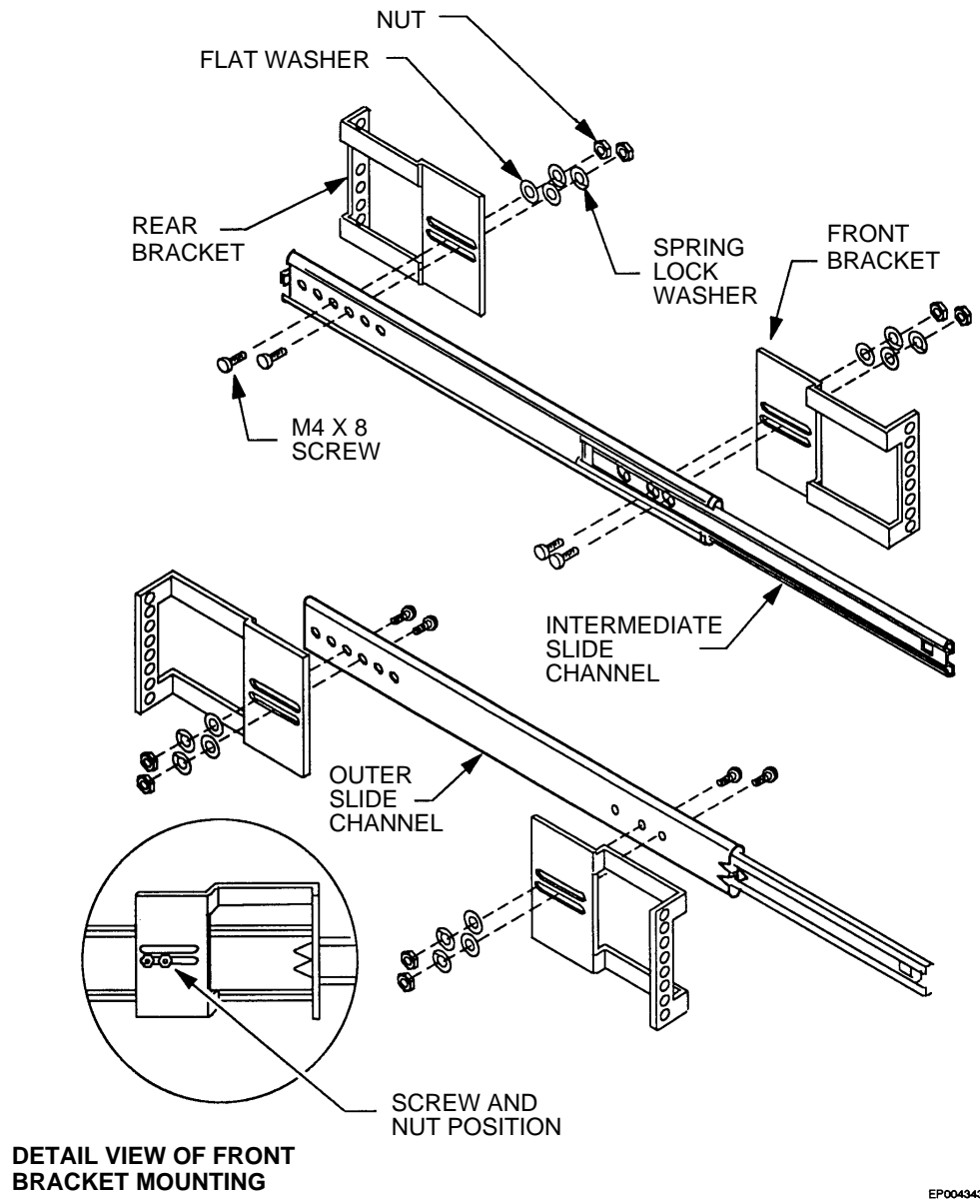
Figure 23. Adjustment Guide for Outer Slide Channel

- Loosely install the mounting brackets on the Outer Slide Channels with two sets of mounting hardware. Be sure to use the lower slots in the brackets.

Before the Front Mounting Brackets can be installed, it will be necessary to align the access slots on the inside of the Intermediate Slide Channel with the mounting holes on the forward end of the Outer Slide Channel. The mounting holes and access slots can be aligned by pulling the Intermediate Slide Channel in or out of the Outer Slide Channel until the access slots and mounting holes line up.

After this alignment is made, the mounting screws can be inserted through the Intermediate Slide Channel access slots, through the Outer Slide Channel mounting holes and into the Front Mounting Brackets.

- 6) Align the Intermediate Slide Channel access slots with Outer Slide Channels using two sets of mounting hardware and loosely fasten the mounting brackets to the forward end of the Outer Slide Channels using two sets of mounting hardware. Be sure to use the lower slots in the brackets. The position of the Front Mounting Brackets must be adjusted before tightening the mounting screws. This adjustment involves moving the front mounting bracket toward the front of the Outer Slide Channel until it stops. The detail view of the front mounting bracket (see next figure) depicts a front mounting bracket that has been properly installed.
- 7) Move the front mounting brackets toward the front of the Outer Slide Channels until they stop and the mounting screws are at the rear end of the mounting slots. Tighten securely.



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Figure 24. Assembling the Quick Release Kit

The mounting hardware consists of eight 10-32 x 5/16 in. screws, eight M5 x 8 screw/washer assemblies and four nut plates.

NOTE

The 10-32 and M5 screws are used with racks that have the corresponding threaded mounting holes in the rails. If the cabinet rails have clearance holes, the 10-32 screws are used with the nut plates.

The next figure illustrates how this portion of the kit is installed into a rack.

- 8) Select the appropriate mounting hardware to install the left and right slide assemblies.

Both the left and right slide assemblies must be installed at the same height on the rack rails. Failure to install the left and right slide assemblies at the same height will create a misalignment between the left and right slide assemblies and prevent the LD 8100 Rack Mount chassis from being installed into the rack.

- 9) Select an appropriate mounting height for the left and right slide assemblies.
- 10) Tighten the rear brackets to the slide assembly just enough for the bracket to hold its position yet still permitting sliding adjustment.
- 11) Hold the slide assembly in position on the cabinet rails with the front bracket held firmly against its rail. Slide the rear bracket until it also is flush with the rear rail. Remove the slide assembly and securely tighten the rear bracket in that position.
- 12) Replace the slide assemblies in their cabinet positions and secure with the preselected hardware. Each bracket should receive two screws. The lower of the two screws should be placed in the bottom bracket hole if possible for maximum stability.

The left and right Intermediate Slide Channels should have already been extended and locked when the left and right Inner Slide Channels were removed earlier in the procedure; however, it is advisable to ensure that they are both fully extended from the rack and locked in place before attempting to install the LD 8100 chassis with the attached left and right Inner Slide Channels.

WARNING



Due to the weight of the LD 8100, rack stability must be considered during and after installation. The rack may become unstable and fall over when the LD 8100 is fully extended on the slides. Exercise caution when installing the LD 8100 or extending it from the rack. Also, if rack support legs are available, they must be pulled out before the installation is attempted.

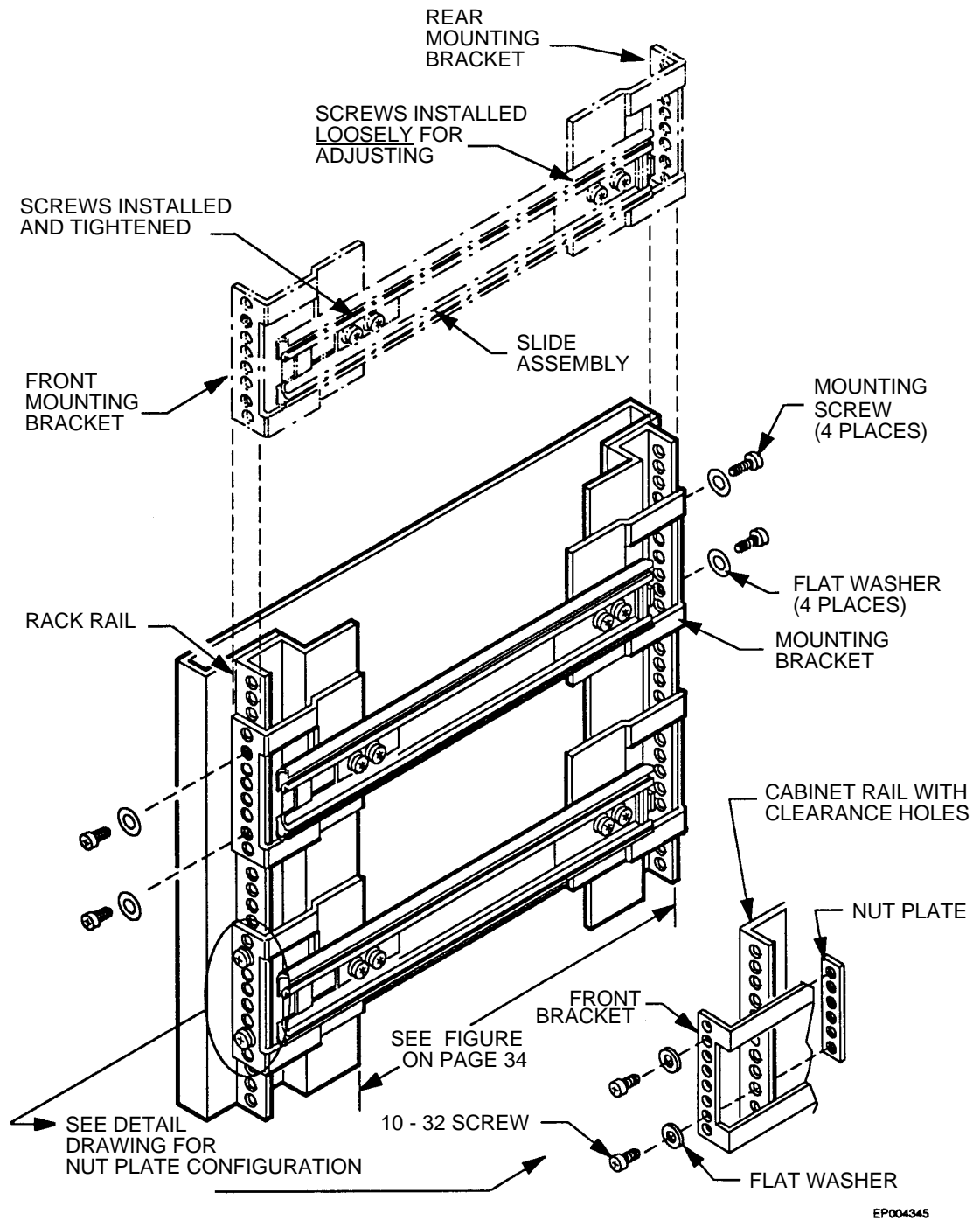


Figure 25. Installing the Slide Assembly into the Rack

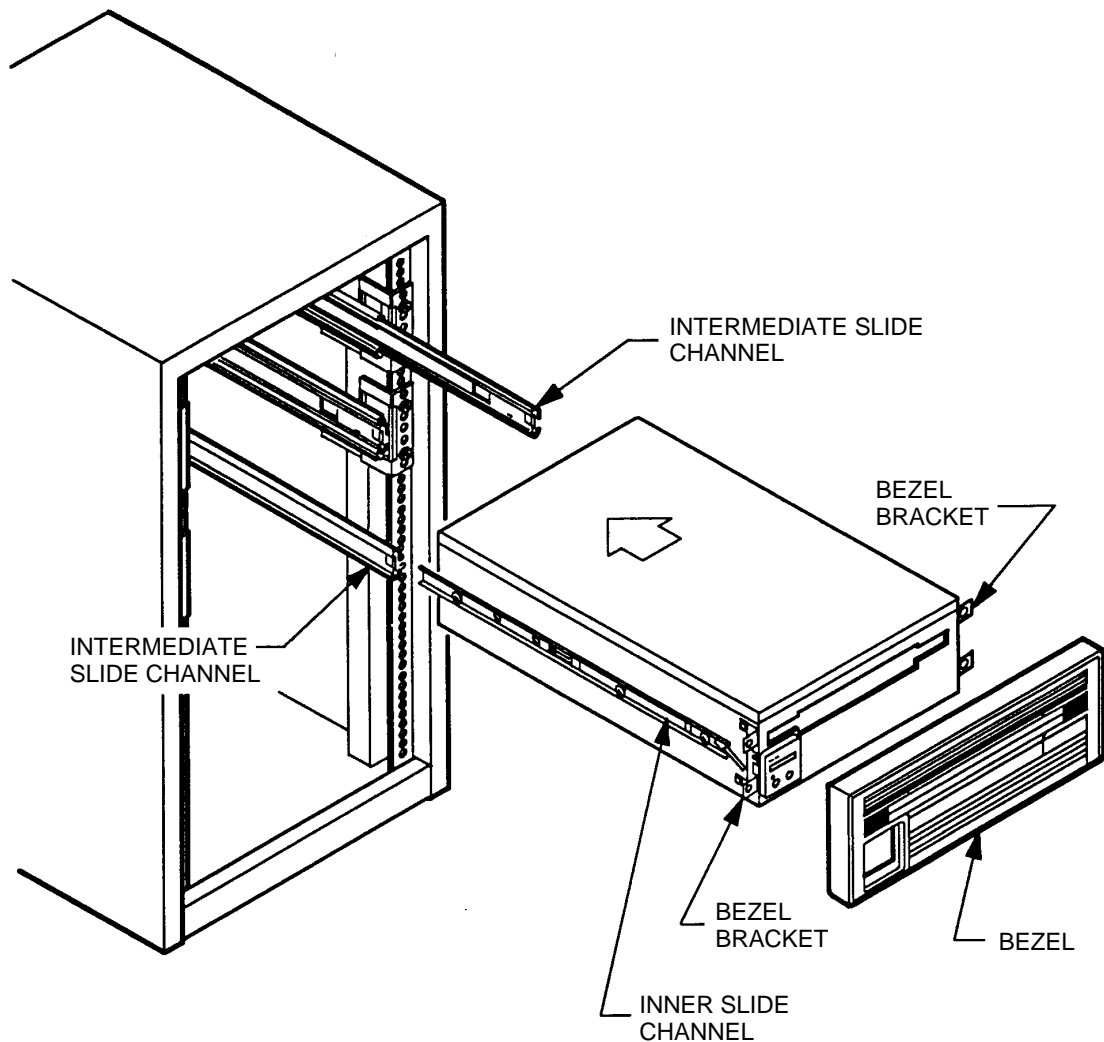


Figure 26. Installing the LD 8100 into the Rack

- 13) Verify that the rack is stable and ready to support the weight of the LD 8100.

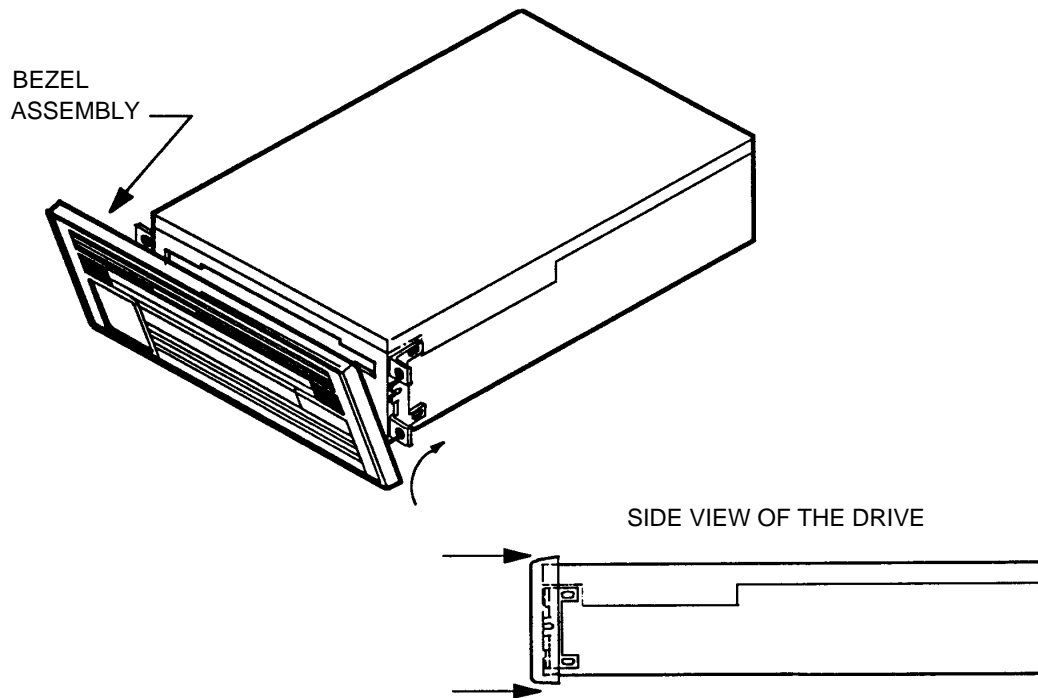
WARNING



Two people are required to lift the LD 8100. Any attempt to lift the LD 8100 without assistance may result in personal injury.

- 14) Carefully lift the LD 8100 and mate the left and right Inner Slide Channels with the left and right Intermediate Slide Channels.
- 15) Push the LD 8100 chassis and Inner Slide Channels toward the rack until a slide stop is encountered.

- 16) After the slide stop is encountered, simultaneously depress the Inner Slide Channel Release Button on the inside of the left and right Inner Slide Channels to fully seat the LD 8100 chassis into the rack.
- 17) Push the LD 8100 chassis towards the rack until the Slide Release Latches at the front of the left and right Inner Slide Channels lock.
- 18) To re-install the Bezel Assembly on the drive, position the Bezel Assembly near the front of the drive with the bottom of the bezel angled in closer to the drive. This ensures that the bottom Velcro fasteners of the Bezel Assembly are aligned with the bottom Velcro fasteners of the drive.



