Installation
and
Operating Guide

Fast*Stor* **22**

Copyright Notice

Copyright Notice (Europe)

Regulatory Notices

FCC Notices (U.S. Only)

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

- Reorient the receiving antenna.
- Relocate the computer with respect to the receiver.
- Move the computer away from the receiver.
- Plug the computer into a different outlet so that the computer and the receiver are on different branch circuits.

If necessary, consult a representative of ADIC or an experienced radio/ television technician for additional suggestions. You may find the following booklet helpful: *FCC Interference Handbook, 1986*, available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00450-7.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

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

A Notice About Shielded Cables: Use only shielded cables for connecting peripherals to this device to reduce the possibility of interference with radio and television reception. Using shielded cables ensures that you maintain the appropriate FCC radio frequency emissions compliance (for a Class A device) or FCC certification (for a Class B device) of this product.

The following information is provided on the device or devices covered in this document in compliance with FCC regulations:

Product name: *ADIC FastStor 22*

Model number: *FS-DLT FastStor 22*

Company name: *Advanced Digital Information Corporation*
PO Box 97057
Redmond, WA 98073-9757 USA

(425) 881-8004

IC Notice (Canada Only)

Most ADIC tape libraries are classified by the Industry Canada (IC) Interference-Causing Equipment Standard #3 (ICES-003) as Class B digital devices. To determine which classification (Class A or B) applies to your tape library, examine all registration labels located on the bottom or the back panel of your library. A statement in the form of "IC Class A ICES-3" or "IC Class B ICES-3" will be located on one of these labels.

Note that Industry Canada regulations provide that changes or modifications not expressly approved by ADIC could void your authority to operate this equipment.

This Class B (or Class A, if so indicated on the registration label) digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la Classe B (ou Classe A, si ainsi indiqué sur l'étiquette d'enregistration) respecte toutes les exigences du Reglement sur le Materiel Brouilleur du Canada.

EN 55022 Compliance (Czech Republic Only)

This device belongs to category B devices as described in EN 55022, unless it is specifically stated that it is a category A device on the specification label. The following applies to devices in category A of EN 55022 (radius of protection up to 30 meters). The user of the device is obliged to take all steps necessary to remove sources of interference to telecommunication or other devices.

Pokud nenÌ na typovÈm ötitku poËÌtaËe uvedeno, ûe spad· do t⁻Ìdy A podle EN 55022, spad· automaticky do t⁻Ìdy B podle EN 55022. Pro za⁻ÌzenÌ za⁻azen· do t⁻Ìdy A (ochrannÈ p·smo 30m) podle EN 55022 platÌ n·sledujÌcÌ. Dojde-li k ruöenÌ telekomunikaËnÌch nebo jinych za⁻ÌzenÌ, je uûivatel povinen provÈst takov· opat⁻enÌ, aby ruöenÌ odstranil.

CE Notice

Marking by the symbol **CE** indicates compliance of this ADIC system to the EMC (Electromagnetic Compatibility) directive of the European Community. Such marking is indicative that this ADIC system meets or exceeds the following technical standards:

EN 55022 — "Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment." This system is an EN 55022 Class B device.

EN 50082-1:1997 — "Electromagnetic compatibility—Generic immunity standard Part 1: Residential, commercial, and light industry."

EN 61000-4-2 — "Electromagnetic compatibility for industrial-process measurement and control equipment Part 2: Electrostatic discharge requirements." — Severity level 3.

IEC 801-3 — "Electromagnetic compatibility for industrial-process measurement and control equipment Part 3: Radiated electromagnetic field requirements." — Severity level 2.

EN 61000-4-4 — "Electromagnetic compatibility for industrial-process measurement and control equipment Part 4: Electrical fast transient/burst requirements." — Severity level 2.

EN60950/A11:1997 — "Safety of Information Technology Equipment including Electrical Business Equipment."

A "Declaration of Conformity" in accordance with the preceding standards has been made and is on file at ADIC Europe, ZAC des Basses Auges, 1, rue Alfred de Vigny, 78112 – Fourqueux, FRANCE.

VCCI Notices (Japan Only)

This is a Class B product based on the standard of the Voluntary Control Council for Interference for information technology equipment. If this equipment is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

Note that VCCI regulations provide that changes or modifications not expressly approved by ADIC could void your authority to operate this equipment.

DECLARATION OF CONFORMITY

according to EN 45014

Manufacturer's Name: Advanced Digital Information Corporation

Manufacturer's Address: 11431 Willows Road   ZAC des Basses Auges
                                   Redmond, Washington 98052   1, rue Alfred de Vigny
                                   USA   78112 Fourqueux,
                                                                FRANCE

declares, that the product:

Product   FastStor 22
(Produit, Erzeugnis):

Model Numbers   FS22-DLT4000
(Marque Commercial,
Warenbezeichnung):   FS22-DLT 7000

                           FS22-DLT 8000

conforms to the following international standards,

Emissions: EN 50081-1, EN-55022 Class B

Immunity: EN 50082-1

Safety: EN 60950

Quality: ISO 9001

Supplementary Information:

Signature: Signature on File   **Signature:** Signature on File

Full Name: _____   **Full Name:** _____

Position: _____   **Position:** _____

Date: _____   **Date:** _____

Place: Redmond, WA USA   **Place:** Fourqueux, FRANCE

Safety Notices

Warnings

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN
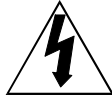
This symbol should alert the user to the presence of "dangerous voltage" inside the product that might cause harm or electric shock.

CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Caution

All safety and operating instructions should be read before this product is operated, and should be retained for future reference. This unit has been engineered and manufactured to assure your personal safety. Improper use can result in potential electrical shock or fire hazards. In order not to defeat the safeguards, observe the following basic rules for its installation, use and servicing.

- Heed Warnings **-** All warnings on the product and in the operating instructions should be adhered to.

- Follow Instructions **-** All operating and use instructions should be followed.

- Ventilation **-** The product should be situated so that its location or position does not interfere with proper ventilation.