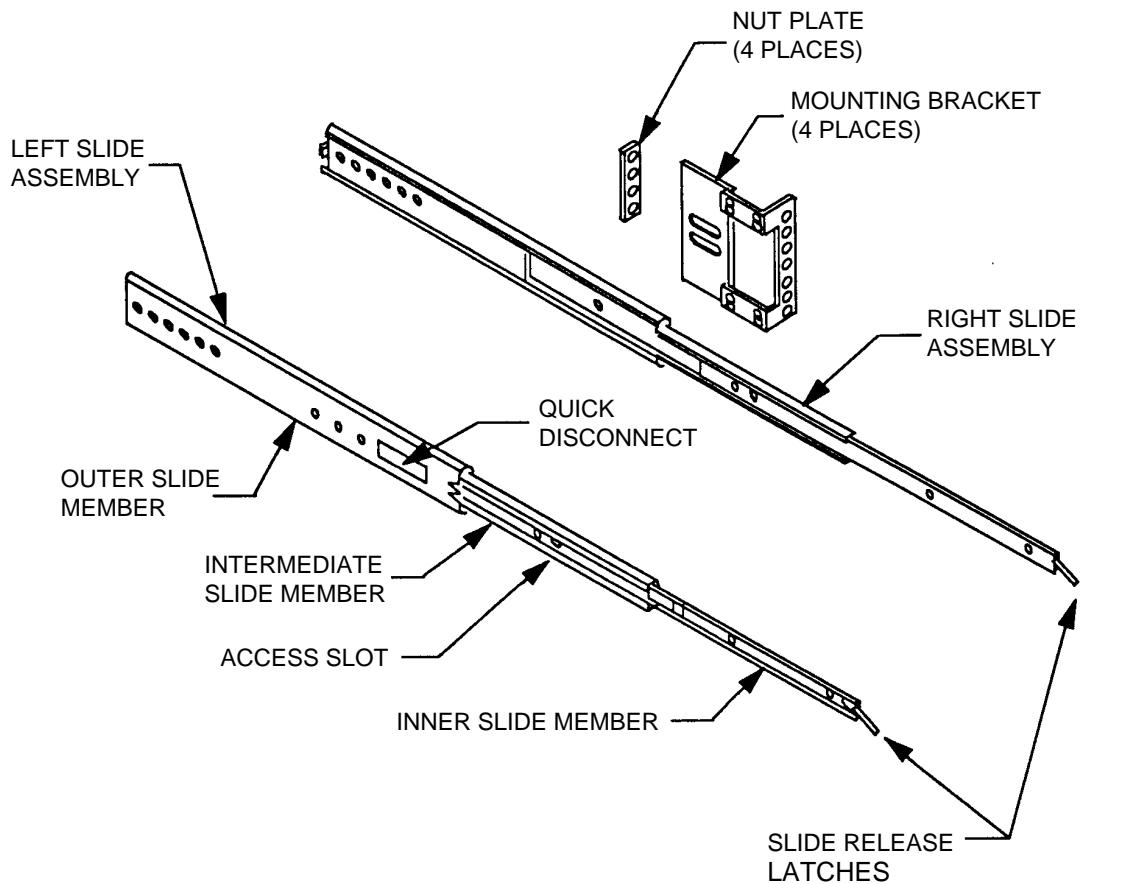
EP004497

Figure 27. Re-installing Bezel Assembly (Rack Mount Installation)

- 19) Begin sliding the Bezel Assembly onto the drive, lifting the Bezel Assembly so that the bottom flange of the Bezel Assembly contacts the bottom surface of the drive (see above figure).

20) Press the Bezel Assembly firmly onto the front of the unit. This action will center the Velcro fasteners for greater adhesion.

The Rack Mount Kit installation is complete and the unit is ready for cable installation. Refer to the SCSI Bus Considerations and Connecting Power and SCSI Cables sections for cabling instructions.



EP004391

Figure 28. Contents of Rack Mount Quick Disconnect Kit

QUICK RELEASE RACK MOUNT DE-INSTALLATION

To de-install the LD 8100 Rack Mount configuration:

- 1) Remove the Bezel Assembly by grasping both sides of the Bezel Assembly and pulling it up, away from the chassis.

WARNING



Two people are required to remove the LD 8100 from the rack. Any attempt to lift the LD 8100 without assistance can result in personal injury.

- 2) Lift both Slide Release Latches up and then pull the drive away from the rack to the fully extended position.
- 3) Verify that the rack is stable.
- 4) Press and hold both Inner Slide Channel Release Buttons while pulling the drive out of the Intermediate Slide Channels. One person can press the Inner Slide Channel Release Buttons and the second person can slide the drive from the Intermediate Slide Channels on to a supporting work surface.

Remove the Inner Slide Channels from the LD 8100's chassis by unfastening the six M4 X 6 screws.

SCSI BUS CONSIDERATIONS

The length of the SCSI interface cables used to interconnect the LD 8100 with other SCSI devices is dictated by the type of SCSI controller installed in each LD 8100. A maximum of 15 LD 8100's can be connected to a host in a daisy chain configuration.

When the single-ended interface controller is used on all SCSI devices, the total length of the SCSI interface cable cannot exceed 3 m (9.8 ft). (Plasmon LMS does not recommend single-ended fast synchronous.) When a differential interface controller is used on all SCSI devices, the total SCSI interface cable length cannot exceed 25 m (82 ft).

NOTE

The internal SCSI cable length for each LD 8100 is approximately 45.7 cm (18.0 in.). This distance must be considered as part of the total SCSI cable length.

No stub connections are permitted.

The SCSI interface cabling used to interconnect an LD 8100 to a host can be daisy chained between SCSI devices as illustrated below. One interface cable is required between each pair of SCSI devices.

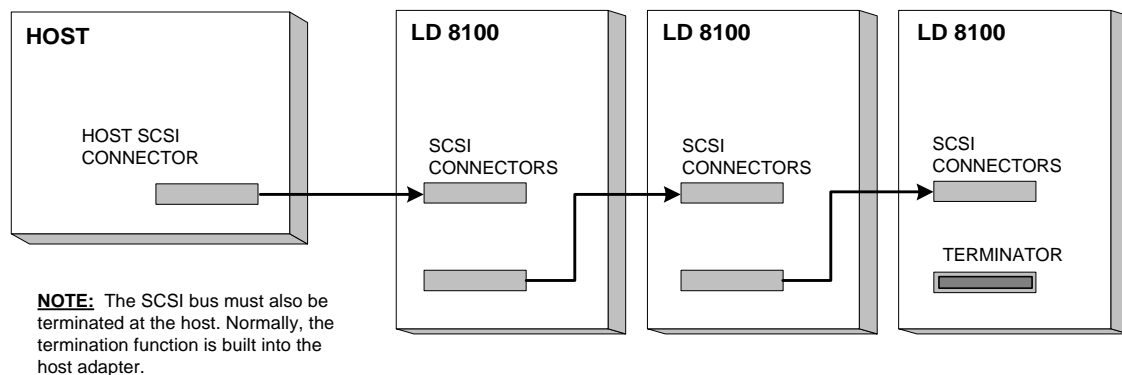


Figure 29. Host-to-LD 8100 Daisy Chain Cable Connections

A terminator must be installed on the vacant connector of the last SCSI device in SCSI bus chain.

NOTE

You must first determine the type of termination your host system requires.

In a daisy chain configuration, a terminator must be used on both the first and last devices on the bus. One of these devices may be the host adapter.

All other LD 8100's between the first and last device in the daisy chain should not be terminated.

NOTE

Installation of both an active single-ended terminator and a passive single-ended terminator on the same bus is not recommended.

With one LD 8100 connected to a host, the SCSI bus must be terminated at the host adapter and the LD 8100 as illustrated in the figure below.

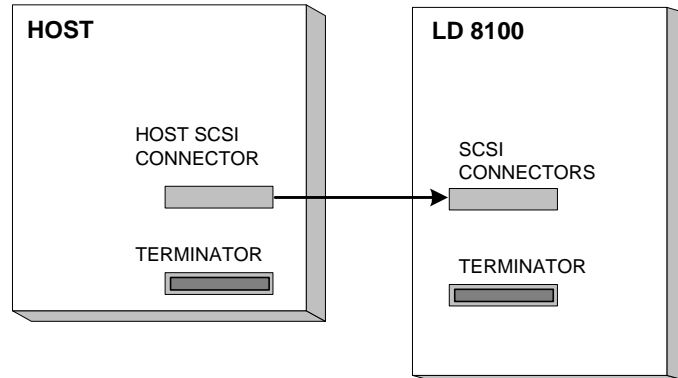


Figure 30. LD 8100-to-Host Cable Connection

Normally, the termination function is built into the host adapter. Power for the external terminator is supplied by the LD 8100 and may also be supplied from another device in the SCSI daisy chain.

Refer to the Accessories section of this manual for a list of SCSI bus terminators, cables and their Plasmon LMS part numbers.

CONNECTING POWER AND SCSI CABLES

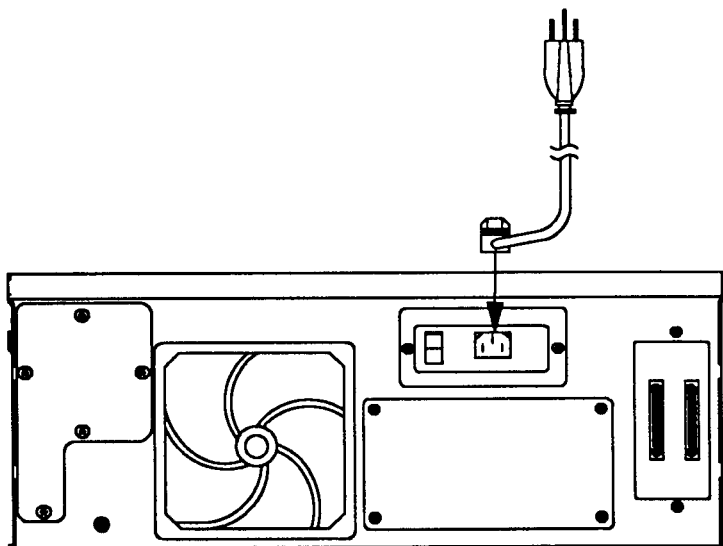
After the LD 8100 has been installed in its operating location, follow these cable connection procedures:

The LD 8100 has two SCSI input/output (I/O) connectors on the rear panel that are used to interface the drive with other SCSI devices. Either SCSI connector can be used as the input or output port because the internal controller cable connection is common to both connectors.

CONNECTING THE POWER CORD

To install the power cord on an LD 8100:

- 1) Ensure that an AC power cord is available and ready for installation. The type of AC power cord being installed depends upon the installation location.
- 2) Ensure facility power is available and the AC power cord connector (male end) will match the site AC power wall outlet.
- 3) Ensure that the AC power switch on the LD 8100 rear panel is set to the OFF (O) position.
- 4) Plug the AC power cord connector (female end) into the AC power receptacle on the LD 8100 rear panel.
- 5) Plug the AC power cord connector (male end) into a wall outlet.



EP006074

Figure 31. Connecting the AC Power Cord (Rear Panel of Rack Mount Version)

CONNECTING MULTIPLE DEVICES

To install SCSI interface cables for a multiple-device configuration

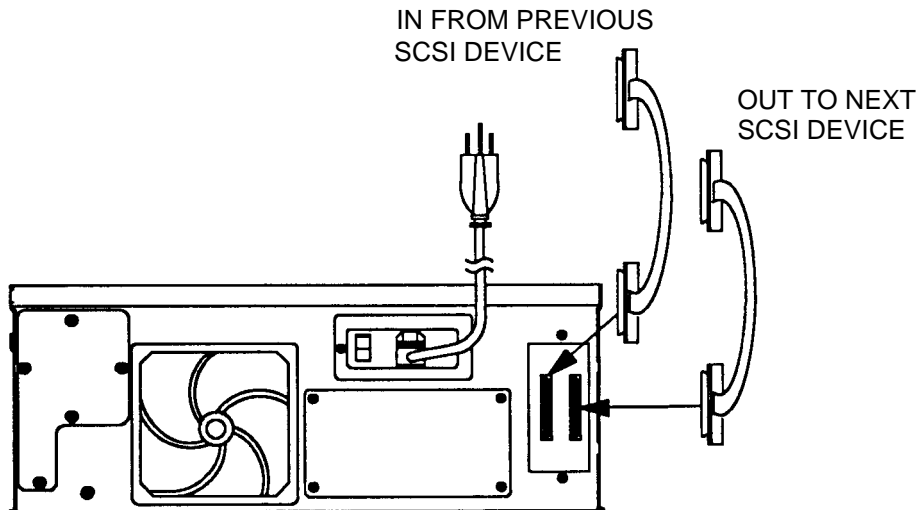
- 1) Ensure that the SCSI interface cables and a terminator (if required) are available and ready for installation.
- 2) Plug one end of a SCSI interface cable into the vacant SCSI interface connector on the previous device in the SCSI chain. Plug the other end of the cable into a SCSI connector.

- 3) If the LD 8100 is not the last unit in the daisy chain, plug one end of the other cable into the vacant connector on the LD 8100 and then connect the other end of the cable to the next SCSI device. Repeat this process until you reach the last SCSI device in the daisy chain.

If the LD 8100 is the last unit in the daisy chain, install a terminator on the LD 8100's vacant SCSI connector.

- 4) Ensure that the SCSI bus is also terminated at the host adapter end.

The SCSI bus must be terminated at both ends in accordance with the LD 8100/LF 8120/LF 8600/LF 8602 SCSI Interface Specification (P/N 97662164).



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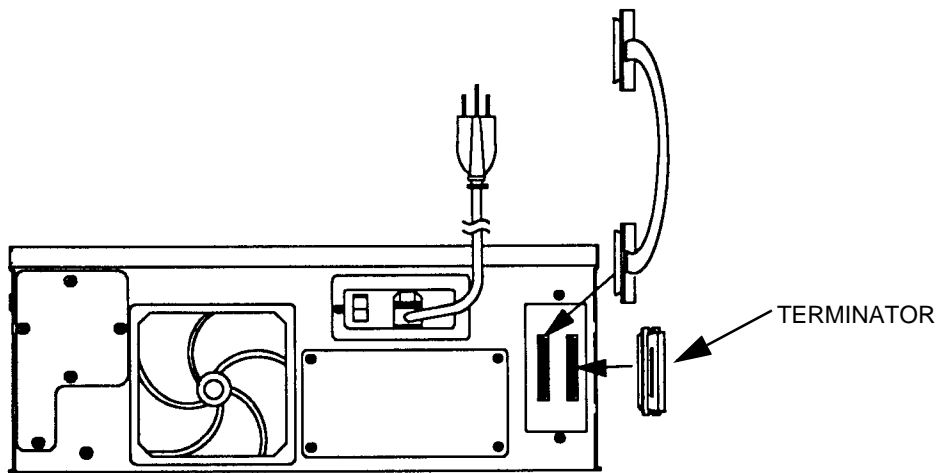
Figure 32. Multiple LD 8100 SCSI Interface Cable Connections

CONNECTING A SINGLE DEVICE

To install a SCSI interface cable for a single-device configuration:

- 1) Plug one end of the SCSI interface cable into the vacant SCSI interface connector on the host.
- 2) Plug the other end of the interface cable into a SCSI I/O connector on the LD 8100 rear panel.
- 3) Ensure that the SCSI bus is terminated at the LD 8100 and the host adapter end (see next figure).

The SCSI bus must be terminated at both ends in accordance with the LD 8100/LF 8120/LF 8600/LF 8602 SCSI Interface Specification (P/N 97662164).



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Figure 33. Single LD 8100 SCSI Interface Cable Connections

CONNECTOR VERIFICATION

Prior to powering on the system:

- 1) Verify proper termination at the host adapter, if applicable.
- 2) Verify proper termination at the last LD 8100 on the bus, if applicable.

Refer to the Operating Instruction section in this manual for power-on procedures.

OPERATING INSTRUCTIONS

CONTROLS AND INDICATORS

The Drive Operator Console (DOC) is located on the front panel of the Rack Mount, Desktop and Tower configurations and on the rear panel of the FileNet and Plasmon Library configurations. The DOC provides the controls and indicators that enable a user to operate the LD 8100.

The DOC controls and indicators consist of an alphanumeric display, a LOAD/MENU switch, a TEST/SELECT switch, and a WRITE PROTECT indicator. Refer to the next table for a description of the DOC controls and indicators.

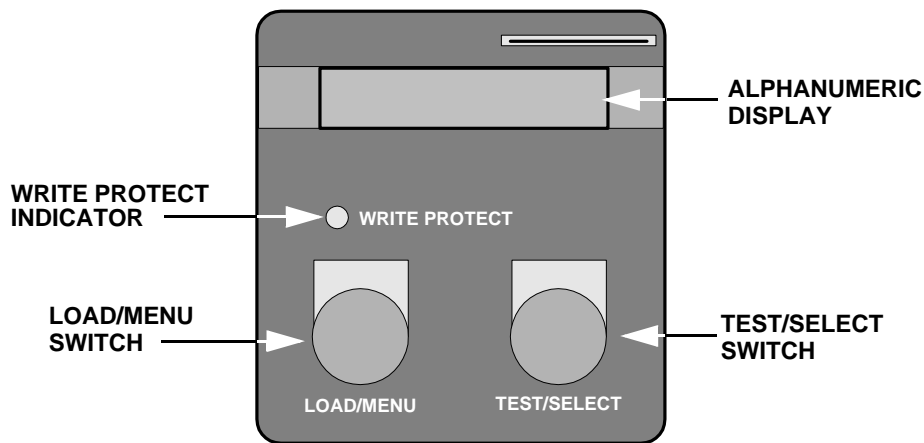


Figure 34. Drive Operator Console

Table 7. DOC Controls and Indicators

CONTROL/INDICATOR	PURPOSE/FUNCTION
Alphanumeric Display	Displays operating, configuration and test status messages
LOAD/MENU Switch	In operating mode, the LOAD/MENU switch controls the loading and unloading of media cartridges. In Configuration mode, the LOAD/MENU switch steps through the menu of configurable parameters.
TEST/SELECT Switch	In operating mode, the TEST/SELECT switch invokes the diagnostic self-test. In Configuration mode, the TEST/SELECT switch scrolls through the options available for each configurable parameter.
WRITE PROTECT Indicator	The WRITE PROTECT indicator illuminates when either the Write Protect (WRT PROT) configuration option is enabled or a media cartridge WRITE PROTECT switch is locked (write disabled). The WRITE PROTECT indicator will flash when an RTPM condition occurs. Also, the WRITE PROTECT indicator will flash when the drive or the media is in a read only condition.

NOTE

Throughout this section, display messages are shown in English, the default language. However, Operating mode messages can appear in French or German (refer to the Operating mode section). Configuration messages will always appear in English.

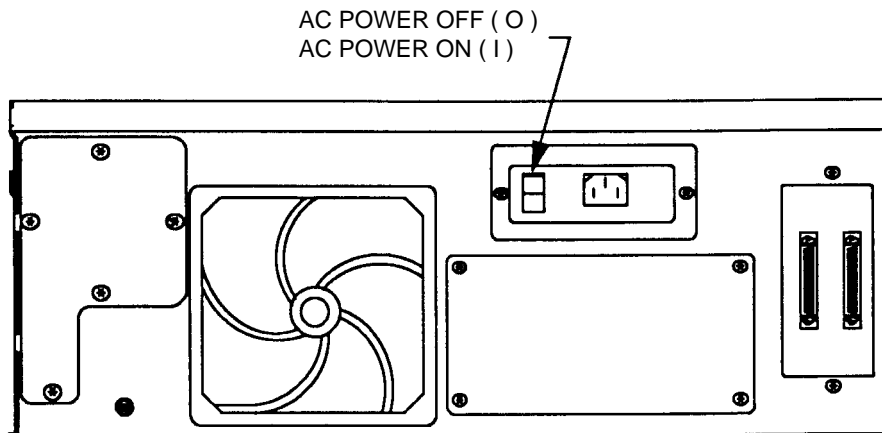
POWER-ON PROCEDURE

The LD 8100 is powered on with the AC Power Switch located on the rear panel.

The ON position is indicated by a (I) and the OFF position is indicated by a (O) as illustrated in the next figure.

NOTE

After you turn the drive's power off, wait 5 sec before turning the power on again.



EP006076

Figure 35. AC Power Switch Positions

Perform the following procedure to power on the LD 8100:

- 1) Ensure that the LD 8100 is properly connected (see the Connecting Power and SCSI Cables and the Connector Verification sections in this manual).
- 2) Set the AC Power Switch to the ON (I) position and verify that air is flowing through the LD 8100.
- 3) Verify that the WRITE PROTECT indicator is illuminated briefly.
- 4) Verify that the "Selftest" message displayed on the DOC is replaced by the "Insert Disk" message. This indicates that the power-on selftests have completed without encountering any errors or faults.

If the "Wrt Prot" configuration is already enabled, the WRITE PROTECT indicator will also be illuminated.

After the LD 8100 is online, the drive monitors internal systems continually for fault conditions. A fault is a malfunction from which operator or host intervention is required for recovery.

Refer to the Modes of Operation section to familiarize yourself with the LD 8100 modes of operation. View the current drive configuration parameters by following the procedure in the Viewing the Configuration section.

MODES OF OPERATION

The LD 8100 has three modes of operation that are selectable from the DOC:

- Operating Mode
- Configuration Mode
- Test Mode

In Operating mode the host system can read and write data. Configuration mode allows an operator to view and set drive parameters. Test mode invokes drive diagnostics to verify proper drive operation.

OPERATING MODE

The LD 8100 enters the Operating mode after being powered on and displays the "Insert Disk" message on the DOC. The "Insert Disk" message indicates the LD 8100 is ready to accept a media cartridge.

Whenever the DOC displays the "Insert Disk" message, a media cartridge can be inserted into the drive. The LM 8000 cartridge must be inserted with side A facing up. An LM 6000 cartridge may be inserted with either side facing up. The cartridge is fully inserted when it reaches the cartridge stops inside the drive and the DOC displays the "Inserted" message.

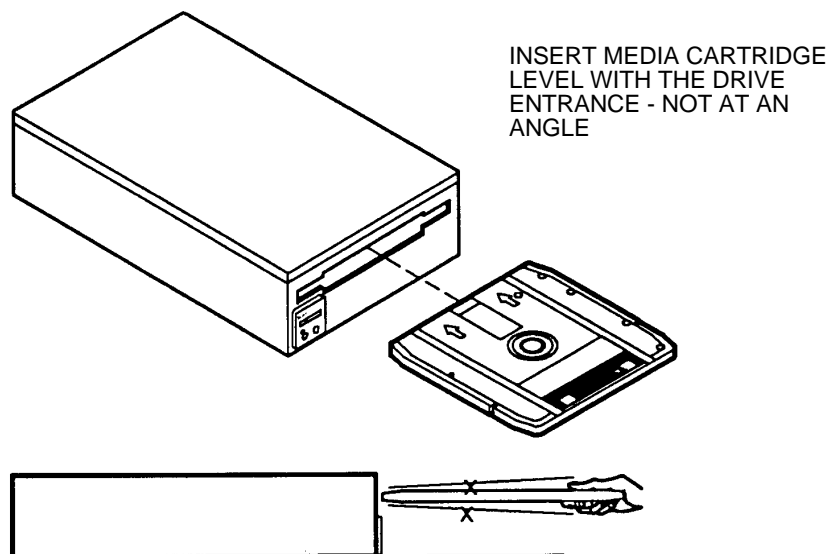


Figure 36. Media Cartridge Loading

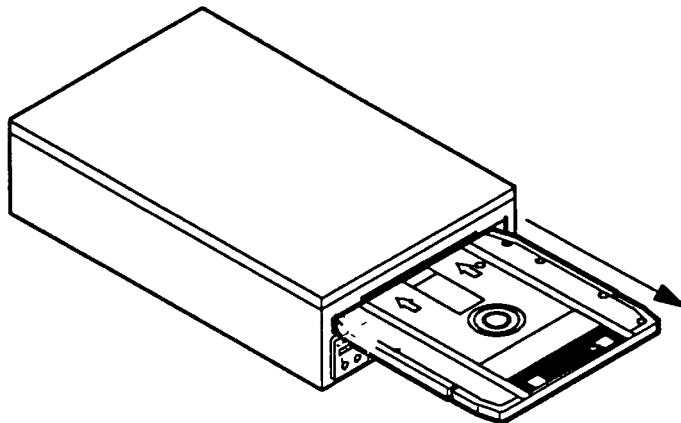
To load a media cartridge:

- 1) Verify that the message "Insert Disk" is displayed on the DOC.
- 2) Insert a media cartridge into the drive. The LM 8000 cartridge must be inserted Side A up and the LM 6000 may be inserted either side up.
- 3) Verify that either the "Ready" message or the "Inserted" message is displayed on the DOC.
- 4) If "Inserted" is displayed on the DOC, press the LOAD/MENU switch to spin up the media.

If the AutoSpin configuration option is enabled, and a media is inserted into the drive, the media will spin up and the "Ready" message will be displayed. If the AutoSpin configuration option is disabled, the "Inserted" message remains displayed on the DOC.

Regardless of whether AutoSpin is enabled or disabled, the "Loading" message may be briefly displayed while the drive is spinning up. The "Ready" message will be displayed when the media cartridge is available for use by the host.

When the DOC is displaying the "Ready" message, a media cartridge can be unloaded and removed from the drive by pressing the LOAD/MENU switch. The media may also be unloaded by command from the host. The media will be unloaded and the cartridge can be removed by pulling the cartridge straight out from the front of the drive as illustrated below.



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Figure 37. Removing the Media Cartridge

The DOC will briefly display "Unloading" while the media is being unloaded from the motor spindle and then will display the "Remove Disk" message. The "Remove Disk" message indicates that the media cartridge is ready to be manually removed from the drive.

If the media cartridge is left in the drive after the "Remove Disk" message appears on the DOC, the media can be spun up again by simply pressing the LOAD/MENU switch. The "Remove Disk" message will be replaced by the "Loading" message and then the "Ready" message. When the media cartridge is removed from the drive, the DOC will display the "Insert Disk" message.

If the drive is powered down while the cartridge is inserted and the media loaded, the cartridge can be removed either by powering up the drive or by activating the manual release mechanism. Refer to the Manual Release Mechanism section for detailed instructions on using the manual release mechanism. During normal operation, the DOC display will be updated with the appropriate messages listed in the next table. The language option in the Configuration mode can be set to display Operating mode messages in English, French or German.

NOTE

Operating mode messages can appear in French or German.
Configuration mode messages will always appear in English.

Table 8. LD 8100 DOC Operating Mode Messages

OPERATING CONDITION	DOC DISPLAY (ENGLISH)	DOC DISPLAY (FRENCH)	DOC DISPLAY (GERMAN)
Insert Cartridge	Insert Disk	Insérer Disq	Einfügen
Loading Media	Loading	Charger	Ladend
Drive Ready	Ready	Prêt	Bereit
Drive Locked	Locked	Verrouillé	Gesperrt
Drive Reading	Reading	Lecture	Lesend
Drive Writing	Writing	Eriture	Schreibend
Unloading Cartridge	Unloading	Déchargement	Entladend
Remove Cartridge	Remove Disk	Retirer Disq	Entfernen
Drive is in Reset	SCSI Reset	SCSI Reinit	SCSI Reinit
Illegal Request (Spin Down Disabled)	Denied	Refusé	Abgelehnt
Drive is Testing Itself	Selftest	Autotest	Selbsttest
Inserted Cartridge	Inserted	Inséré	Eingelegt
Drive is Scanning Media	Scanning	Scanning	Media Prüf
Executing SCSI READ BUFFER Command	Reading Bufr	Lecture Bufr	Buffer Lesen
Executing SCSI WRITE BUFFER Command	Writing Bufr	Ecriture Bufr	Bfr Schriben
Drive in READ-ONLY Mode	ReadReady	Prêt	Bereit
Media Management Recovery	MM Read	MM Lecture	MM Lesen
Drive Executing Write Power Calibration (WPC)	WPC Write	Calib. Laser	Schriben WPC
Invert Cartridge	Flip Disk	Retourner Dg	Dsk Umdrehen

CONFIGURATION MODE

Configuration mode is used to view and set drive operating parameters. The parameters that can be configured and displayed are summarized in the following (the corresponding DOC display is shown in parentheses).

Viewing the configuration ("View Config")

- View the current operating parameters ("View Current")
- View the firmware revisions of the drive ("View FW Revs")
- View the hardware revisions of the drive ("View HW S/Ns")
- View the hardware part numbers of the drive ("View HW P/Ns")

Setting the configuration of the operating parameters ("Set Config")

- Set all parameters to the default value ("Set Defaults")
- Set device SCSI identification number 0 through 15 ("SCSI ID:")
- Enable or disable parity checking ("Parity:")
- Set language option to English, French or German ("Language:")
- Enable or disable write protect option ("Wrt Prot:")
- Enable or disable media AutoSpin option ("AutoSpin:")
- Enable or disable load switch option ("Load SW:")
- Enable or disable read ahead ("Rd Ahead:")
- Enable or disable Controller Detected Error blink option ("CDE Curs:")
- Enable or disable Busy option ("Busy:")
- Enable or disable Mode Select Read Ahead ("ModSelRA:")
- Enable or disable Media Management Spin Up ("MMSpinUp:")
- Set Target Negotiation ("Negotiation")

Viewing diagnostic results or performing diagnostic operations ("Diagnostics")

- Park the drive in preparation for shipment ("Park Drive")
- Display the state of the drive sensors ("Test Sensors")
- Clear the drive initialization variables in nonvolatile memory ("Clear NvRAM")
- Display controller detected error information ("View CDEs")
- Change ADP Baud Rate ("Baud:")
- Set Test Start Number ("Test Start:0")
- Set Test End Number ("Test End 0")
- Set Number of tests to be performed ("Test Cycles")
- View Real Time Performance Monitor ("View RTPM")
- Clear RTPM error ("Clear RTPM")
- Initialize DPC ("Init DPC")
- Write Power Calibration ("WPC Options")

Set the internal drive serial number ("Set Serial #")

Configuration mode can be entered when the "Ready" message is displayed on the DOC. To enter the Configuration mode:

- 1) Press both the LOAD/MENU and TEST/SELECT switches simultaneously.
- 2) Verify that "View Config" is displayed.

Entry to Configuration mode starts with a Main menu, allowing the user to select one of four submenus. The Main menu includes the following submenu options:

- "View Config"** This is the entry point into the Configuration menu. Press the SELECT switch to enter a submenu allowing the user to view the drive operating parameters, firmware revisions and hardware serial numbers. Press the MENU switch to select the next option in the Main menu.
- "Set Config"** Press the SELECT switch to enter a submenu allowing the user to select and set the drive operating parameters. Press the MENU switch to select the next option in the Main menu.
- "Diagnostics"** Press the SELECT switch to enter a submenu allowing the user to display diagnostic parameters or perform diagnostic operations. Diagnostics includes the "Park Drive" option to prepare the drive for shipping. Press the MENU switch to select the next option in the Main menu.
- "Set Serial #"** Press the SELECT switch to enter the Set Serial # submenu thereby allowing the user to set the right digit of the serial number. Press MENU to advance to the next digit in the serial number. Press SELECT to change the value of each digit.

NOTE

The serial number set in the drive must correspond to the last 5 digits of the drive's actual serial number for accurate internal event logging to occur. The drive's actual serial number is written on the back of the drive enclosure.

A structure diagram for the Main menu is shown in the next figure.

To move up a level in the Configuration menu hierarchy, press the LOAD/MENU and TEST/SELECT switches simultaneously.

To exit the Configuration mode, press the LOAD/MENU and TEST/SELECT switches simultaneously from the Main menu. The display will show the message which appeared prior to the drive entering the Configuration mode.

The "Ready" message is displayed when a media cartridge is loaded on the drive spindle.

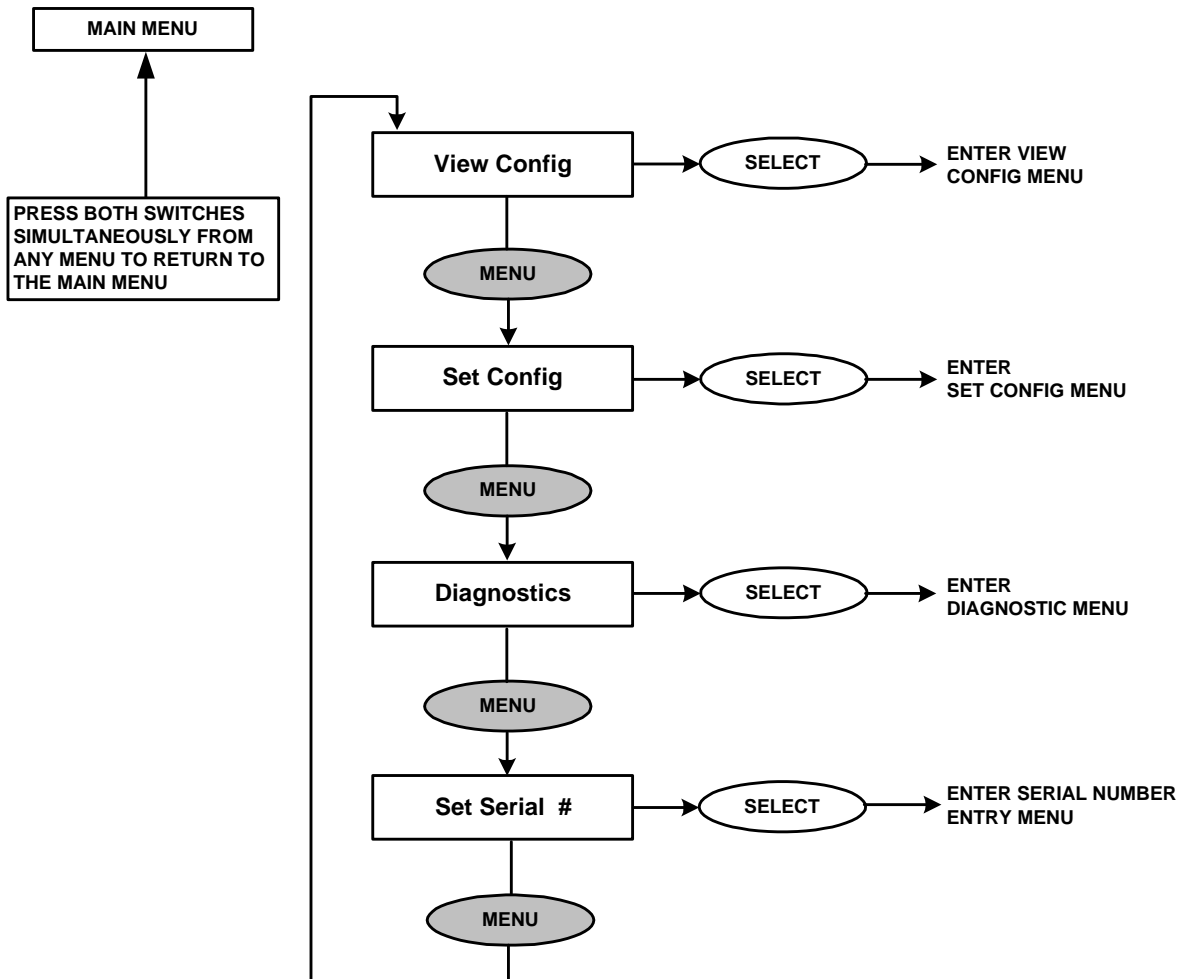


Figure 38. Main Menu

VIEWING THE CONFIGURATION ("VIEW CONFIG")

To view the configuration, press the TEST/SELECT switch while "View Config" is displayed in the Main menu. The drive will enter the View Configuration menu which includes the following options:

- "View Current"** Press the SELECT switch to display the current drive operating parameters. The operating parameters are listed in the table below. Press the MENU switch to select the next option in the View Configuration menu.
- "View FW Revs"** Press the SELECT switch to display the drive firmware revisions. These include firmware revisions for the WOODI, DPC, RWS A and RWS B. Press the MENU switch to select the next option in the View Configuration menu.
- "View HW S/Ns"** Press the SELECT switch to display the serial numbers. These include serial numbers for the Drv SN, Woodi, Rws A, Rws B, Oma A, Oma B, and Dpc. Press the MENU switch to select the next option in the View Configuration menu.
- "View HW P/Ns"** Press the SELECT switch to display the hardware part numbers. These include part numbers for WOODI, RWS A, RWS B and DPC. Press the MENU switch to select the next option in the View Configuration menu.

Table 9. View Configuration Messages

OPTION NAME	CURRENT SETTING	DEFAULT FACTORY SETTING
SCSI ID:	# 0 - 15	0
Parity:	On or Off	On
Language:	Eng, Frh or Grm	Eng
Wrt Prot:	On or Off	Off
AutoSpin:	On or Off	On
Load SW:	On or Off	On
Rd Ahead:	On or Off	Off
CDE Curs:	On or Off	Off
Busy:	On or Off	On
ModSelRA:	On or Off	On
MMSpinUp:	On or Off	Off
TargSDTR	On or Off	On
TargWDTR	On or Off	On

A structure diagram for the View Configuration menu is shown in the next figure.

To move up a level in the Configuration menu hierarchy to the Main menu, press the LOAD/MENU and TEST/SELECT switches simultaneously.

To exit the Configuration mode, press the LOAD/MENU and TEST/SELECT switches simultaneously. The display will show the message which appeared prior to the drive entering the Configuration mode.