- Heat **-** The product should be situated away from heat sources such as radiators, heat registers, furnaces, or other heat producing appliances.

- Power Sources **-** The product should be connected to a power source only of the type directed in the operating instructions or as marked on the product.

- Power Cord Protection **-** The AC line cord should be routed so that it is not likely to be walked on or pinched by items placed upon or against it, paying particular attention to the cord at the wall receptacle, and the point where the cord exits from the product.

- Object and Liquid Entry **-** Care should be taken to insure that objects do not fall and liquids are not spilled into the product's enclosure through openings.

- Servicing **-** The user should not attempt to service the product beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

Precautions

- Do not use oil, solvents, gasoline, paint thinners or insecticides on the unit.

- Do not expose the unit to moisture, to temperatures higher than 60ºC (140ºF) or to extreme low temperatures.

- Keep the unit away from direct sunlight, strong magnetic fields, excessive dust, humidity and electronic/electrical equipment, which generate electrical noise.

- Hold the AC power plug by the head when removing it from the AC source outlet; pulling the cord can damage the internal wires.

- Use the unit on a firm level surface free from vibration, and do not place anything on top of unit.

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Table of Contents

Quick Start Guide

This Guide …

❐ provides a quick guide for experts who are familiar with installing hardware and software.

Follow these steps to quickly get started using your ADIC FastStor 22:

Notes

The following defaults have been set at the factory, and in most cases, should not have to be changed.

- LDR SCSI ID: 1, DRV SCSI ID: 3
- FastStor 22 DLT 4000 Tape Density: 40GB
- FastStor 22 DLT 7000 Tape Density: 70GB
- FastStor 22 DLT 8000 Tape Density: 80GB
- Operating Mode: Random
- Logon String: FastStor

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1. Install AC line cord to FastStor 22, then to AC outlet.

2. Install SCSI terminator on FastStor 22.
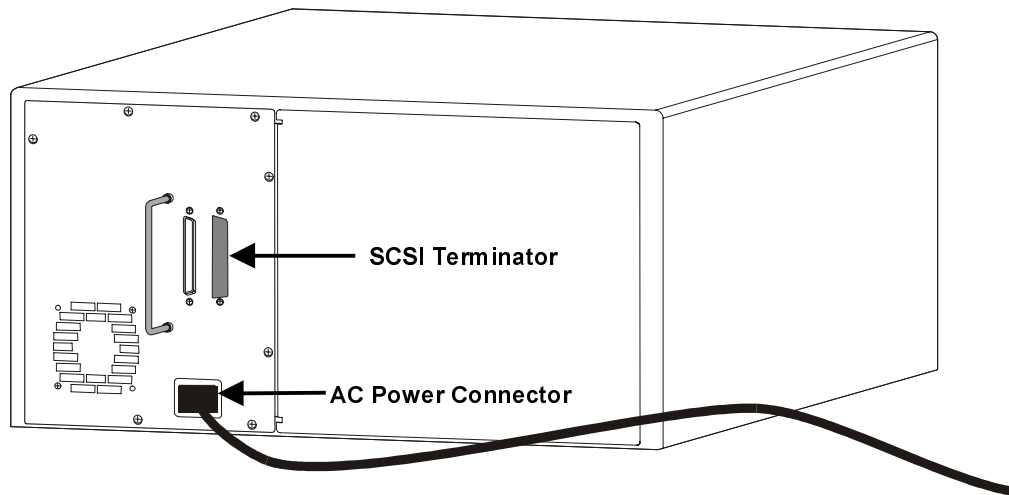
3. Power up your FastStor 22 by pressing the Power button.

Power Button

LdR REAdy

MODE
NEXT
SELECT
PREVIOUS
ALARM
ACTIVITY
POWER

POWER
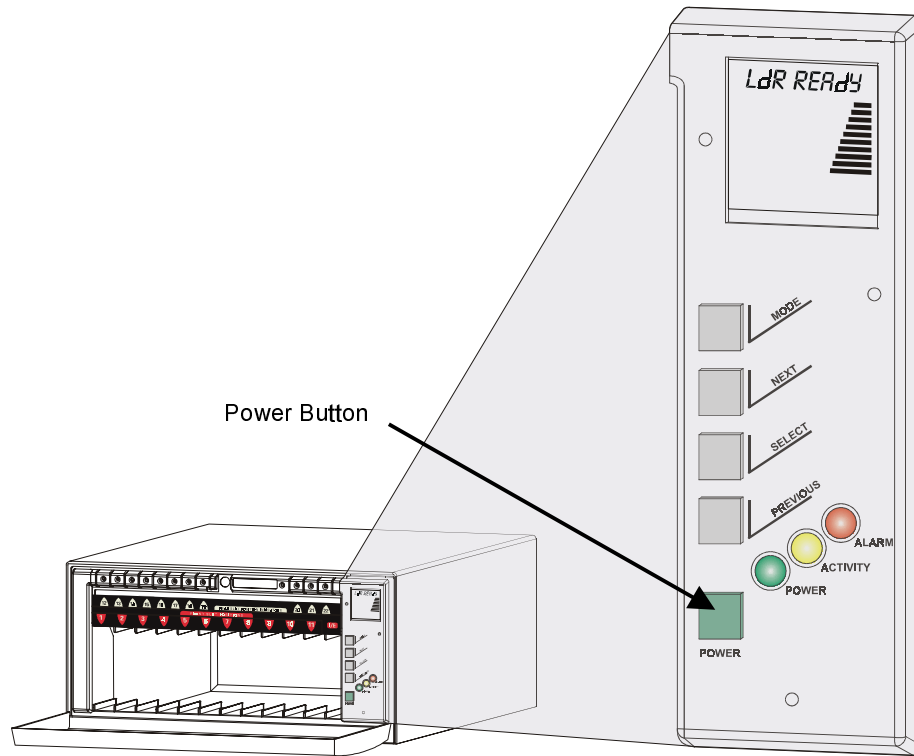
4. Install data cartridges in slots 1 through 11 of your FastStor 22. Orient the cartridges as shown below.
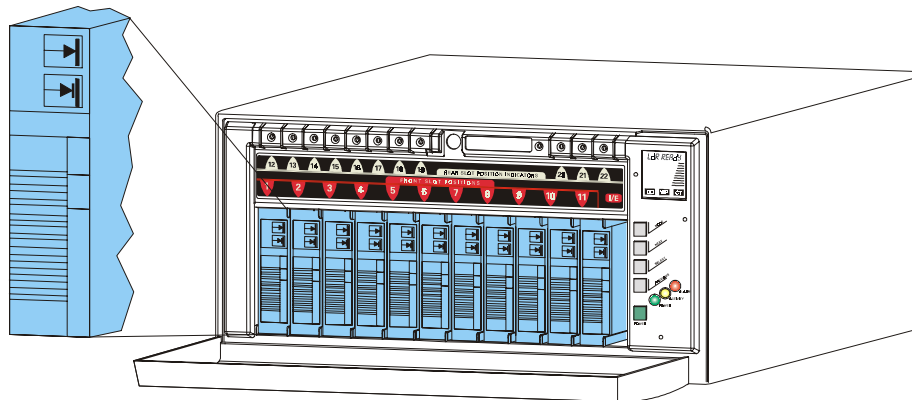
5. Press the **MODE** button until **LOAd SLOT** is displayed on the LCD.


```
LdR REAdy
```
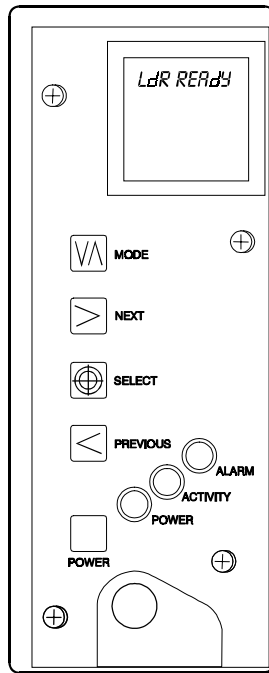
6. Press **SELECT** button. **SNgL LOAd** is displayed on LCD.