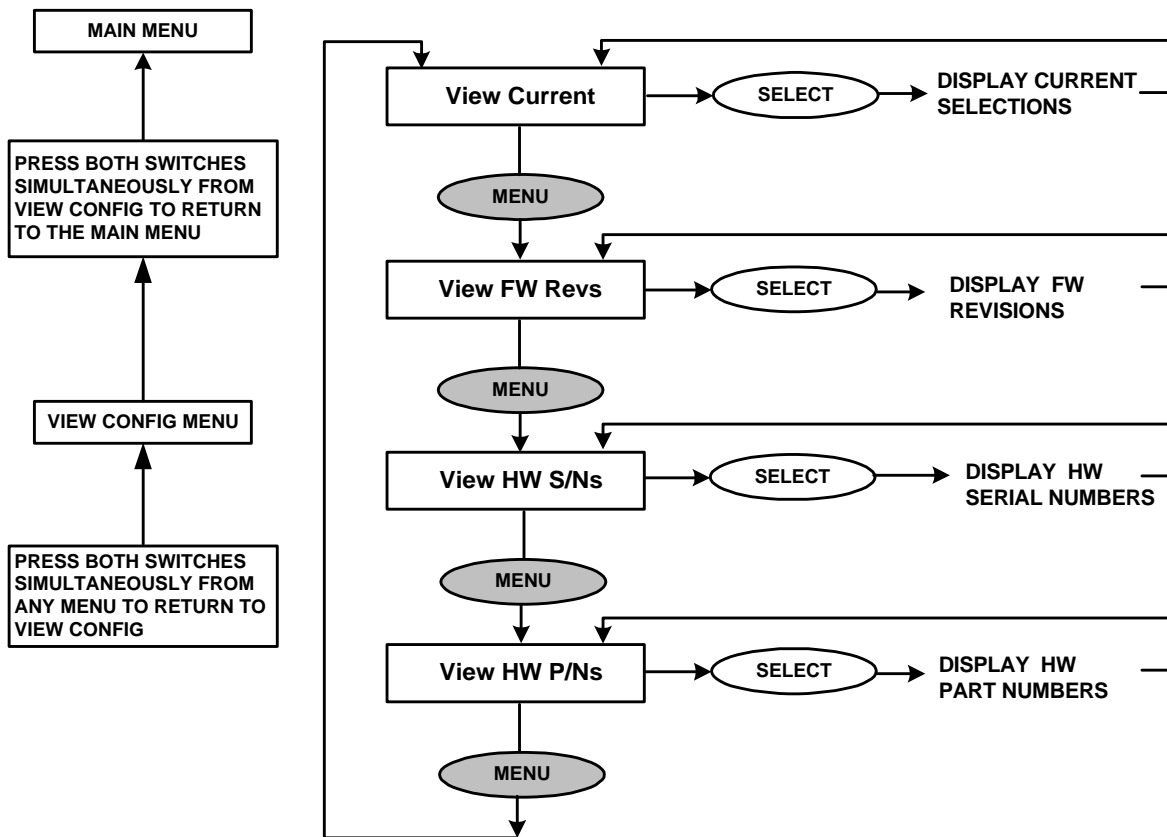


Figure 39. View Config Menu

SETTING THE CONFIGURATION OF THE OPERATING PARAMETERS ("SET CONFIG")

To enter the mode to set the drive configuration, press the TEST/SELECT switch while "Set Config" is displayed in the Main menu. The drive will enter the Set Configuration menu which includes the following options:

- "Set Defaults"** Press the SELECT switch to set all drive operating parameters to the factory defaults. Press the MENU switch to select the next option in the Set Configuration menu.
- "SCSI ID:"** Press the SELECT switch to scroll through the possible SCSI ID values (0 through 15). When the desired ID value is displayed, press the MENU switch to enter that value as the SCSI ID and select the next option in the Set Configuration menu.
- "Parity:"** Press the SELECT switch to turn parity checking on or off. SCSI bus parity generation is always enabled but SCSI bus parity checking by the drive may be turned on or off. When the desired state (on or off) is displayed, press the MENU switch to enter that state for parity checking and select the next option in the Set Configuration menu.
- "Language:"** Press the SELECT switch to scroll through the language options (Eng = English, Frh = French, Grm = German) for the DOC operating messages. When the desired language option is displayed, press the MENU switch to enter that option and select the next option in the Set Configuration menu.
- "Wrt Prot:"** Press the SELECT switch to turn write protect on or off. When the desired state (on or off) is displayed, press the MENU switch to enter that state for write protect and select the next option in the Set Configuration menu.
- "AutoSpin:"** Press the SELECT switch to turn AutoSpin on or off. When the desired state (on or off) is displayed, press the MENU switch to enter that state for AutoSpin and select the next option in the Set Configuration menu.
- "Load SW:"** Press the SELECT switch to enable or disable the LOAD switch on the DOC. When the desired state (on or off) is displayed, press the MENU switch to enter that state for load switch and select the next option in the Set Configuration menu.
- "Rd Ahead:"** Press the SELECT switch to turn read ahead on or off. When the desired state (on or off) is displayed, press the MENU switch to enter that state for read ahead and select the next option in the Set Configuration menu.
- "CDE Curs:"** Press the SELECT switch to turn the CDE indicator (a blinking solid cursor in the rightmost display position) on or off. When the desired state (on or off) is displayed, press the MENU switch to enter that state for CDE Curs and select the next option in the Set Configuration Menu.
- "Busy:"** Press the SELECT switch to toggle the Busy option between On and Off. When the desired mode has been selected, press the LOAD/MENU switch to select the next option.
- "ModSelRA:"** Press the SELECT switch to toggle the Mode Select Read Ahead option between On and Off. When the desired mode has been selected, press the LOAD/MENU switch to select the next option.
- "MMSpinUp:"** Press the SELECT switch to toggle the Media Management Spin Up option between On and Off. When the desired mode has been selected, press the LOAD/MENU switch to select the next option.
- "Negotiation"** Press SELECT switch to toggle between TargSDTR OFF or ON. Press MENU to switch to TargSWTR. Press SELECT again to toggle between TargSWTR OFF and ON. When the desired selctions have been made, press MENU and SELECT simultaneously to return tothe NEGOTIATIONS menu.

A structure diagram for the Set Configuration menu is shown in the next figure.

To move up a level in the configuration menu hierarchy to the Main menu, press the LOAD/MENU and TEST/SELECT switches simultaneously.

To exit the Configuration mode, press the LOAD/MENU and TEST/SELECT switches simultaneously. The display will show the message which appeared prior to the drive entering the Configuration mode.

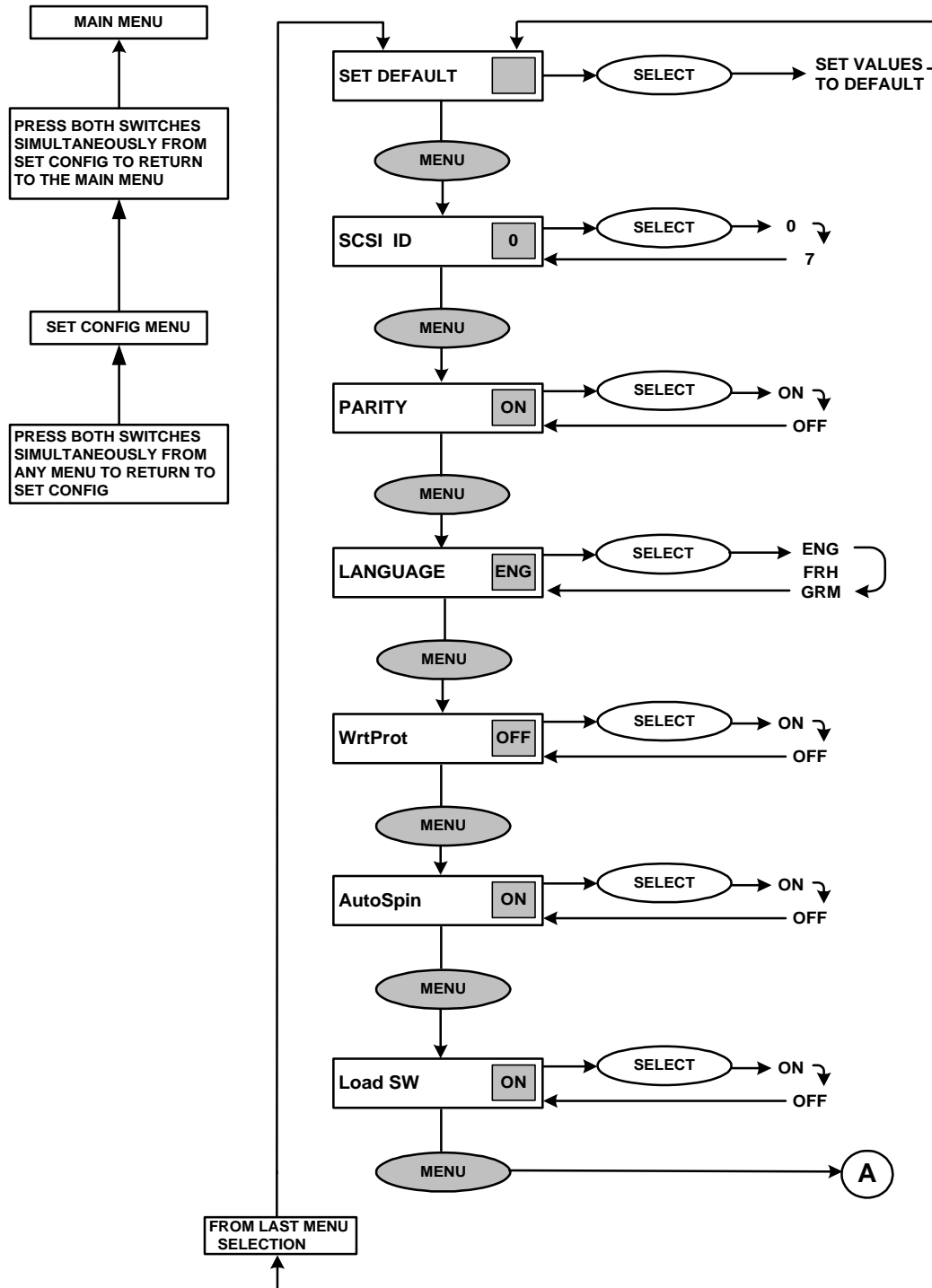


Figure 40. Set Config Menu (Part 1)

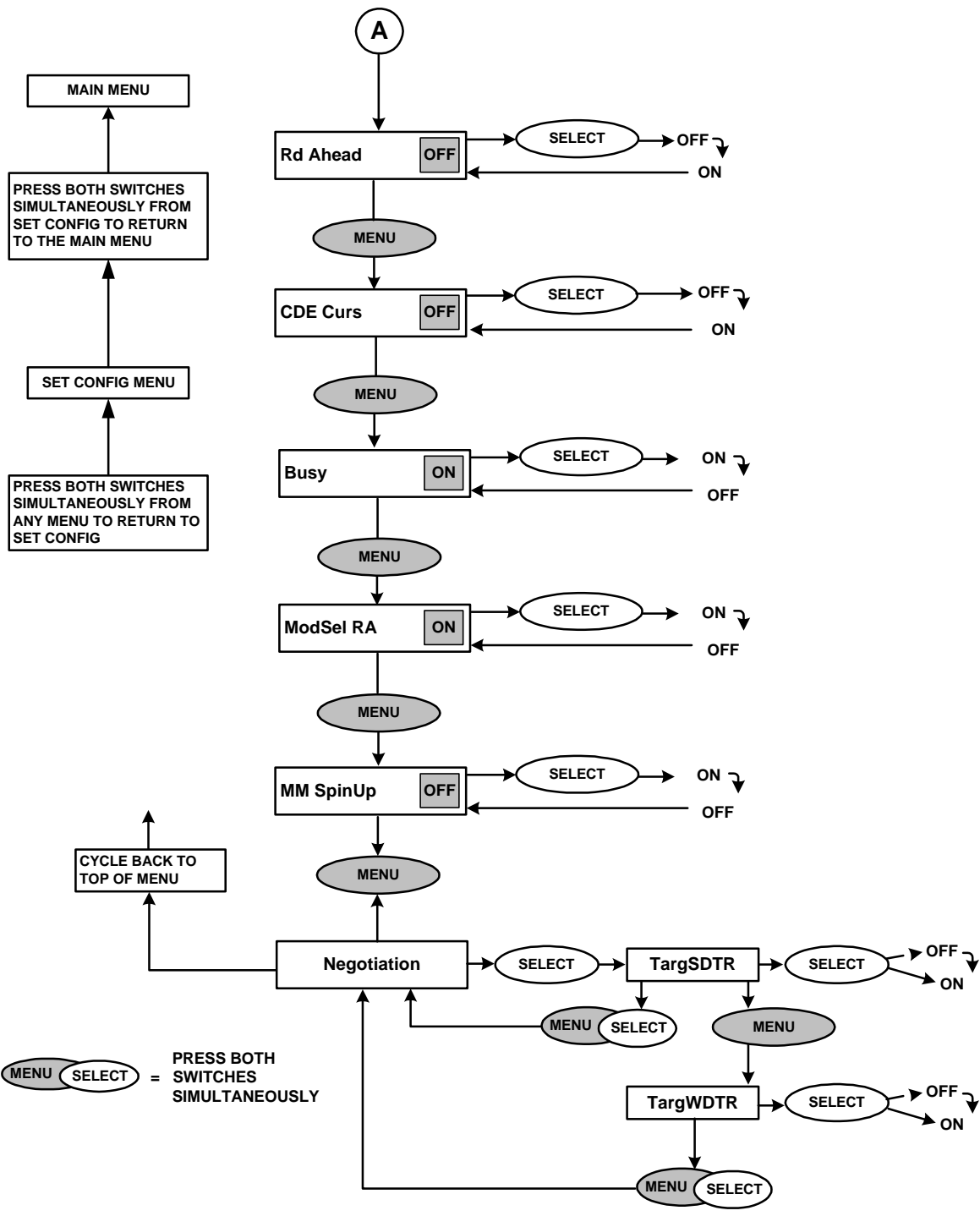


Figure 40. Set Config Menu (Part 2)

SET DEFAULTS

The SET DEFAULT function will reset all operating parameters to factory defaults.

Perform the following procedure to set the LD 8100's to the factory defaults:

- 1) Enter the Configuration mode by pressing both the LOAD/MENU and TEST/SELECT switches simultaneously.
- 2) Press the MENU switch until "Set Config" is displayed.
- 3) Press the SELECT switch to enter the Set Configuration menu. "SET DEFAULTS" will be displayed.
- 4) Press SELECT to set parameters to the factory defaults.
- 5) Simultaneously press the LOAD/MENU and TEST/SELECT switches to move up to the Main menu. Simultaneously press the LOAD/MENU and TEST/SELECT switches again to exit Configuration mode.

SETTING THE SCSI ID

The SCSI ID can be set to one of 16 device Identification (ID) numbers (0 through 15); however, each device connected to the same SCSI bus must have a unique SCSI ID.

Perform the following procedure to set the LD 8100's SCSI ID number:

- 1) Enter the Configuration mode by pressing both the LOAD/MENU and TEST/SELECT switches simultaneously.
- 2) Press the MENU switch until "Set Config" is displayed.
- 3) Press the SELECT switch to enter the Set Configuration menu.
- 4) Press the MENU switch until "SCSI ID" is displayed.
- 5) Press the SELECT switch to scroll through the options for the SCSI ID value (0 through 15). When the desired value is displayed for the SCSI ID, press MENU to enter the SCSI ID value and move to the next option in the Set Configuration menu.
- 6) Simultaneously press the LOAD/MENU and TEST/SELECT switches to move up to the Main menu. Simultaneously press the LOAD/MENU and TEST/SELECT switches again to exit Configuration mode.

NOTE

After resetting the device ID, turn the drive off, wait 5 sec and then turn the drive on again. This ensures that the new device ID will be acknowledged by the SCSI bus.

SETTING THE BUS PARITY CHECKING

SCSI bus parity generation is always enabled; however, SCSI bus parity checking at the drive can be disabled.

Perform the following procedure to turn parity checking on or off:

- 1) Enter the Configuration mode by pressing both the LOAD/MENU and TEST/SELECT switches simultaneously.
- 2) Press the MENU switch until "Set Config" is displayed.
- 3) Press the SELECT switch to enter the Set Configuration menu.
- 4) Press the MENU switch until "Parity:" is displayed.
- 5) Press the SELECT switch to scroll through the states for parity checking (on, off). When the desired state is displayed, press MENU to enter the state and move to the next option in the Set Configuration menu.
- 6) Simultaneously press the LOAD/MENU and TEST/SELECT switches to move up to the Main menu. Simultaneously press the LOAD/MENU and TEST/SELECT switches again to exit Configuration mode.

SETTING THE LANGUAGE

The language option enables the user to select the language used by the LD 8100 to display messages in the Operating mode. (English is the only available language for Configuration mode.)

Perform the following procedure to set the operating mode display language:

- 1) Enter the Configuration mode by pressing both the LOAD/MENU and TEST/SELECT switches simultaneously.
- 2) Press the MENU switch until "Set Config" is displayed.
- 3) Press the SELECT switch to enter the Set Configuration menu.
- 4) Press the MENU switch until "Language:" is displayed.
- 5) Press the SELECT switch to scroll through the language display options (Eng = English, Frh = French, Grm = German). When the desired language option is displayed, press MENU to enter the language option and move to the next option in the Set Configuration menu.
- 6) Simultaneously press the LOAD/MENU and TEST/SELECT switches to move up to the Main menu. Simultaneously press the LOAD/MENU and TEST/SELECT switches again to exit Configuration mode.

SETTING THE WRITE PROTECT OPTION

The write protect option enables the user to inhibit the LD 8100 from writing to any media inserted into the drive, regardless of the write protect setting on the media cartridges.

Perform the following procedure to turn write protect on or off:

- 1) Enter the Configuration mode by pressing both the LOAD/MENU and TEST/SELECT switches simultaneously.
- 2) Press the MENU switch until "Set Config" is displayed.
- 3) Press the SELECT switch to enter the Set Configuration menu.
- 4) Press the MENU switch until "Wrt Prot:" is displayed.
- 5) Press the SELECT switch to scroll through the states for write protect (off, on). When the desired state is displayed, press MENU to enter the state and move to the next option in the Set Configuration menu.
- 6) Simultaneously press the LOAD/MENU and TEST/SELECT switches to move up to the Main menu. Simultaneously press the LOAD/MENU and TEST/SELECT switches again to exit Configuration mode.

NOTE

The Write Protect indicator on the DOC is illuminated when write protect is enabled.

SETTING THE MEDIA AUTOSPIN OPTION

The media AutoSpin load option enables a user to choose between automatically or manually spinning up and initializing a media cartridge after it has been inserted into the drive. If the AutoSpin option is enabled, each media cartridge inserted into the drive will be automatically spun up and initialized. If the AutoSpin option is disabled, the LOAD/MENU switch will have to be pressed to spin up the media.

Perform the following procedure to set the LD 8100's AutoSpin option:

- 1) Enter the Configuration mode by pressing both the LOAD/MENU and TEST/SELECT switches simultaneously.
- 2) Press the MENU switch until "Set Config" is displayed.
- 3) Press the SELECT switch to enter the Set Configuration menu.
- 4) Press the MENU switch until "AutoSpin:" is displayed.
- 5) Press the SELECT switch to scroll through the states for the AutoSpin (on, off). When the desired option for AutoSpin is displayed, press MENU to enter the option and move to the next option in the Set Configuration menu.
- 6) Simultaneously press the LOAD/MENU and TEST/SELECT switches to move up to the Main menu. Simultaneously press the LOAD/MENU and TEST/SELECT switches again to exit Configuration mode.

NOTE

Ensure that the Plasmon and FileNet LD 8100 drive configurations have AutoSpin disabled.

SETTING THE LOAD SWITCH OPTION

The load switch option enables the user to enable or disable the LOAD/MENU switch on the DOC. The LOAD/MENU switch can be disabled to prevent accidentally spinning down a media cartridge. This also prevents cartridge loading from the DOC, giving the host exclusive control of media loading.

Perform the following procedure to enable or disable the LOAD/MENU switch:

- 1) Enter the Configuration mode by pressing both the LOAD/MENU and TEST/SELECT switches simultaneously.
- 2) Press the MENU switch until "Set Config" is displayed.
- 3) Press the SELECT switch to enter the Set Configuration menu.
- 4) Press the MENU switch until "Load SW:" is displayed.
- 5) Press the SELECT switch to scroll through the states for the load switch (on, off). When the desired state is displayed, press MENU to enter the state and move to the next option in the Set Configuration menu.
- 6) Simultaneously press the LOAD/MENU and TEST/SELECT switches to move up to the Main menu. Simultaneously press the LOAD/MENU and TEST/SELECT switches again to exit Configuration mode.

SETTING THE READ AHEAD OPTION

The read ahead option often improves the overall read data transfer rate of the LD 8100 in applications which require continuous blocks of data to be read (as compared to the same subsystem without read ahead).

Perform the following procedure to turn read ahead on or off:

- 1) Enter the Configuration mode by pressing both the LOAD/MENU and TEST/SELECT switches simultaneously.
- 2) Press the MENU switch until "Set Config" is displayed.
- 3) Press the SELECT switch to enter the Set Configuration menu.
- 4) Press the MENU switch until "Rd Ahead:" is displayed.
- 5) Press the SELECT switch to scroll through the states for read ahead (off, on). When the desired state is displayed, press MENU to enter the state and move to the next option in the Set Configuration menu.
- 6) Simultaneously press the LOAD/MENU and TEST/SELECT switches to move up to the Main menu. Simultaneously press the LOAD/MENU and TEST/SELECT switches again to exit Configuration mode.

CAUTION



The read ahead option is system dependent. Ensure that you check with your system analyst before setting this option.