7. Press **NEXT** button, **bULK LOAd** is displayed on LCD.

8. Press **SELECT** button, tapes in front slots will be moved to rear slots 12-22.

9. Rear Slots Indicator LEDs will illuminate indicating cartridge presence.

REAR SLOT POSITION INDICATORS

LEDs indicates 12-22 loaded.
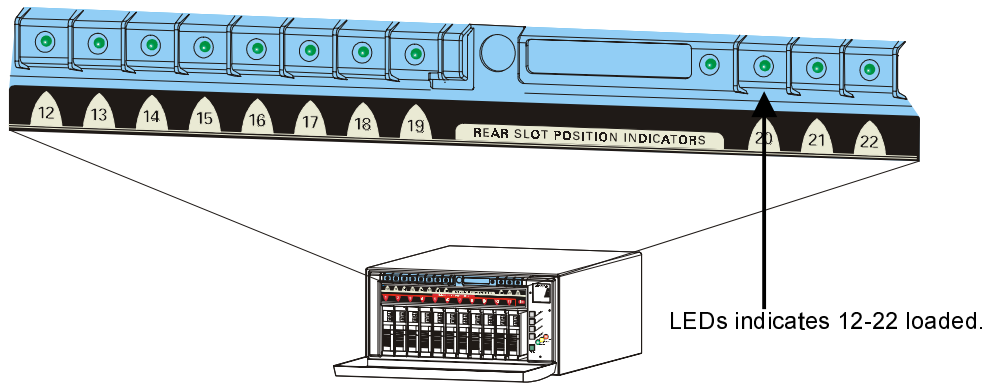
10. Install additional data cartridges in slots 1-11.

11. Connect SCSI cable between host computer and FastStor 22.

SCSI Cable
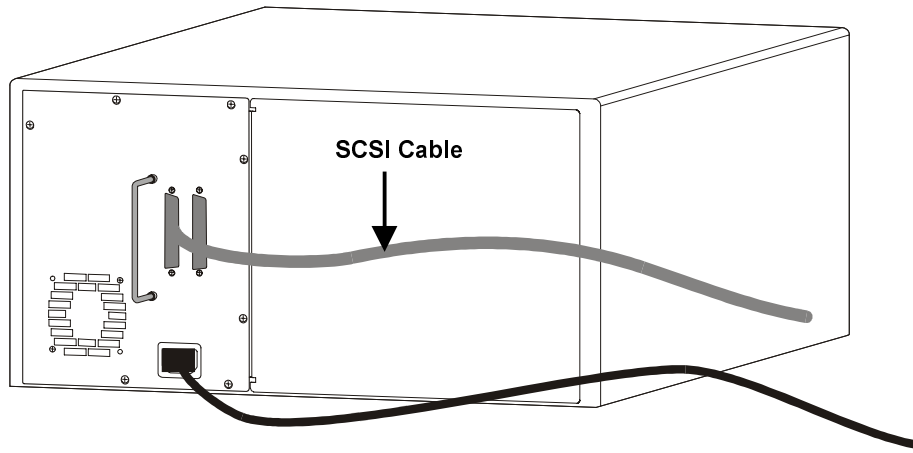
12. Power up your host computer.
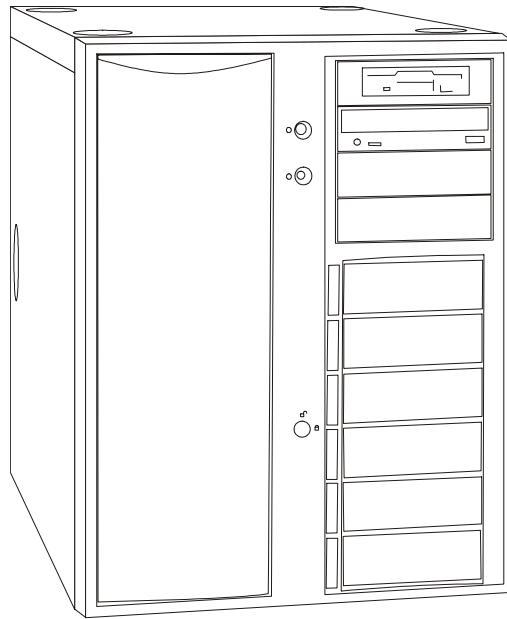
13. Verify your backup software.

Your ADIC FastStor 22 is ready for operation.

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Chapter

1

Introduction

This Chapter …

❒ provides a physical description of the switches, indicators and connectors on the front and rear panels of the external FastStor 22

❒ describes the drive and media used in the FastStor 22

❒ describes other requirements (additional hardware and/or software) needed to utilize the FastStor 22

❒ provides a brief overview of the FastStor 22 features. For detailed specifications, see Appendix A
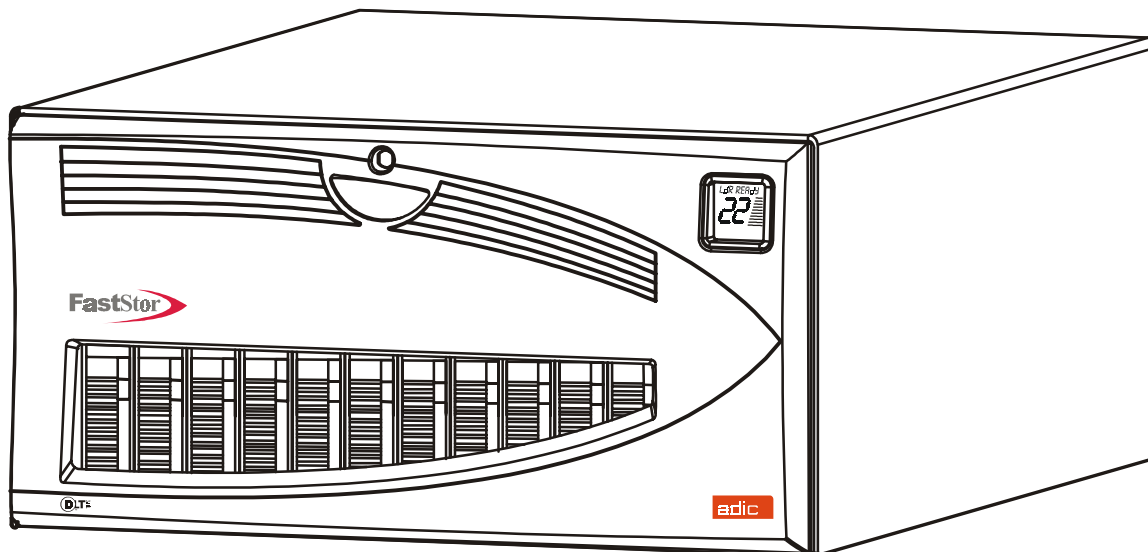
W elcome to your ADIC FastStor 22 (shown above). Your FastStor 22 is a fully automated, high-performance, high-capacity, mass storage system. The FastStor 22 is designed to provide you with unattended, near-line and off-line data storage, archiving, backup, hierarchical storage management (HSM), and retrieval for low- and mid-range servers and networks. Through the remainder of this manual, references will be made to the FastStor 22. Except in model-specific instances (the reference will be made to the proper model), the information is applicable to all models of the family.

Equipment Description

The FastStor 22 is a six-model family of SCSI-2 compatible data storage devices. Your FastStor 22 is available with a DLT™ 4000 drive in a Single-Ended (SE) or High-Voltage Differential (HVD) configuration, or a DLT 7000 drive in a SE or HVD configuration, or a DLT 8000 drive in a Low-Voltage Differential/Single-Ended (LVD/SE) or HVD configuration. All models incorporate a streaming tape cartridge data storage device, which features high capacity, high throughput, and data compression. Equipped with a Quantum$^®$ DLT drive, your FastStor 22 operates as two SCSI devices (DLT 4000 drive is a Wide SCSI device; DLT7000 and DLT 8000 are Fast/Wide SCSI devices) on a single SCSI bus. Your FastStor 22 can contain up to 23 data cartridges providing a maximum formatted capacity of 1.84 TB and a sustained data transfer rate as high as 720 MB per minute. The tape media is rated at up to 1,000,000 passes and has a shelf life of 30 years, providing superior media durability and data reliability.

Your FastStor 22 is compatible with all operating systems and environments supporting the SCSI interface, but requires either direct support of the operating system, or a suitable application program to take advantage of its features. Hosting environments that do not directly support SCSI interfaces, like most personal computers, require the addition of a SCSI host adapter board.

Your FastStor 22 is capable of operating in either Random-Access or Sequential-Access modes. In Random-Access mode, the application software controls cartridge management. In Sequential-Mode, the FastStor 22 operating firmware predefines cartridge management. Refer to the *Change Mode* section in *Chapter 4 Troubleshooting and Diagnostics,* for a detailed description of Sequential-Mode operation.

Features

❐ **Multi-function Operator Panel**. The Operator Panel, located to the right, under the front door, employs a 1-line by 10-character liquid crystal display (LCD), a four-key keypad, and three LEDs to permit you to monitor and control the operations of your library. Specific areas of the LCD provide you with information such as status of the cartridge in the drive (write-protected or data compression enabled) and inform you when the drive requires cleaning.

❐ **Rear Slot Indicator LEDs**. The FastStor 22 has rear slot indicator LEDs integrated into the bezel above the front data slots. These indicators illuminate when a data cartridge is present in a rear slot.

❐ **Media Transporter**. The Media Transporter is the media cartridge handling mechanism and normally responds to commands from the application software to move the cartridges between the storage slots and the drive. Employing a bi-directional, pass-through gripper, the Media Transporter picks and places cartridges to/from the front and rear mounted storage slots.