When enabled, the read ahead option uses the data buffer (12.8 MBytes) to store data sectors read from the disk beyond those sectors requested by the host. Subsequent sequential sectors will be read directly from the buffer instead of incurring the latency time it takes to access sequential sectors. (Refer to the LD 8100/ LF 8120/ LF 8600/ LF 8602 SCSI Interface Specification, P/N 97662164.)

SETTING THE CDE CURS OPTION

The CDE Curs (Controller Detected Error) option enables a blinking solid cursor in the rightmost character location of the DOC panel when a CDE has occurred. In most system installations, the host system will recover from reported CDE's and no user intervention is required. A developer may wish to enable this indicator during system development or installation.

Perform the following procedure to turn CDE Curs on or off:

- 1) Enter the Configuration mode by pressing both the LOAD/MENU and TEST/SELECT switches simultaneously.
- 2) Press the MENU switch until "Set Config" is displayed.
- 3) Press the SELECT switch to enter the Set Configuration menu.
- 4) Press the MENU switch until "CDE Curs:" is displayed.
- 5) Press the SELECT switch to scroll through the states for CDE Curs (off, on). When the desired state is displayed, press MENU to enter the state and move to the next option in the Set Configuration menu.
- 6) Simultaneously press the LOAD/MENU and TEST/SELECT switches to move up to the main menu. Simultaneously press the LOAD/MENU and TEST/SELECT switches again to exit Configuration mode.

SETTING THE BUSY OPTION

When enabled, the "Busy" message is displayed at the DOC during a spin up or spin down operation. Enabling this option will cause the Drive to respond to a Start command (via SCSI or MCLI) with a "BUSY" message over SCSI.

Perform the following procedure to enable or disable the BUSY option:

- 1) Enter the Configuration mode by pressing both the LOAD/MENU and TEST/SELECT switches simultaneously.
- 2) Press the MENU switch until "Set Config" is displayed.
- 3) Press the SELECT switch to enter the Set Configuration menu.
- 4) Press the MENU switch until "Busy:" is displayed.
- 5) Press the SELECT switch to scroll through the states for the load switch (on, off). When the desired state is displayed, press MENU to enter the state and move to the next option in the Set Configuration menu.
- 6) Simultaneously press the LOAD/MENU and TEST/SELECT switches to move up to the main menu. Simultaneously press the LOAD/MENU and TEST/SELECT switches again to exit Configuration mode.

SETTING THE MODSEL RA OPTION

ModSel RA setting determines if the Drive will acknowledge a Mode Select from the host that changes the state of the Read Ahead. When disabled, the Drive will ignore a MODSEL RA send over SCSI.

Perform the following procedure to enable or disable the ModSel RA option:

- 1) Enter the Configuration mode by pressing both the LOAD/MENU and TEST/SELECT switches simultaneously.
- 2) Press the MENU switch until "Set Config" is displayed.
- 3) Press the SELECT switch to enter the Set Configuration menu.
- 4) Press the MENU switch until "ModSelRA:" is displayed.
- 5) Press the SELECT switch to scroll through the states for the load switch (on, off). When the desired state is displayed, press MENU to enter the state and move to the next option in the Set Configuration menu.
- 6) Simultaneously press the LOAD/MENU and TEST/SELECT switches to move up to the main menu. Simultaneously press the LOAD/MENU and TEST/SELECT switches again to exit Configuration mode.

SETTING THE MM SPINUP OPTION

When enabled, the (Media Management Spin Up) MM SpinUp option allows the LaserDrive to read necessary media management information during spin up. If not enabled, the media management information will be recovered on the first media access command.

Perform the following procedure to enable or disable the MM SpinUp option:

- 1) Enter the Configuration mode by pressing both the LOAD/MENU and TEST/SELECT switches simultaneously.
- 2) Press the MENU switch until "Set Config" is displayed.
- 3) Press the SELECT switch to enter the Set Configuration menu.
- 4) Press the MENU switch until "MMSpinUp:" is displayed.
- 5) Press the SELECT switch to scroll through the states for the load switch (off, on). When the desired state is displayed, press MENU to enter the state and move to the next option in the Set Configuration menu.
- 6) Simultaneously press the LOAD/MENU and TEST/SELECT switches to move up to the main menu. Simultaneously press the LOAD/MENU and TEST/SELECT switches again to exit Configuration mode.

SELECT TARGET NEGOTIATION

The Negotiation menu allows the Drive to be set to initiate the NEGOTIATE for SCSI Wide and SCSI Synchronous communication.

Perform the following procedure to enable or disable the MM SpinUp option:

- 1) Enter the Configuration mode by pressing both the LOAD/MENU and TEST/SELECT switches simultaneously.
- 2) Press the MENU switch until "Set Config" is displayed.
- 3) Press the SELECT switch to enter the Set Configuration menu.
- 4) Press the MENU switch until "Negotiation" is displayed.
- 5) Press SELECT switch. "TargSDTR" is displayed. Press SELECT to toggle between OFF or ON.
- 6) When the desired selection has been made, press MENU to display TargWDTR.
- 7) Press SELECT to toggle between OFF and ON.
- 8) Simultaneously press the LOAD/MENU and TEST/SELECT switches to move up to the main menu. Simultaneously press the LOAD/MENU and TEST/SELECT switches again to exit Configuration mode.

VIEWING DIAGNOSTIC RESULTS OR PERFORMING DIAGNOSTIC OPERATIONS ("DIAGNOSTICS")

To enter the diagnostic submenu, press the TEST/SELECT switch while "Diagnostics" is displayed in the Main menu. The drive will enter the Diagnostics menu which includes the following options:

"Park Drive" Press the SELECT switch to park the baseplates for drive shipment. If the "Park Failed, Close Manually" message appears, refer to the Manual Release section of this manual. Press the MENU switch to select the next option in the Diagnostics menu.

"Test Sensors" Press the SELECT switch to enter sensor display mode. In sensor display mode the DOC panel will display the status of the sensors within the drive. For details, see the LD 8100 Hardware Maintenance Manual (P/N 97663081). Press the MENU switch to select the next option in the Diagnostics menu.

"Clear NvRAM"

CAUTION



Since the initialization variables cannot be recovered once they are cleared, this operation should only be performed by a trained Customer Engineer (CE).

Press the SELECT switch; the message "Drive will reset and NvRAM will be cleared! To Continue Press Select" will appear. Press the MENU switch if you do not want to clear the nonvolatile memory (NvRAM) initialization variables; press the SELECT switch to clear the NvRAM initialization variables in the drive. Press the MENU switch to select the next option in the Diagnostics menu.

"View CDEs" Press the SELECT switch to view the controller detected error (CDE). The DOC will display the error code. When no error has occurred, the "No CDE Error" message is displayed. The error code is cleared upon exiting the Diagnostics menu. The error code should be logged by the operator for aiding the CE in diagnosing the drive problem. Press the MENU switch to select the next option in the Diagnostics menu.

"Baud:" Press the SELECT switch to cycle through the available baud rates. When the desired is displayed, press MENU to go to the next menu item.

"Test Start:" Press the SELECT switch to select the Test to be performed (0 - 9). Once the desired test has been selected, press MENU to select the Test End value (see the next table for the test value and test name).

"Test End:" Press the SELECT switch to select last Test to be performed (0 - 9). Once the desired test has been selected, press MENU to select the Test Cycle value (see the next table for the test value and test name).

Table 10. Diagnostics Selftests

TEST #	DESCRIPTION OF TEST
0	Power-on self-test. This test cannot be disabled; it runs automatically when the drive is powered on.
1	PCA Self-tests, DPR Communication
2	Read/Write Data Path
3	OMA
4	Cartridge Guide and Shuttle Sensors
5	Baseplate and Spindle Motor Operation
6	Servo Control Systems
7	Read Performance
8	Reserved
9	Write Power Calibration

Test Cycles

Press the SELECT switch to select the number of times the test(s) is to be performed. Use the MENU switch cycle through all four digits. Press the MENU switch to select the next option in the Diagnostics Menu.

"View RTPM"

Press the SELECT switch to view the RTPM (Real Time Performance Monitor) status. If no RTPM error has occurred, the DOC will display "No RTPM Err". If an RTPM error has occurred, the DOC will display the media serial number and drive channel combination which caused the RTPM error. The media serial number will be displayed for 5 sec (S/N: #####) and then the drive channel will be displayed for 4 sec (Channel: A, B, or A+B). The display will then return to the View RTPM option.

"Clear RTPM"

CAUTION



RTPM errors indicate the drive or media require maintenance, and place the drive in a read only mode. Corrective action may be as simple as cleaning the media that caused the error, or may require the attention of a trained Customer Engineer (CE) to repair the drive. Clearing this error without resolving the cause may reduce the total media capacity because of abnormally high relocations during write operations.

Press the SELECT switch; if an RTPM error has not occurred, the message "No RTPM Err" will briefly appear and the display will return to "Clear RTPM". If an RTPM has occurred, a confirmation message will be displayed. Press the SELECT switch to clear the RTPM error and enable writing. Press the MENU switch to select the next option in the Diagnostic (Park Drive) menu without clearing the RTPM error. The drive will not perform write operations with an RTPM error.

"Init DPC"

Press SELECT switch to Initialize DPC. This option will clear all the serial E-Prom values and reset the drive.

WPC Options

Press the SELECT switch. "Force WPC" is displayed. If Write Calibration is required, press the SELECT switch again. The Drive will cycle through the WPC Write, WPC GOOD, and back to Force WPC messages.

Press the MENU switch to display Clear WPC. If the WPC log needs to be cleared from the Drive, press SELECT again. When the WPC Log has been cleared, the message WPC CLEARED will be momentarily displayed. When Clear WPC is displayed, press MENU and MENU/SELECT simultaneously to return to the Diagnostic Menu.

A structure diagram for the Diagnostics menu is shown in the next figure.

To move up a level in the configuration menu hierarchy to the Main menu, press the LOAD/MENU and TEST/SELECT switches simultaneously.

To exit the Configuration mode, press the LOAD/MENU and TEST/SELECT switches simultaneously from the Main menu. The display will show the message which appeared prior to the drive entering the Configuration mode.

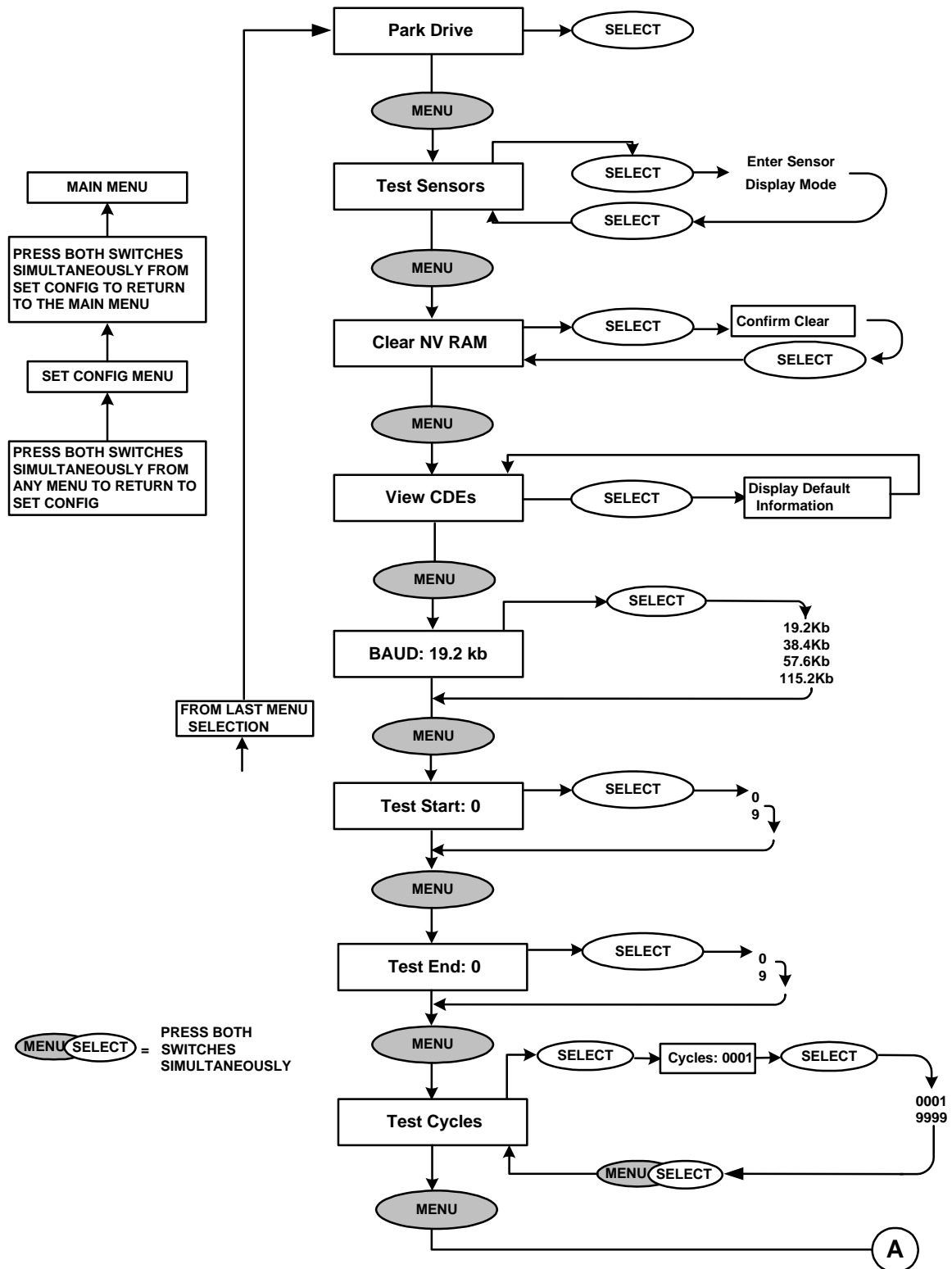


Figure 41. Diagnostics Menu (Part 1)

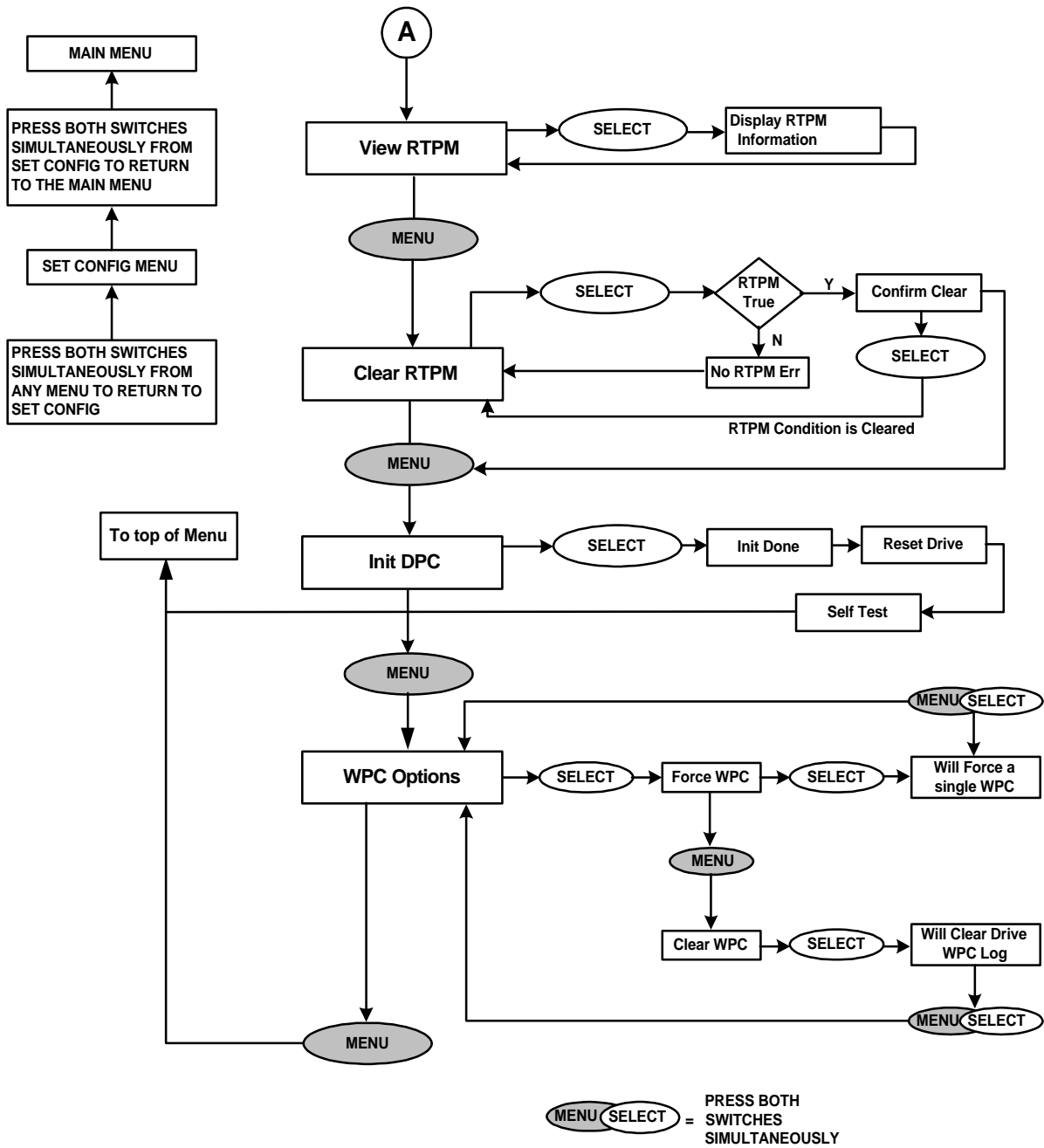


Figure 41. Diagnostic Menu (Part 2)

SET THE INTERNAL DRIVE SERIAL NUMBER ("SET SERIAL #")

To enter the serial number submenu, press the TEST/SELECT switch while "Set Serial #" is displayed in the Main menu. The drive will enter the menu allowing the operator to view and change the internal drive serial number.

NOTE

The serial number set in the drive must correspond to the last 5 digits of the drive's actual serial number for accurate internal event logging to occur. The drive's actual serial number is located on the back of the drive enclosure.

To change the drive's 5-digit serial number, follow these steps:

- 1) Enter the Configuration mode by simultaneously pressing the LOAD/MENU and TEST/SELECT switches.
- 2) Press the MENU switch until "Set Serial #" is displayed.
- 3) Press the SELECT switch to enter the serial number mode. The serial number will be displayed.
- 4) If the serial number does not require revision, simultaneously press the LOAD/MENU and TEST/SELECT switches to move up to the Main menu. Simultaneously press the LOAD/MENU and TEST/SELECT switches again to exit Configuration mode.

If the serial number requires revision, press the MENU switch until the digit position to be changed is blinking. Then press the SELECT switch until the desired digit value is displayed. Continue to select digit positions and values until the correct serial number is displayed.

- 5) Simultaneously press the LOAD/MENU and TEST/SELECT switches to move up to the Main menu. Simultaneously press the LOAD/MENU and TEST/SELECT switches again to exit Configuration mode.

A structure diagram for the Set Serial # menu is shown in the next figure.