❐ **Scalar Emulation**. To maximize application software compatibility, your FastStor 22 shares the same command set as the ADIC Scalar library, and can appear as either a FastStor 22 or a Scalar.

❐ **System Integrity**. The cartridge storage slots, drive, and robotics are protected by a physically lockable door.

❐ **Multi-Purpose Slot**. The Import/Export slot within FastStor 22 can be configured through the operator panel to function as a mail slot, cleaning slot, or a data slot.

❐ **Door Window**. The clear window in the front door assembly provides visual access to front cartridge slots while the door is locked.

❐ **Manual Cartridge Use**. Individual cartridges can easily be transported to the drive by manually opening the front door and installing the cartridge into any unoccupied storage slot. The Operator Panel is then used to load cartridges into the drive.

❐ **Cartridge Pre-Check**. Whenever you power up your FastStor 22 it will scan the cartridge storage slots and the drive and build a log of valid cartridge locations.

❐ **Reverse Cartridge Protection**. The 12 front cartridge storage slots employ a design that prevents the cartridges from being inserted incorrectly.

❐ **Built-in Diagnostics**. Your FastStor 22 includes diagnostic firmware that tells you when drive head cleaning is required, reports diagnostic results, and drive operating status.

❐ **Barcode Ready**. The barcode reader option delivers instant media verification and inventory without losing storage capacity.

❐ **24 Hour Fast Exchange**. In the event your FastStor 22 needs to be serviced, ADIC will provide you with a next day advanced exchange to reduce down time.

DLT Drives

Your FastStor 22 is equipped with a third-, or fourth-generation DLT drive. Two drive models (DLT4000, and DLT7000) can read and write 2.6 GB, 6.0 GB, and 10.0 GB tape formats (only the DLTtape™ III cartridge can be formatted or reformatted to these densities by the FastStor 22 drive) for 100% interchange compatibility with earlier DLT drives. The DLT 8000 drive can read and write 10.0 GB, 15.0 GB, 20.0 GB, and 35.0 GB tape formats for compatibility with the DLT 2000, DLT 2000xt, DLT 4000, and DLT 7000 drives. DLT 8000 default tape density is 40.0 GB (80.0 GB compressed) when using the DLTtape IV data cartridge. Tape density is selectable by the application software or via the Operator Panel.

Model	Drive Model	Cartridge Max Capacity (density - compressed mode)	Max Capacity (compressed mode)	Sustained Transfer Rate (compressed mode)
FastStor 22 DLT4000	DLT4000	20 GB (DLTtape III) 30 GB (DLTtape IIIXT) 40 GB (DLTtape IV)	440 GB 660 GB 880 GB	3.0 MB/sec (180 MB/min)
FastStor 22 DLT7000	DLT7000	20 GB (DLTtape III) 30 GB (DLTtape IIIXT) 70 GB (DLTtape IV)	440 GB 660 GB 1.54 TB	10.0 MB/sec (600 MB/min)
FastStor 22 DLT8000	DLT8000	20 GB (DLTtape III) 30 GB (DLTtape IIIXT) 80 GB (DLTtape IV)	440 GB 660 GB 1.76 TB	12.0 MB/sec (720 MB/min)

Maximum Capacity and Sustained Transfer Rates

Options

SCSI Interface

The FastStor 22 is equipped with a Quantum manufactured SE, LVD/SE, or HVD drive, and a corresponding robotics interface.

Caution

SE and LVD/SE SCSI devices are not compatible with HVD SCSI devices. Equipment damage may occur if you connect your FastStor 22 to an incompatible SCSI bus.

Connectors, Indicators and Controls

The following figures show the connectors, controls and indicators located on the rear panel and Operator's panel of the FastStor 22.

SCSI Channel Connectors

AC Power Connector
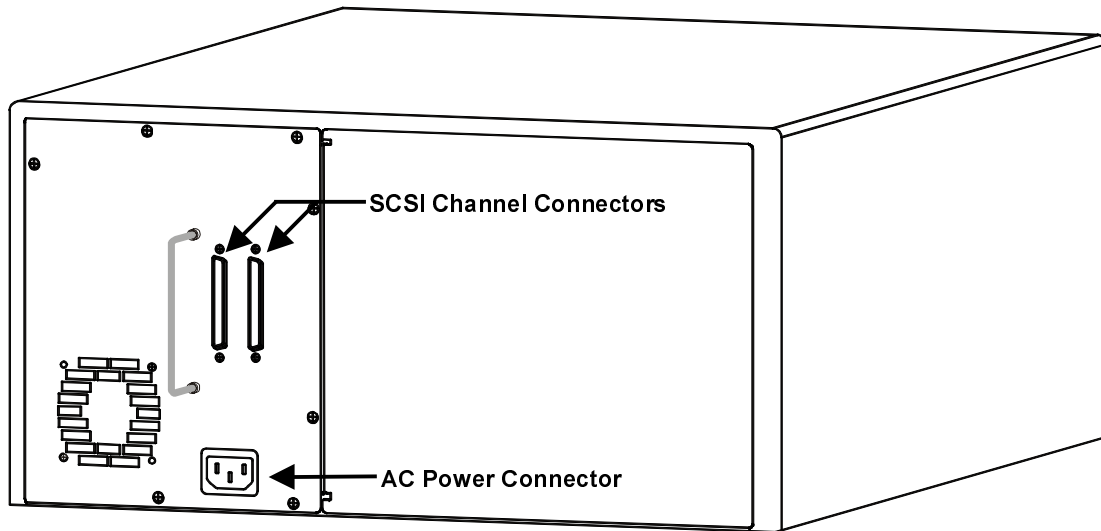
Rear Panel

Rear Panel Connectors	
AC Power Connector	Receptacle for AC power cord.
SCSI Channel Connectors	Connections for the interface cable that connect the unit with the host computer and/or other devices on the SCSI channel (including additional FastStor 22 units). The interface cable can be attached to either connector. Connectors also provide a connection point for a SCSI bus terminator, required if FastStor 22 is the last device on the SCSI bus.

The Operator's Panel is located behind the front door of the FastStor 22. If necessary, unlock the door to access the Operator's Panel.

Rear Slot Indicator LEDs (x 12) **Operator Panel**
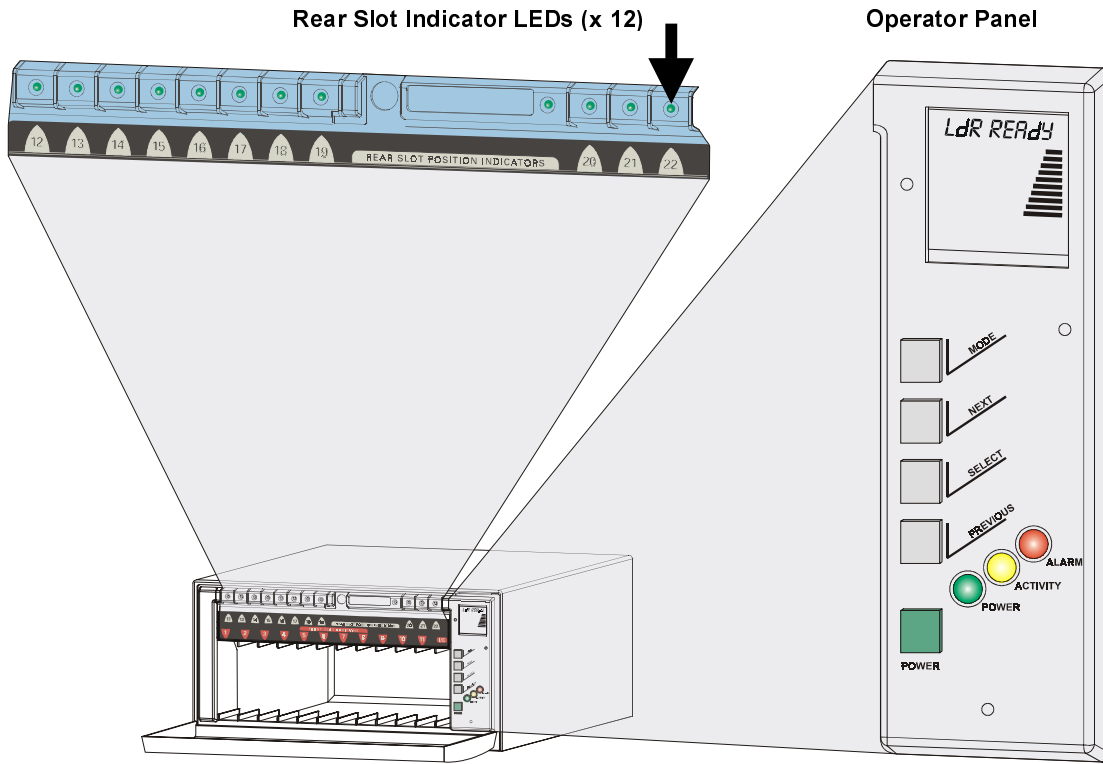
Rear Slot Indicator LEDs & Operator's Panel

Operator Panel Indicators	
Power LED (green)	Illuminates when power is on.
Activity LED (blinking amber)	Indicates robotic and drive activity. A slow blinking interval indicates FastStor 22 robotic activity and a fast interval indicates drive activity.
Alarm LED (red)	Illuminates whenever an error has occurred.
LCD	1-line by 10-character Liquid Crystal Display. Displays information about drive status, operational messages, and error messages.
Rear Slot Indicator LEDs (green)	Indicates rear slot status; illuminates when cartridge is present in slot.

Operator Panel Display

The normal on-line message (**LdR REAdY**) is displayed on the top line. On-line, off-line, and error messages also appear on this line.

LCD

DC indicates data compression is selected on the drive.
WP indicates a write-protected data cartridge is loaded into the drive.
CT indicates the drive head needs to be cleaned.

The large field in the center of the display normally indicates which cartridge is loaded into the drive. Whenever an error occurs an **E** will appear in this field and the error message will appear on line 1.

The Activity Bars on the right side of the display, in conjunction with the Activity LED, indicate robotic and drive activity. A blinking bottom bar is displayed when no activity is taking place. A slow interval between the bars appearing/ disappearing indicates robotic activity, and a fast interval indicates drive activity.

Operator's Panel

Operator Panel Controls
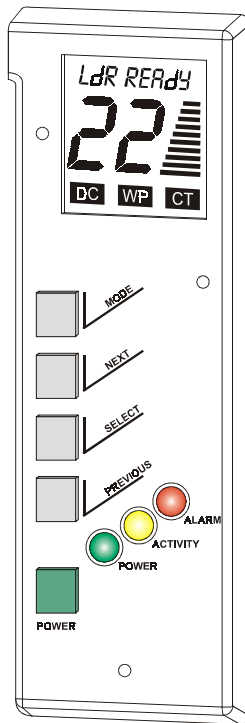
MODE Press this button to enter or exit off-line mode menus.

NEXT Selects next item or value in the currently displayed menu.

SELECT Causes the FastStor 22 to execute the current menu (displayed on line 1 of the LCD).

PREVIOUS Selects previous item or value in the currently displayed menu.

POWER Press and release this button to turn on your FastStor 22. Press and hold this button for 2 seconds to turn off your FastStor 22. **POWER dOWN** will appear on the LCD and the Activity Bars (see Indicators above) and Activity LED will indicate robotic activity as the Picker moves to its power down position.