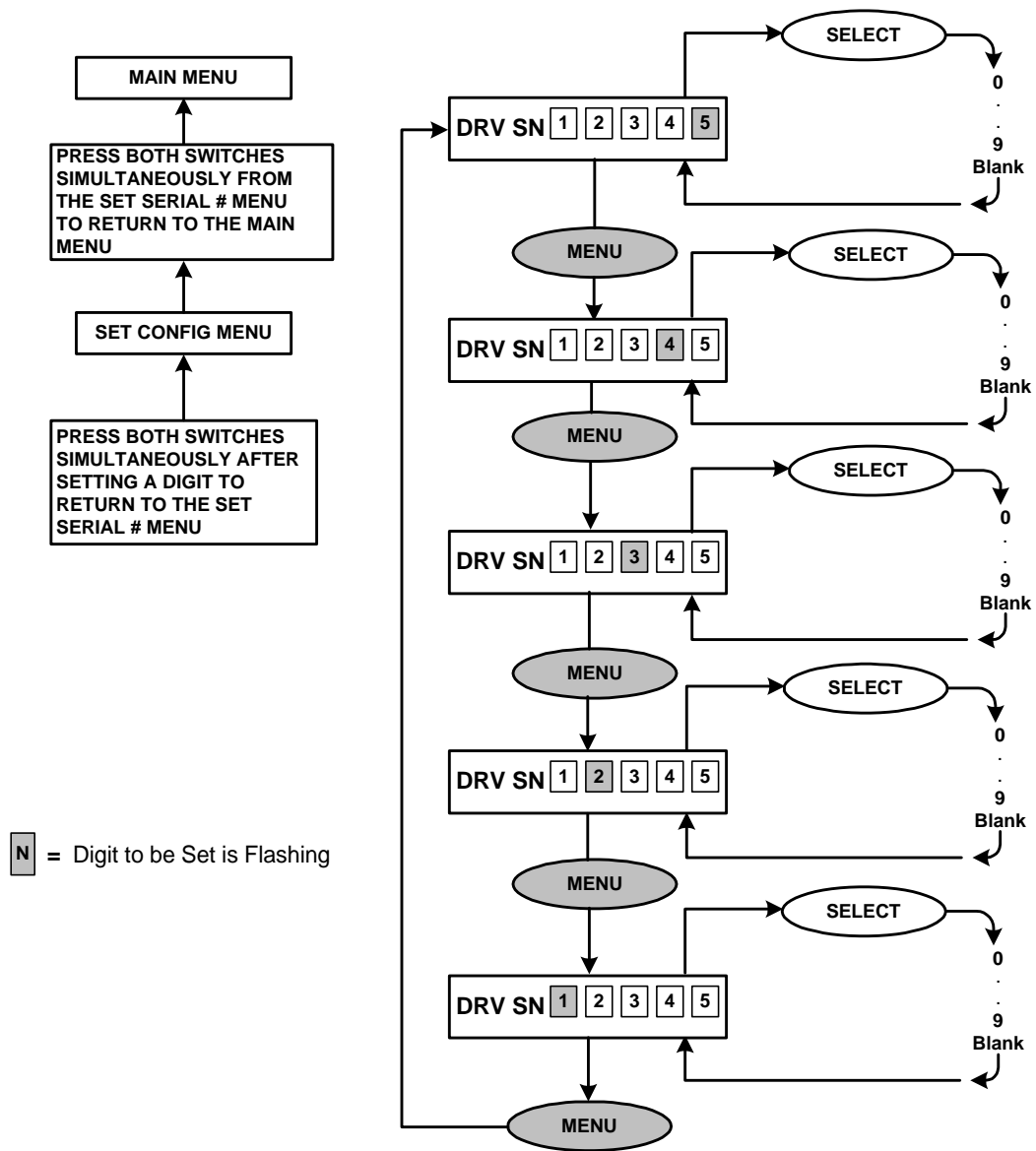


Figure 42. Set Serial # Menu

TEST MODE

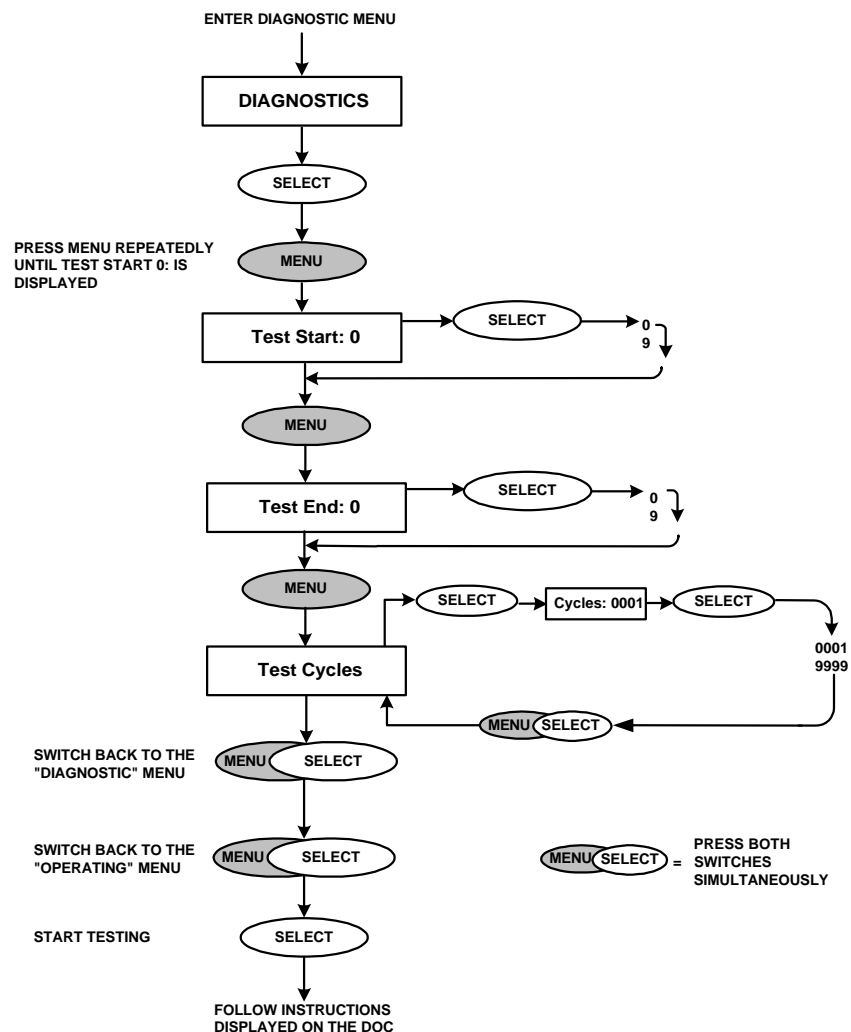
The LD 8100 automatically enters the Test mode each time the Drive is powered on. Power-on selftest diagnostics are run to verify the operational readiness of the drive.

After the LD 8100 successfully passes the power-on selftests, the LD 8100 enters the Operating mode. While the LD 8100 is in the Operating mode, the operator may manually enter the Diagnostic Test mode.

The level of selftest diagnostic coverage is configurable via the "Test Start:", "Test End" and "Test Cycles" options in the Diagnostics menu. Diagnostic tests 0 through 7 verify basic drive hardware operation. Test number 9 will Write Power Calibrate the current media in the Drive.

To perform any of the diagnostic test:

From the Operating Mode enter the "Diagnostic" menu and follow the steps in the flow chart below:



When errors are detected, the appropriate diagnostic message will be displayed on the DOC. Diagnostic messages are presented to the operator in the form of failed test codes and Field Replaceable Unit (FRU) mnemonics that can be relayed to a CE for repairing the malfunction.

If no problems are detected by the system function diagnostics, the display will show "Diagnostics Complete. Press TEST to restart drive...".

Pressing TEST resets the Drive.

MEDIA CARTRIDGE HANDLING

LM 8000 media is interchangeable between the LD 8100, LF 8120, LF 8600, and the LF 8602 drives. The LD 8100 can also read LM 6000 and LM 4000 media. Contact Plasmon LMS for availability and ordering information for the LM 4000 media option.

The LD 8100 accesses both sides of the media cartridge (see next figure). The LM 8000 cartridge must be inserted with side A facing up, the LM 6000 cartridge may be inserted into the Drive with either side facing up.

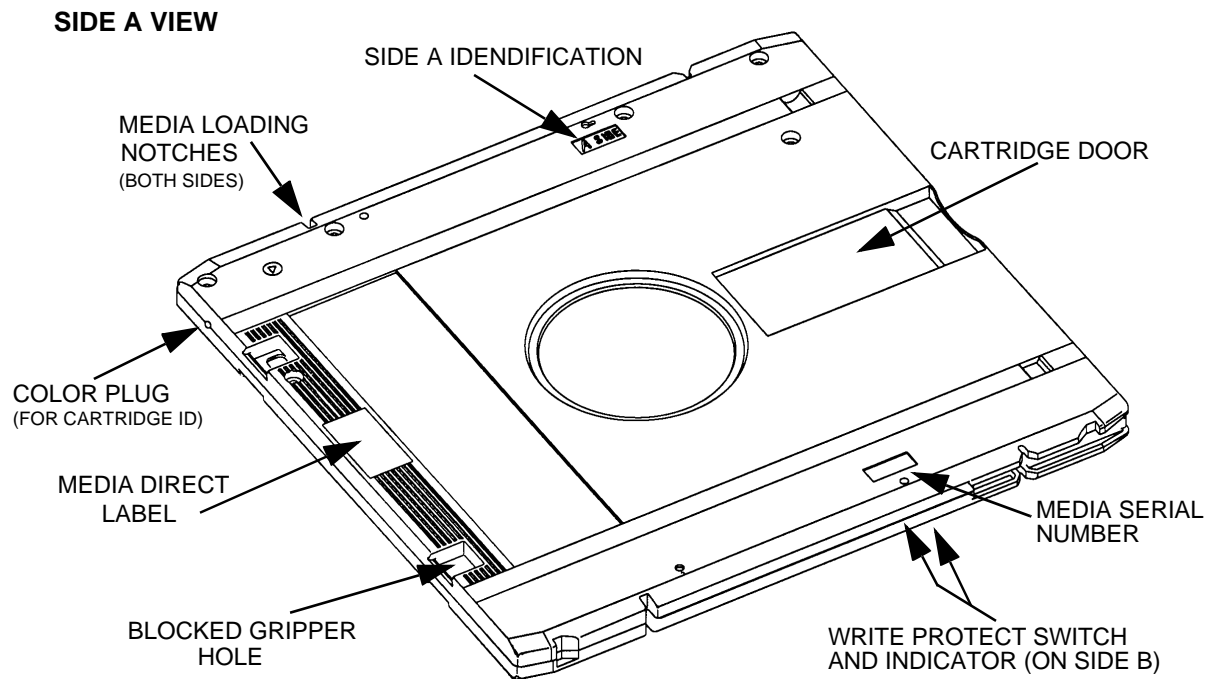


Figure 43. LM 8000 Media Cartridge

The media cartridge is mechanically keyed to insure proper orientation during insertion. The media cartridge also has a write protect switch which write protects both sides of the media when the switch is in the active position.

Observe the following precautions to assure data integrity when handling or storing the media cartridge:

- 1) Do not drop the media cartridge onto hard surfaces.
- 2) Do not physically abuse the cartridge exterior or access mechanisms.
- 3) Remove cartridges from the drive when the drive is going to be moved.
- 4) Apply labels only in designated areas. Refer to the Affixing Labels to the Media Cartridge section for instructions on label placement.
- 5) Avoid exposing the media cartridge to direct sunlight and condensation.
- 6) Do not expose the media cartridge to temperature extremes.
- 7) Stabilize the media cartridge to the specified operating temperature range 1 hour before use.
- 8) Do not open the media access shutter except during the cleaning process.
- 9) Do not touch the disk surface through the media access shutter.
- 10) Do not remove the disk from the cartridge.
- 11) Use, handle and store the media cartridge in clean office conditions.
- 12) Do not smoke while handling the media cartridge. Smoke is a prime source of disk contamination. All smoking materials should be kept away from areas where media cartridges are in use or stored.
- 13) Keep external surfaces of the cartridge clean. Dust the cartridge periodically with a soft, dry, lint-free cloth.

SETTING THE WRITE PROTECTION SWITCH

To manually write protect media, set the write protect switch on the media cartridge as indicated below.

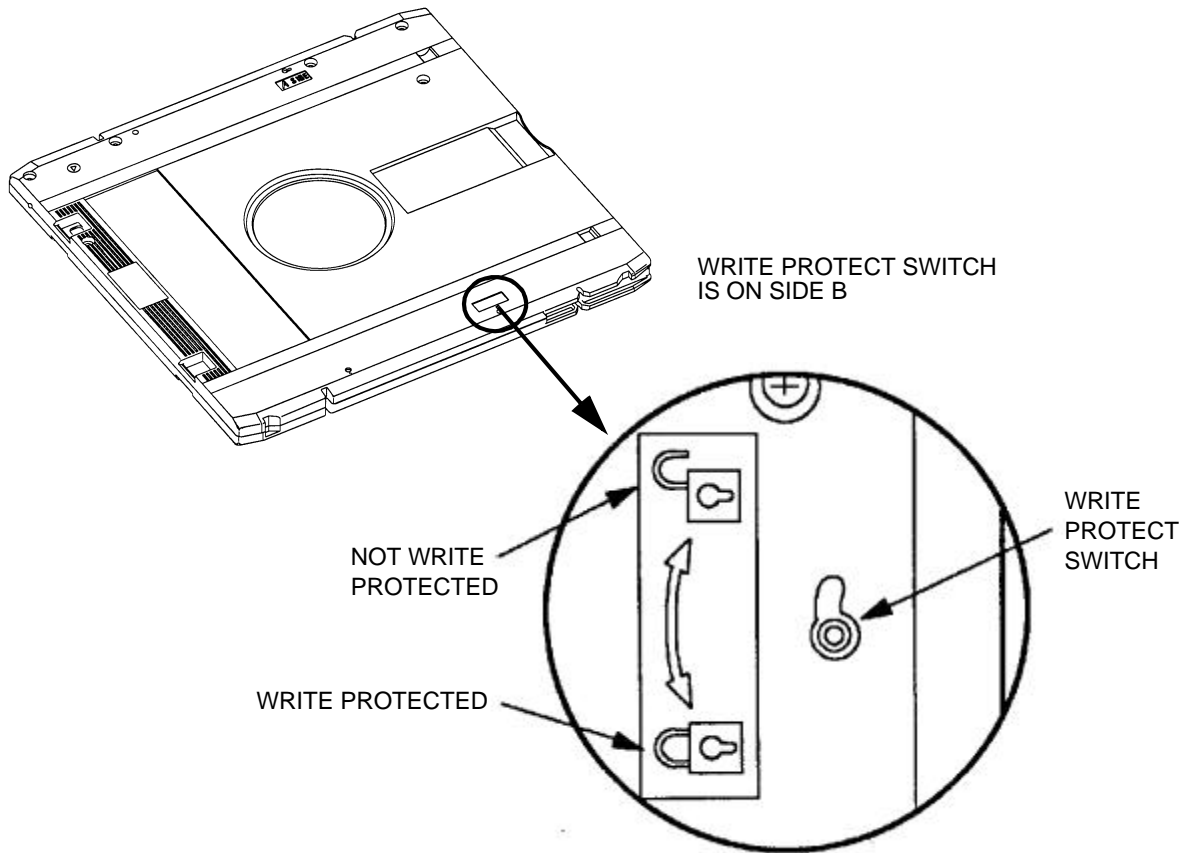


Figure 44. Manually Write Protecting the Data Cartridge

AFFIXING LABELS TO THE MEDIA CARTRIDGE

Title and content labels are supplied with each LM 8000 media cartridge and should be affixed before a media cartridge is inserted into the LD 8100. Before affixing the labels in the recessed areas (see figure below, ensure that the surface of the cartridge is clean and dry.

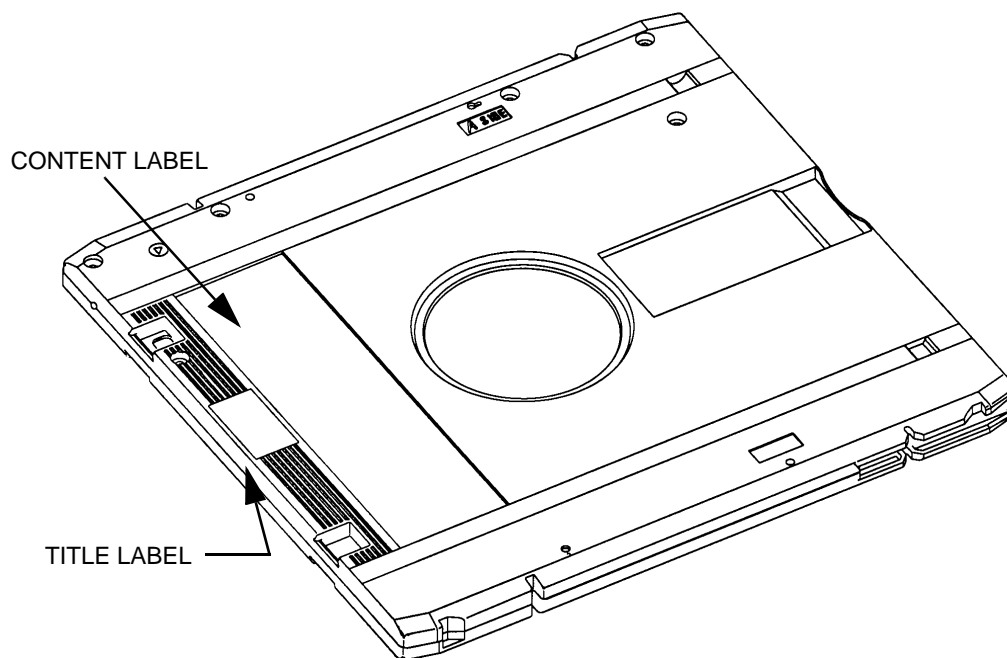
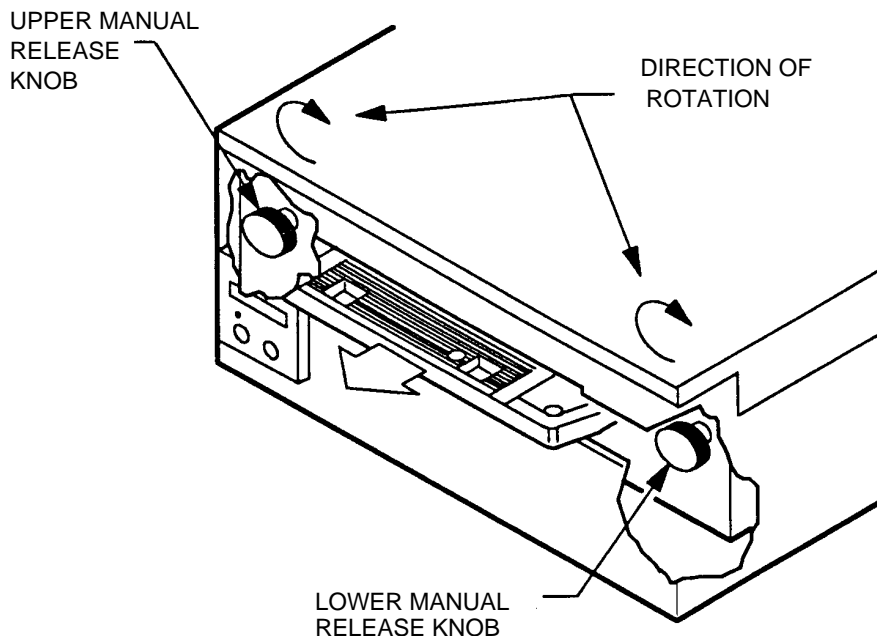


Figure 45. Label Placement

MANUAL RELEASE MECHANISM

If the power or drive fails with a media cartridge inserted, the media cartridge can be manually removed. Rotate the lower and upper Manual Release Knobs in the appropriate direction to open the drive baseplates, then remove the media cartridge. The figure below illustrates the location of the upper and lower Manual Release Knobs and the direction that each must be rotated to open the baseplates.



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Figure 46. Removing a Media Cartridge via the Manual Release Mechanism

Access to the Upper and Lower Manual Release Knobs is possible through the Media Cartridge Loading Slot, which is concealed behind the Bezel on the Rack Mount, Desktop and Tower configurations and the Registration Panel on the FileNet Library configuration.

- 1) Ensure that the AC Power Switch is set to the OFF (O) position.
- 2) If you are attempting to remove a media cartridge from either the Rack Mount, Desktop or Tower configurations, remove the Bezel Assembly by grasping both sides and pulling the Bezel Assembly up, away from the chassis.
- 3) Locate the Upper Manual Release knob inside the drive chassis directly behind the front panel.
- 4) Turn the Upper Manual Release knob in the clockwise direction until motion stops. Use the fingertips to rotate the Upper Manual Release knob.
- 5) Locate the Lower Manual Release knob inside the drive chassis directly behind the front panel.
- 6) Turn the Lower Manual Release knob in the clockwise direction until motion stops. Use the fingertips to rotate the Lower Manual Release knob.
- 7) Pull the media cartridge out of the drive.
- 8) If needed, re-install the Bezel Assembly.

OPERATOR MAINTENANCE

INSPECTING AND CLEANING FAN AND BLOWER FILTERS

Inspect the Filters at the rear of the drive on a 1 - 6 month schedule and clean, if necessary, to ensure that cooling air flow is not restricted. If the drive is exposed to excessive amounts of dust, decrease the time between inspection intervals.

Remove dust on the drive's exterior with a dry, lint-free cloth. Dust can migrate to the media cartridge and cause performance degradation.

CAUTION



Failure to maintain a clean Filter Element can reduce air flow through the drive. This will create high temperatures in the LD 8100 which may shorten the life of the drive.

Perform the following procedure to clean the Filter Elements:

- 1) Set the drive's AC power switch to the OFF (O) position and verify that the fan and blower have stopped running.
- 2) Remove each Outer Grill Half by grasping its sides and pulling it away from the chassis (see next figure).
- 3) Remove each Filter Element by pulling it away from the inside of the Grill.
- 4) Wash the Filter Element in warm soapy water.
- 5) Rinse the Element thoroughly and let it air dry.
- 6) Re-install the Filter Element in the Outer Grill Half.
- 7) Replace the Outer Grill Half by snapping it onto the inner Grill half.

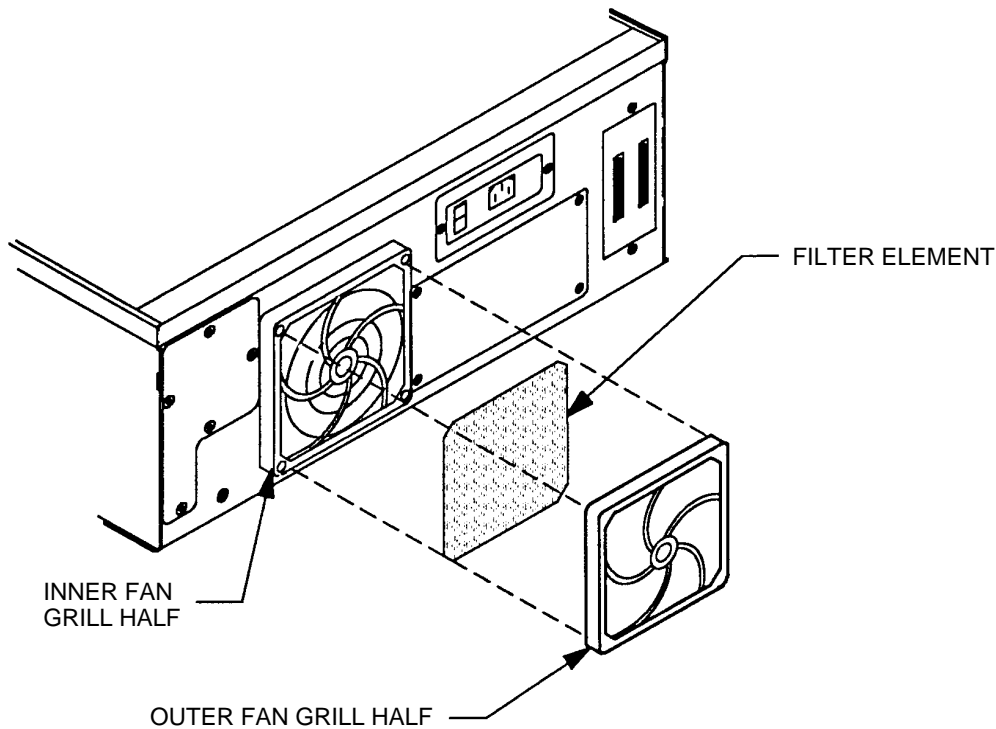


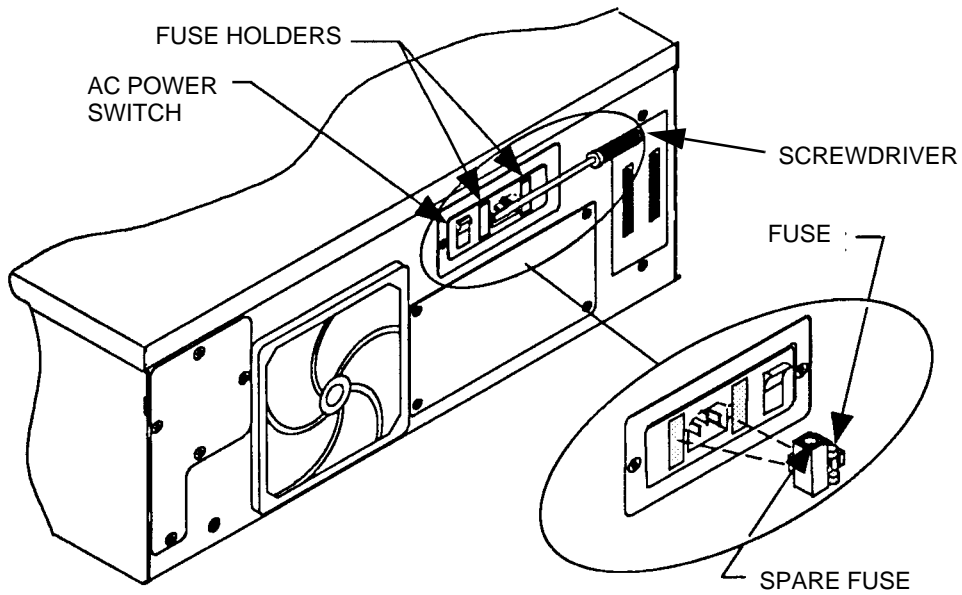
Figure 47. Removing the Fan Filter Element from the LD 8100

REPLACING FUSES

Two fuses and two spare fuses are integrated into the power receptacle on the rear panel of the LD 8100 (refer to the next figure). If the drive will not power up, one or both of the fuses may have blown.

To replace a blown fuse with a spare fuse:

- 1) Set the drive's AC power switch to the OFF (O) position and remove the AC power cord.
- 2) Insert a small, flat-blade screwdriver between the fuse holder and the receptacle housing, as shown below.
- 3) Gently pry the fuse holder open. Slide the fuse holder out of the receptacle and visually inspect the active fuse to determine if it is blown. If the active fuse is blown, proceed to step 4); otherwise, proceed to 5).
- 4) Remove the active fuse and discard it. Remove the spare fuse from its storage location and insert the fuse between the fuse housing and the retaining clip.
- 5) Re-install the fuse holder into the receptacle, sliding the holder into the receptacle until the holder is aligned flush with the receptacle housing.
- 6) Refer to the Power - on procedure section for instructions on applying power to the unit.
- 7) If power is not restored, check the other fuse.



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Figure 48. Removing Fuse from AC Power Receptacle (Rear View of LD 8100)

WARNING



If a spare fuse blows immediately after you have replaced the original fuse, contact your next level of support. Do not replace the spare fuse and attempt to power on the unit.

Contact your next level of support.

This may be a symptom of a more serious problem, either with the drive's power supply or with the system power.

MEDIA CLEANING

Media disk surfaces should be inspected periodically and cleaned on an as-needed basis.

MEDIA CLEANING USING CLEANING KIT P/N 97662550

The Cleaning Kit P/N 97662550 provides a semi-automated cleaning method for cleaning the Plasmon LM 4000 and LM 6000 and LM 8000 12 inch optical media. Follow the instructions given in the enclosed Cleaning Instructions.

The Kit contains the following items:

- One 12 inch media cleaning fixture
- Containers of cleaning liquid
- Package of 500 cleaning tissues
- One pair of latex gloves
- Cleaning Instructions

GERMAN TRANSLATIONS/ÜBERSETZUNGEN INS DEUTSCHE

ABMESSUNGEN UND GEWICHT

Tabelle 1 zeigt die Abmessungen des LD 8100 Modell für Gestellmontagen-, Desktop- und Turm-, FileNet- und Plasmon Library-Konfiguration. Diese Abmessungen enthalten keine Datenträgerkassetten und Schnittstellenkabel. Abmessungen für die FileNet- und Plasmon Library-Konfigurationen mit einer Datenträgerkassette und Schnittstellenkabel finden Sie in der Produktspezifikation für den LD 8100 (Bestellnr. 97653977).

Abmessungen für die LD 8100-Konfigurationen

ABMESSUNG	GESTELL-MONTAGE	DESKTOP	TURM	FILENET	PLASMON
Länge des Gehäuses:	60.9 cm	64.3 cm	64.3 cm	64.3 cm	64.3 cm
Mit Einbausatz:	65.3 cm ⁽¹⁾	67.3 cm ⁽²⁾	67.3 cm ⁽²⁾	67.3 cm ⁽³⁾	
			66.6 cm ⁽⁴⁾		
Breite des Gehäuses:	43.0 cm	43.0 cm	16.9 cm	16.9 cm	43.0 cm
Mit Einbausatz:	47.5 cm ⁽¹⁾	48.6 cm ⁽²⁾	18.8 cm ⁽²⁾		
			30.5 cm ⁽⁴⁾		
Höhe des Gehäuses:	16.9 cm	16.9 cm	48.6 cm	43.0 cm	16.9 cm
Mit Einbausatz:	17.78 cm ⁽¹⁾	18.8 cm ⁽⁵⁾	63.2 cm ⁽⁶⁾	43.8 cm ⁽³⁾	
Einbautiefe:	60.9. cm ⁽⁷⁾				

- (1) inkl. Frontblende.
- (2) inkl. Frontblende und Gehäuserahmen.
- (3) inkl. Registriertafel.
- (4) inkl. Sockel und Sockelrahmen.
- (5) inkl. Gummifüße.
- (6) inkl. Gehäuserahmen, Sockel und Fußrollen.
- (7) Einschubtiefe des Laufwerks in das Gestell.

Die folgenden Gewichtsangaben enthalten keine Schnittstellenkabel oder optische Datenträger:

Gestellmontage:	30,5 kg
Desktop:	35,9 kg - inkl. Gehäuse
Turm:	41,8 kg - inkl. Gehäuse und Sockel
FileNet Library:	31,4 kg - einschließlich Registriertafel
Plasmon Library:	30,5 kg

TEMPERATUR, LUFTFEUCHTIGKEIT UND SEEHÖHE

Tabelle 2 enthält die Betriebs-, außer Betrieb-, Lager- und Übergangsgrenzwerte für Temperatur, Feuchtigkeit und Meereshöhe des LD 8100.

Temperatur-, Luftfeuchtigkeits- und Höhengrenzwerte

BEDINGUNG	BETRIEB	RUHE	LAGERUNG/ TRANSPORT ⁽¹⁾
Temperatur	10° bis 42° C ⁽²⁾	-40° bis 66° C	-40° bis 66° C
Maximale Änderungsrate	11° C/h	20° C/h	20° C/h
Luftfeuchtigkeit (Nicht Kondensierend)	10 bis 90%	5 bis 95%	5 bis 95%
Maximale Änderungsrate	10%/h	10%/h	10%/h
Maximale Feuchtkugeltemperatur ⁽³⁾	28° C	46° C	46° C
Minimaler Taupunkt	2° C	2° C	2° C
Seehöhe ⁽⁴⁾	-300 bis 3000 m	-300 bis 3000 m	Lagerung: -300 bis 3000 m Transport: -300 bis 12000 m

- (1) Die Lagerungsangaben beziehen sich auf maximal 90 Tage in der Plasmon LMS-Verpackung. Kondensation ist nicht zulässig. Die Transportangaben gelten für maximal 1 Woche in einem werkseitig verschlossenen Behälter.
- (2) Falls nicht anders angegeben ist die maximale Betriebstemperatur für ein freistehendes Laufwerk auf Meereshöhe. 42 C. Die maximale Betriebstemperatur über 300 m Höhe wird bei 2000 m Höhe linear auf 38 C herabgesetzt.
- (3) Weitere Informationen zu Temperatur- und Luftfeuchtigkeitsgrenzwerten im Betriebszustand finden Sie in der Produktspezifikation für den LD 8100/ LF 8600/LF 8602 (Bestellnr. 97663035).

WECHSELSTROMBEDARF

Der LD 8100 ist mit einem im Wechselstromschalter integrierten, geerdeten Netzanschluß und mit Sicherungen an der Geräterückseite ausgerüstet. Zwei separate Sicherungen sind im Stromanschluß enthalten. Ein Verfahren zum Auswechseln der Sicherungen finden Sie in Abschnitt 6.2.

Das Netzteil des Laufwerks erfordert die in Tabelle 4 angegebenen Netzspannungen. Das Netzteil ist selbstregulierend und erfordert kein mechanisches Schalten der Eingangsspannung oder Frequenzwahl.

Wechselstrombedarf

FREQUENZ	WECHSELSPANNUNG	LEISTUNG (TYPISCH)	EINSCHALTSTROMSTOSS(1)	NENNLEISTUNG, MIN
47 bis 66 Hz	86,7 bis 128 V	1,5 A	5,5 A	15 A
47 bis 66 Hz	173,4 bis 268 V	0,75 A	2,75 A	15 A

⁽¹⁾ Weniger als 1 Sek., Kaltstart

WECHSELSTROMERDUNG

Das Wechselstromkabel des LD 8100 legt den LD 8100 durch die Wechselstromversorgung an Erde. Die Wechselstromversorgung des Standorts wiederum muß diese Erdung an einen Erdanschluß legen. Alle Wechselstromverbindungen des Standorts müssen denselben Erdanschluß verwenden.

Der Erdanschlußteil an der Geräterückseite kann auch dazu verwendet werden, die Gehäuseerdung an einen Erdanschluß zu legen. Dieser Erdanschlußteil ist ein 6 mm M4-Bolzen mit Mutter und Sicherungsscheibe.

WECHSELSTROMKABEL

Die Art des Wechselstromkabels, das mit dem LD 8100 geliefert wird, hängt von der bestellten Konfiguration ab.

SCHUTZFUNKTIONEN DER STROMVERSORGUNG

Die Stromversorgung des LD 8100 stellt Über- und Unterspannungsschutz, Überstromschutz, Stromausfallerkennung und Übertemperaturschutz zur Verfügung. Sollte ein Parameter außerhalb des Wertebereichs liegen, schaltet der LD 8100 die Gleichstromausgänge des Netzteils aus. Wenn die interne Temperatur der Stromversorgung z.B. den Wert 80 C +/- 5 C erreicht, wird das Netzteil ausgeschaltet. Nachdem das Problem korrigiert wurde, kann der Strom wieder eingeschaltet werden, indem der Wechselstromschalter zuerst aus- (OFF) und dann wieder eingeschaltet (ON) wird.

KIPPTOLERANZ

Die LD 8100 Gestellmontagen-, Desktop- und Plasmon Library-Konfigurationen ermöglichen den Betrieb mit einer Kipptoleranz von 10 Grad aus der waagrechten Stellung. Die Turm- und FileNet Library-Konfigurationen ermöglichen den Betrieb mit einer Kipptoleranz von 10 Grad aus der senkrechten Stellung. Der LD 8100 ist nicht für dynamisches Kippen konstruiert.

WÄRMEAUSSTRAHLUNG

Das Laufwerk weist während eines Schreib-Lese-Vorgangs eine typische Wärmeabgabe von 146 kcal/h (BTU/h) auf. Wenn Datenträgerkassetten mit der Maximalgeschwindigkeit des Laufwerks eingelegt, geladen, eingeschaltet, ausgeschaltet, entladen und entfernt werden, weist der LD 8100 eine typische Wärmeabgabe von 182 kcal/h (725 BTU/h) auf.

GRENZWERTE FÜR DIE STAUBKONZENTRATION

Der LD 8100 ist für den Betrieb in einem Büro- oder Computerraum konstruiert. Die Umgebung muß niedrige Staubwerte aufweisen. Der LD 8100 filtert die eingehende Luft, um die Menge an Feststoffteilchen, die in das Laufwerk eintreten, zu vermindern. Dieser Filter ist jedoch gegen kleine Teilchen (dazu gehört auch Tabakrauch), die sich auf den Datenträgern und optischen Komponenten absetzen, nicht effektiv, was eine Verschlechterung der Laufwerksleistung zur Folge hätte.

WARNHINWEISE

Der LD 8100 ist als Lasergerät eingestuft. Als solches unterliegt es den US-amerikanischen Anforderungen an Lasergeräte. Die in Abbildung 6 dargestellten Warnhinweise sind gemäß Bundesverordnungen erforderlich und dürfen nicht vom LD 8100 entfernt werden.

WARNUNG



Um Personenverletzungen zu vermeiden, sind für das Auspacken, Wiederverpacken und den Transport des LD 8100 zwei Personen erforderlich. Der Versuch, den LD 8100 ohne Hilfe einer zweiten Person zu transportieren oder anzuheben, kann zu Personenverletzungen führen. Für den Transport des LD 8100 innerhalb des Gebäudes wird die Verwendung eines Handwagens empfohlen. Geeignete Vorsichtsmaßnahmen gegen plötzliche Unebenheiten und Erschütterungen sind zu treffen.

WIEDERVERPACKEN DES LD 8100

Der LD 8100 sollte in seiner Originalverpackung wiederverpackt werden. Halten Sie sich beim Verpacken des LD 8100 für den Transport an das folgende Verfahren.

VORSICHT



Die Grundplatten müssen in geschlossener Stellung sein, bevor das Laufwerk wieder versendet werden kann, um die Beschädigung des Hebemechanismus zu vermeiden. Wählen Sie die Option "parken" im Konfigurationsmodus oder führen Sie das in Schritt 2) beschriebene manuelle Verfahren aus, um die Grundplatten zu schließen.

Ein Versand des LD 8100 ohne Schließen der Grundplatten, kann zu Schäden am Laufwerk führen, die nicht von der Garantie gedeckt sind.

- 1) Entfernen Sie sämtliches Verpackungsmaterial aus dem Karton außer dem Verpackungsmaterial am Boden des Kartons.