DLT Media

The data cartridges used in the DLT drive are housed in 4-inch plastic cases and employ ½-inch metal particle tape. Always store data cartridges in a dry, cool environment.
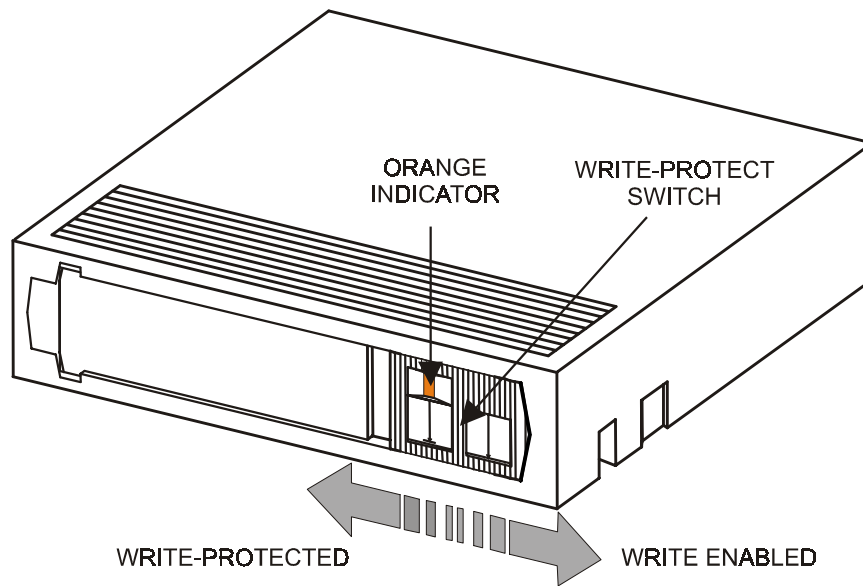
DLT Data Cartridge

The write-protect switch is used to prevent recording over existing data. To prevent recording or deleting, place the write-protect switch to the open position. The drive senses the position of the switch and will not allow writing in this position. When installing cartridges in the FastStor 22, place the switch in the closed position (unless you do not wish to record on a specific cartridge).

If the switch is moved all the way to the left, the cartridge is write-protected and the drive cannot write to, or erase data from, the cartridge. The small orange rectangle will be visible whenever the cartridge is write-protected. Additionally, an arrow (beneath the orange rectangle and above the two lines on the switch) lets you know that data cannot be written to the cartridge. If the switch is moved all the way to the right, the cartridge is write-enabled and the drive can write data to, or erase data from, the cartridge. The orange rectangle will not be visible whenever the cartridge is write-enabled. On the right side of the write-protect switch an arrow over one line indicates that if you slide the switch to the right, data can be written to the cartridge.

> ### Notes
>
> • Store data cartridges in a dry, cool environment.
>
> • Never reset or power down your computer or FastStor 22 while a function is in process or a tape is moving.

Other Requirements

SCSI Host Adapter

Your FastStor 22 must be connected to either an integrated SCSI host or a separate SCSI interface (host adapter) card installed in the computer – either directly to the I/O connector on the card or as part of an existing SCSI chain. The host adapter you choose will depend on your system requirements and your needs. If you are not sure about your host adapter requirements, please call ADIC's Technical Assistance Center (ATAC) and ask for assistance. The SCSI interface must be installed before you connect the FastStor 22.

Application Software

A variety of backup and data storage software is available for use with your FastStor 22. The software you use will depend upon your storage needs and the system you are using. Please check with ADIC Sales or Customer Assistance if you have a question on the compatibility of a particular software package.

Now you are ready to connect the FastStor 22 to your host computer. Follow the instructions provided in the next chapter.

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Chapter
2

Hardware Installation

This Chapter. . .

❐ explains the steps necessary to install and test your FastStor 22

For the most part, installation is simply a matter of checking all necessary SCSI connections, installing the application software (backup or otherwise) on the host computer, and applying power. The FastStor 22 defaults set at the factory should be sufficient for most applications.

Unpacking and Inspecting

> **Caution**
>
> If the operating environment differs from the storage environment by 15° C (30° F) or more, let the unit acclimate to the surrounding environment for at least 12 hours before opening the shipping carton.

❑ Unpack all items from the carton. Save the packing materials in case you need to move or ship the system in the future.

> **Caution**
>
> You must ship the FastStor 22 in the original or equivalent packing materials or your warranty may be invalidated.

Checking the Accessories

Check to make certain that the following items are included with your FastStor 22, and that none of them are damaged:

- Power cord
- One cleaning cartridge or a coupon for a free DLT cleaning cartridge
- One DLTtape IV data cartridge
- One 6' SCSI cable with HD/68-pin connectors
- One 68-pin SCSI bus terminator
- One Tape Tote
- Two keys for the front door
- This manual
- A Quick Start Guide
- Warranty Registration card

✔ None of the items should show signs of damage

Installing the Host Adapter

At this point if your host computer system does not have native SCSI capability and the host adapter you are using is not installed, please install it. Refer to the manual that came with your host adapter for specific directions.

When the host adapter card is installed return to this point in the manual.

Installing the SCSI Cable and Terminator

> ### Notes
>
> - Make sure that the interface cable you are planning on using has the appropriate connectors on each end. The FastStor 22 employs a 68-pin high-density SCSI connector on the rear panel.
>
> - If your host computer's SCSI connector is different from that on the FastStor 22, you will need to obtain an adapter or a different cable. Consult your dealer or ATAC if you need help.
>
> - The interface cable must be shielded – ADIC can supply you with the correct type.
>
> - SCSI bus TERM POWER is supplied by the robotics interface, not by the drive.

❑ If your FastStor 22 is the last device on the SCSI bus, install the SCSI terminator on one of the SCSI connectors on the rear panel of the FastStor 22.

❑ Connect the SCSI cable to the remaining SCSI connector on the rear panel of the FastStor 22.

❑ Connect the free end of the SCSI cable to the connector on the host computer's SCSI adapter.