WARNUNG



Für das Wiederverpacken und den Transport des LD 8100 sind zwei Personen erforderlich. Der Versuch, den LD 8100 ohne Hilfe einer zweiten Person zu transportieren oder anzuheben, kann zu Personenverletzungen führen. Für den Transport des LD 8100 innerhalb des Gebäudes wird die Verwendung eines Handwagens empfohlen. Geeignete Vorsichtsmaßnahmen gegen plötzliche Unebenheiten und Erschütterungen sind zu treffen.

TURMKONFIGURATION

- 1) Entfernen Sie alle Datenträgerkassetten aus dem Laufwerk.

VORSICHT



Die Grundplatten müssen in geschlossener Stellung sein, bevor das Laufwerk wieder versendet werden kann, um die Beschädigung des Hebemechanismus zu vermeiden. Wählen Sie die Option "parken" im Konfigurationsmodus oder führen Sie das in Schritt 2) beschriebene manuelle Verfahren aus, um die Grundplatten zu schließen.

- 2) Wählen Sie die Option "parken" um den LD 8100 auf den Transport vorzubereiten. Falls das Laufwerk nicht funktioniert, folgen Sie Nachstehenden Schritten:
- a Stellen Sie sicher, daß der Wechselstromschalter ausgeschaltet (OFF - O) ist.
 - b Entfernen Sie den Frontblendensatz.
 - c Drehen Sie die manuellen Entriegelungsknöpfe, die sich auf der Vorderseite des Laufwerks befinden, entgegen dem Uhrzeigersinn, bis sie sich nicht mehr drehen lassen.
 - d Bauen Sie den Frontblendensatz wieder ein.

WARNUNG



Um Personenverletzungen zu vermeiden, sind für das Auspacken, Wiederverpacken und den Transport des LD 8100 zwei Personen erforderlich. Der Versuch, den LD 8100 ohne Hilfe einer zweiten Person zu transportieren oder anzuheben, kann zu Personenverletzungen führen. Für den Transport des LD 8100 innerhalb des Gebäudes wird die Verwendung eines Handwagens empfohlen. Geeignete Vorsichtsmaßnahmen gegen plötzliche Unebenheiten und Erschütterungen sind zu treffen.

- 3) Entriegeln Sie die Gleitrollen und rollen Sie das Laufwerk vorsichtig zum Aufstellort.
- 4) Entfernen Sie sämtliches Verpackungsmaterial aus dem Karton außer dem unteren Polster.
- 5) Lassen Sie die Rampe des Kartons auf den Boden herunter.
- 6) Rollen Sie den Turm vorsichtig auf die Rampe auf den unteren Polster.
- 7) Verriegeln Sie die Gleitrollen.
- 8) Bringen Sie die Rampe in der Palette in eine senkrechte Stellung.
- 9) Positionieren Sie die Schaumstoffleisten, den vorderen und hinteren Schaumstoffpolster wie in Abbildung 17 dargestellt.
- 10) Legen Sie die Netz- und Schnittstellenkabel, das Benutzerhandbuch und das restliche Zubehör auf das Zubehörfach und legen Sie dieses Fach auf die Schaumstoffpolster.
- 11) Legen Sie den Karton über das Laufwerk.
- 12) Binden Sie den Karton an jedem Ende an der Palette fest.

VORSICHT



Wenn der LD 8100 in ein Gerätegestell oder -Gehäuse eingebaut ist, stellen Sie sicher, daß die interne Temperatur des Gestells oder Gehäuses die in der Produktspezifikation und dem vorliegenden Handbuch angegebenen Betriebsgrenzen nicht überschreiten. Senkrecht gestapelte Einheiten erfordern spezielle Aufmerksamkeit im oberen Bereich, in dem höhere Temperaturen herrschen.

In der nächsten Tabelle sind die optimalen Freiraumweiten für Luftzirkulation, zum Einlegen/Entfernen von Kassetten, zur Wartung und Kabelverlegung angeführt.

Freiraumweiten für die Installation des LD 8100

LD 8100	VORNE	HINTEN ⁽¹⁾	SEITEN ⁽²⁾	OBEN ⁽³⁾	UNTEN
Desktop	51 cm ⁽⁴⁾	12.7 cm	12.7 cm	90 cm	
Gestellmontage	116 cm ⁽⁵⁾	12.7 cm	12.7 cm	90 cm	12.7 cm ⁽²⁾
Turm	51 cm ⁽⁴⁾	12.7 cm	12.7 cm	12.7 cm	
Library	116 cm	12.7 cm	12.7 cm	90 cm	12.7 cm

(1) Erforderlich, um das Knicken und Verbiegen von Kabeln zu verhindern.

(2) Erforderlich, um eine ausreichende Durchlüftung sicherzustellen.

(3) Erforderlich, um Abdeckungen während der Installation zu entfernen.

(4) Erforderlich, um Zugang zur Bedienerkonsole des Laufwerks zu haben und zum Laden und Entladen von Datenträgern.

(5) Erforderlich, um das LD 8100-Gestell auf seinen Schienen vollständig ausfahren zu können.

Stellen Sie sicher, daß der Aufstellort ein Luftstromvolumen von 3,2 m³/min (112 cfm) aufnehmen kann. Stellen Sie außerdem sicher, daß die Betriebsumgebung frei von Staub und anderen Verunreinigungen, wie etwa Tabakrauch, ist. **WARNUNG**



Um Brand- oder Stromstoßschäden zu vermeiden, darf der LD 8100 weder Regen noch Feuchtigkeit ausgesetzt werden. Lassen Sie Wartungsarbeiten nur von qualifizierten Technikern ausführen.

Isolieren Sie die Einheiten vom Hauptnetz im Falle eines Brandes oder einer anderen Notsituation, indem Sie die Stecker aus den Steckdosen ziehen. Sollte das Herausziehen der Stecker nicht möglich oder praktisch sein, isolieren Sie die Einheiten vom Hauptnetz, indem Sie das Hauptnetz des Systems ausschalten.

WARNUNG



Die betriebsfremde Nutzung von Bedienelementen oder Reglern oder die Durchführung von Verfahren, die nicht im vorliegenden Handbuch angegeben sind, kann zu einer gefährlichen Laserstrahlungsbelastung führen.

Die Sicherheitsverriegelungen in der Einheit dürfen nicht entfernt werden. Vermeiden Sie es, direkt in den Laserstrahl oder dessen Spiegelung auf einer reflektierenden Oberfläche zu blicken. Unsichtbare Laserstrahlung kann freigesetzt werden, wenn die Einheit offen ist und die Sicherheitsverriegelungen nicht mehr intakt sind.

4.2. TURMMONTAGE

WARNUNG



Während der Installation des LD 8100 in das Gestell werden zwei Personen benötigt, um das Laufwerk in die Einbaustellung anzuheben.

WARNUNG



Aufgrund des Gewichts des LD 8100 muß die Stabilität des Gestells während und nach der Installation berücksichtigt werden. Wenn der LD 8100 auf seinen Schienen voll ausgefahren ist, kann das Gestell instabil werden und umkippen. Seien

Sie vorsichtig, wenn Sie den LD 8100 installieren oder aus dem Gestell ausfahren. Wenn Stützbeine für das Gestell vorhanden sind, müssen sie vor der Installation herausgezogen werden.

- 13) Überprüfen Sie, ob das Gestell stabil ist und das Gewicht des LD 8100 tragen kann.

WARNUNG



Zwei Personen werden zum Anheben des LD 8100 benötigt. Der Versuch, den LD 8100 ohne Hilfe einer zweiten Person zu heben, kann zu Personenverletzungen führen.
hinweis

HINWEIS

Die interne Länge des SCSI-Kabels beträgt für jeden LD 8100 etwa 340 mm. Dieser Abstand muß als Teil der SCSI-Gesamtkabellänge berücksichtigt werden.

ANSCHLUß DES NETZKABELS

So schließen Sie das Netzkabel an den LD 8100 an:

- 1) Stellen Sie sicher, daß ein Wechselstromkabel zur Installation bereitliegt. Die Art des zu installierenden Wechselstromkabels hängt von der Einbaustelle ab.

VORSICHT



Der LD 8100 muß an ein Stromverteilersystem angeschlossen sein, das eine direkte Verbindung zur Erdung hat (Netzwerk mit abgeschlossener Erde (TT, Terminated Terra)/geerdet). Diese Einheit ist nicht zur Nutzung auf einer erdfreien Masse (Netzwerk mit unterbrochener Erde (IT, Interrupted Terra)) geeignet.

- 2) Überprüfen Sie, ob die Stromversorgung eingeschaltet ist und der Stecker des Wechselstromkabels in die Wechselstromsteckdose am Aufstellort paßt.
 - 3) Überprüfen Sie, ob der Wechselstromschalter an der Geräterückseite des LD 8100 ausgeschaltet (OFF - O) ist.
 - 4) Stecken Sie den Buchsenstecker des Wechselstromkabels in die Wechselstromsteckdose an der Geräterückseite des LD 8100.
 - 5) Stecken Sie den Stecker des Wechselstromkabels in die Steckdose.
-
- 1) Entfernen Sie den Frontblendensatz, indem Sie ihn an beiden Seiten festhalten und nach oben weg vom Gehäuse ziehen.

WARNUNG



Es werden zwei Personen benötigt, um den LD 8100 vom Gestell zu entfernen. Der Versuch, den LD 8100 ohne Hilfe einer zweiten Person zu heben, kann zu Personenverletzungen führen.

- 2) Heben Sie beide Auslöseriegel an den Seiten an und fahren Sie das Laufwerk vom Gestell voll aus.

EINSCHALTVERFAHREN

Der LD 8100 wird mit Hilfe des Wechselstromschalters an der Geräterückseite eingeschaltet. Die ON-Stellung (eingeschaltet) wird durch ein (I)-Zeichen gekennzeichnet, die OFF-Stellung (ausgeschaltet) wird durch ein (O)-Zeichen gekennzeichnet.

HINWEIS

Nachdem Sie das Laufwerk ausgeschaltet haben, warten Sie eine Sekunde, bevor Sie es wieder einschalten.

HINWEIS

Die Seriennummer, die dem Laufwerk zugeordnet wird, muß mit den letzten 5 Ziffern der tatsächlichen Seriennummer des Laufwerks übereinstimmen, damit eine exakte interne Ereignisprotokollierung stattfinden kann. Die tatsächliche Seriennummer des Laufwerks befindet sich an der Rückseite des Laufwerksgehäuses.

HINWEIS

Schalten Sie das Laufwerk nach Rücksetzung der Gerätekennung aus, warten Sie 1 Sekunde und schalten Sie das Laufwerk dann wieder ein. Dies stellt sicher, daß die neue Gerätekennung vom SCSI-Bus anerkannt wird.

HINWEIS

Die Anzeige WRT PROT auf der Bedienerkonsole ist beleuchtet, wenn der Schreibschutz aktiviert ist.

ANZEIGEN DER DIAGNOSEERGEBNISSE ODER DURCHFÜHREN VON DIAGNOSEVERFAHREN

VORSICHT



Da die Initialisierungsvariablen nicht wiederhergestellt werden können, nachdem sie gelöscht wurden, sollte dieser Vorgang nur von einem ausgebildeten Ingenieur des Kundendienstes durchgeführt werden.

HINWEIS

Die Seriennummer, die dem Laufwerk zugeordnet wird, muß mit den letzten 5 Ziffern der tatsächlichen Seriennummer des Laufwerks übereinstimmen, damit eine exakte interne Ereignisprotokollierung stattfinden kann. Die tatsächliche Seriennummer des Laufwerks befindet sich an der Rückseite des Laufwerksgehäuses.

HANDHABUNG VON DATENTRÄGERKASSETTEN

Achten Sie bei der Handhabung und Lagerung von Datenträgerkassetten auf die folgenden Vorsichtsmaßnahmen, um die Datenintegrität zu sichern.

- 1) Die Datenträgerkassette niemals auf harte Flächen fallen lassen.
- 2) Das Kassettengehäuse oder den Zugriffsmechanismus nicht mißbrauchen.
- 3) Die Datenträgerkassette nicht im Laufwerk lagern.
- 4) Die Kassetten vor einem Transport aus dem Laufwerk entfernen.
- 5) Etiketten nur an den vorgesehenen Stellen anbringen.
- 6) Die Datenträgerkassette vor direkter Sonneneinstrahlung und Kondensation schützen.

VORSICHT



Zur Vermeidung einer Beschädigung der Datenträger wird dringendst empfohlen, die in der Spezifikation für LM 8000-Datenträger (Bestellnr. 97663080) angegebenen Umgebungsbeschränkungen sorgfältig zu beachten.

- 7) Die Datenträgerkassette nicht extremen Temperaturen aussetzen.
- 8) Die Datenträgerkassette eine Stunde vor Gebrauch auf den angegebenen Betriebstemperaturbereich stabilisieren.
- 9) Die Zugangsabdeckung des Datenträgers nicht öffnen.
- 10) Die Plattenoberfläche nicht durch die Zugangsabdeckung berühren.
- 11) Die Magnetplatte nicht aus der Kassette herausnehmen.
- 12) Die Datenträgerkassetten in einer sauberen Büroumgebung benutzen, handhaben und lagern.
- 13) Während der Handhabung von Datenträgern nicht rauchen. Asche und Tabak sind eine Hauptquelle für die Verunreinigung von Magnetplatten. Alle Rauchtensilien sind aus den Bereichen fernzuhalten, in denen Datenträger benutzt oder gelagert werden.
- 14) Die Außenflächen der Kassetten sauber halten. Die Kassetten regelmäßig mit einem weichen, trockenen, fusselreien Tuch reinigen.

MANUELLER AUSLÖSEMECHANISMUS

Wenn der Strom oder das Laufwerk ausfällt, während sich eine Datenträgerkassette im Laufwerk befindet, kann die Datenträgerkassette manuell entfernt werden. Drehen Sie die oberen und unteren manuellen Auslöseknöpfe in die entsprechende Richtung, um die Grundplatten des Laufwerks zu öffnen, und entfernen Sie dann die Datenträgerkassette. Abbildung 2 zeigt die Positionen der oberen und unteren manuellen Auslöseknöpfe und die Richtung, in die jeder Knopf gedreht werden muß, um die Grundplatten zu öffnen.

VORSICHT



Wenn die Luftfilter nicht sauber gehalten werden, wird möglicherweise der Luftstrom durch das Laufwerk reduziert. Dies kann zu erhöhten Temperaturen im LD 8100 und dadurch zu einer Beschädigung des LD 8100 führen.

AUSWECHSELN VON SICHERUNGEN

Wie in Abschnitt 2.8. des vorliegenden Handbuchs dargestellt, sind zwei Sicherungen und zwei Ersatzsicherungen in die Netzbuchse an der Geräterückseite des LD 8100 eingebaut. Wenn sich das Laufwerk nicht einschalten läßt, könnte eine oder beide Sicherungen durchgebrannt sein.

So tauschen Sie eine durchgebrannte Sicherung gegen eine Ersatzsicherung aus:

- 1) Stellen Sie den Wechselstromschalter des Laufwerks auf AUS (0), und ziehen Sie das Netzkabel ab.
- 2) Fügen Sie einen kleinen Flachsraubenzieher zwischen dem Sicherungshalter und dem Gehäuse der Buchse ein.
- 3) Öffnen Sie den Sicherungshalter vorsichtig. Ziehen Sie den Sicherungshalter aus der Buchse heraus und überprüfen Sie die aktive Sicherung, um festzustellen, ob sie durchgebrannt ist. Wenn die Sicherung durchgebrannt ist, fahren Sie mit Schritt 4) fort, ansonsten mit Schritt 5).
- 4) Entfernen Sie die aktive Sicherung und entsorgen Sie sie. Nehmen Sie die Ersatzsicherung aus deren Aufbewahrungsort und fügen Sie die Sicherung zwischen dem Sicherungsgehäuse und der Halteklammer ein.
- 5) Installieren Sie den Sicherungshalter wieder in der Buchse; schieben Sie dabei den Halter in die Buchse, bis der Halter bündig auf das Gehäuse der Buchse ausgerichtet ist.
- 6) Wenn die Stromversorgung nicht wiederhergestellt wird, prüfen Sie die andere Sicherung.

WARNUNG



Sollte eine Ersatzsicherung unmittelbar nach dem Ersetzen der Originalsicherung entfallen, dürfen Sie diese Sicherung {U}nicht{D} mehr ersetzen.

Wenden Sie sich an die nächste Stufe technischer Unterstützung.

Dies könnte das Symptom eines schwerwiegenden Problems sein, das entweder am Netzteil des Laufwerks oder in der Stromversorgung liegt.

REINIGUNG DES DATENTRÄGERS

Die Oberflächen von Datenträgerplatten sollten regelmäßig untersucht und bei Bedarf gereinigt werden.

Benutzen Sie den Plasmon LMS Datenträger-Reinigungssatz (Teile-Nr. 97655378), um die Plattenoberflächen zu reinigen. Der Reinigungssatz enthält einen kommerziellen Glasreiniger, ein fusselfreies Tuch und eine Haltevorrichtung, um die Kassettenür offen zu halten.

Beide Seite (A und B) der Platte müssen durch die Klappenöffnungen der Datenträgerkassette gereinigt werden, während die Platte noch im Laufwerk ist. Dazu wird die Kassettenklappe an jeder Seite der Datenträgerkassette geöffnet.

Federhebel befinden sich am linken und rechten Rand der Datenträgerkassette. Drücken Sie diesen Hebel nach unten um die Klappe auf einer Seite zu öffnen. Drehen Sie die Platte jeweils nur in eine Richtung, und versuchen Sie, die Durchgänge zu überlappen, um sicherzustellen, daß die Platte vollständig gereinigt wird.

So reinigen Sie die Magnetplatte:

- 1) Befeuchten Sie ein Tuch mit einem Glasreiniger.
- 2) Halten Sie die Datenträgerkassette mit einer Hand.
- 3) Ziehen Sie den Türhebel mit dem Zeigefinger Ihrer anderen Hand nach unten. Beachten Sie, welche Seite (A oder B) Sie reinigen.
- 4) Halten Sie die Kassettenür an der Oberkante (wie in Abbildung 50 dargestellt) offen, und installieren Sie die Haltevorrichtung, um die Tür offen zu halten.
- 5) Wischen Sie die Plattenoberfläche mit einem fusselfreien Tuch (das mit Glasreiniger befeuchtet wurde) ab, beginnen Sie dabei in der Mitte und arbeiten Sie sich an den äußeren Rand vor. Nur der Teil der Oberfläche, der bei geöffneter Kassettenklappe sichtbar ist, kann bei jedem Durchgang gereinigt werden.

Achten Sie darauf, daß alle Teile der Platte gereinigt werden.

Um eine Beschädigung der Oberfläche der Datenträgerplatte zu verhindern, achten Sie darauf, daß keine groben Materialien oder harten Gegenstände mit der Platte während der Reinigung in Berührung kommen.

VORSICHT



Üben Sie beim Reinigen nur einen leichten Druck aus. Ein zu starker Druck kann dazu führen, daß sich der vorhandene Staub in die Datenträgerplatte einfrißt und deren Oberfläche zerkratzt. Kratzer können dazu führen, daß die Datenträgerplatte nicht mehr gelesen oder beschrieben werden kann.

- 6) Wiederholen Sie dieses Verfahren mit der anderen Seite der Platte.