❑ If you wish to connect one or more additional devices to the bus after the FastStor 22, connect an appropriate cable between the remaining SCSI connector on the rear panel of the FastStor 22 and the next device.
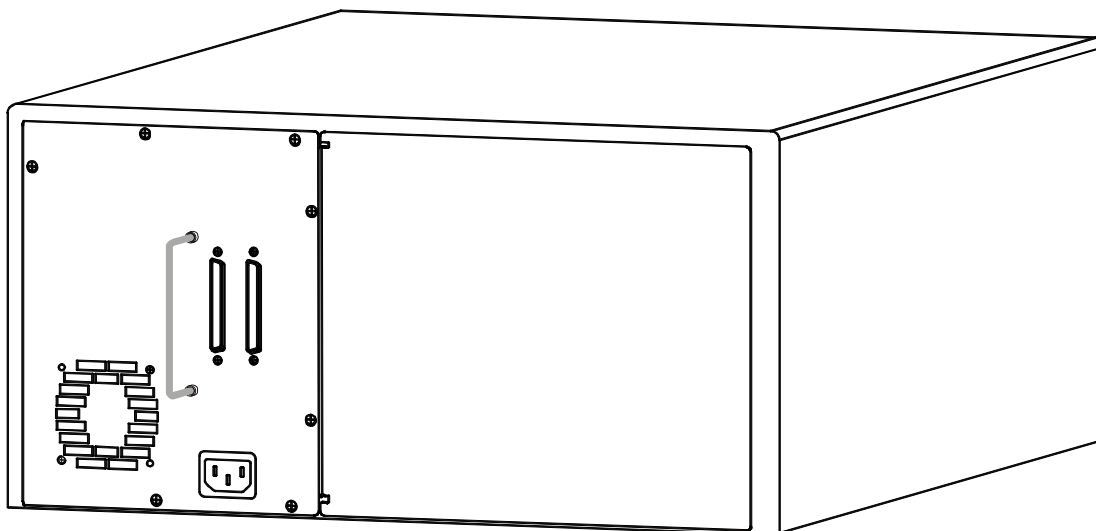
FastStor 22 Rear Panel

❑ Be sure that the SCSI bus is terminated at the last device in the chain.

✔ Make sure that the SCSI cable between the host adapter and the FastStor 22 is secure and the connections are fastened correctly.

Connecting More than One FastStor 22

If you are connecting more than one FastStor 22 on the same SCSI channel, simply connect each unit to the previous unit with an additional shielded interface cable. It does not matter which SCSI connector on each FastStor 22 you connect the interface cable to. Make sure that you configure each FastStor 22 unit with a unique drive SCSI ID and loader ID. Your FastStor 22s will not function properly if they have the same SCSI IDs.

Preparing the Host Computer System

Installing the Application Software

At this point you need to refer to your software installation guide for instructions on installing the backup/controlling software for the FastStor 22 onto the host computer.

Chapter

3

Operation and Maintenance

This Chapter. . .

❒ describes the normal operating features of your FastStor 22

❒ provides details about media and drive head-cleaning cartridge

❒ explains the normal maintenance procedures

Normal Operations

General Guidelines

Once your FastStor 22 and your choice of application software are installed and configured, you can automatically perform backup and restore operations through the application software. You do not need to intervene unless you need to replace cartridges.

Always follow these general-operating guidelines:

❒ Do not open the front door of the FastStor 22 unless you must perform manual Mode commands, or change media.

❒ Use only the recommended types of media cartridges described earlier in this manual.

❒ Clean the DLT drive whenever the **CT** field appears on the LCD (signifying a cleaning request), or as soon possible.


Note

Never insert or remove cartridges from the storage slots unless **LdR REAdY** is displayed on the LCD.

Power on the System

The two keys for the front door are taped to the rear panel of your FastStor 22.

❒ Remove the keys from the rear panel, unlock and open the front door.

❒ Remove the foam shipping block from the cartridge storage area.

❒ Plug the power cord into the AC receptacle on the rear panel of your FastStor 22.

❒ Plug the power cord from the FastStor 22 into a grounded electrical outlet.
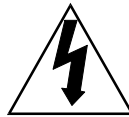
Use caution when plugging the power cord into an electrical outlet. Hazardous voltages are present in the sockets of the outlet.

❒ Plug the power cord from your host computer into a grounded electrical outlet.

❒ Turn on power to the FastStor 22 by pressing the **POWER** button on the Operator Panel.

Note

When powering OFF your FastStor 22, you must press and hold the **POWER** button for 2 seconds.

While the FastStor 22 initializes, the LCD will appear as shown below. The Activity LED will blink slowly, and the Activity Bars will appear on the LCD.

LdR INIT
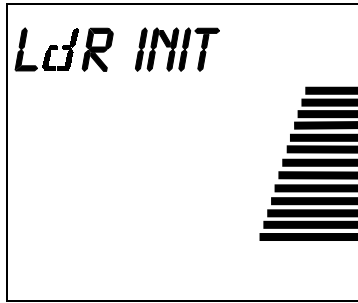
After the FastStor 22 robotics completes its initialization, the drive will initialize and the LCD will appear as shown below. The Activity LED will blink fast, and the Activity Bars will appear on the LCD.
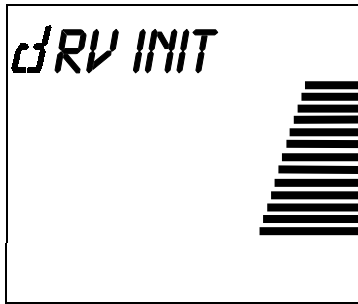
dRV INIT

At the conclusion of drive initialization, the LCD will appear as shown below.

LdR REAdY

Power Up Checks

When you apply power to your FastStor 22 it will perform the following actions:

- Verify drive configuration and status.

- Build a valid cartridge inventory log.

- Calibrate the Media Picker.

When the FastStor 22 has completed the Power Up Checks, the LCD will display **LdR REAdY**.

Set the SCSI IDs

Your FastStor 22 consists of two SCSI devices: the drive and the robotics. Depending upon your requirements, you may need to change the SCSI ID default settings for your installation. To change the SCSI ID of the robotics and/or the drive, perform the following steps:

❐ Repeatedly press the **MODE** button on the Operator's Panel until **SET SCSI** (**Mode 6**) appears on the first line of the LCD.

❐ Press the **SELECT** button. **LdR SCSI** will now appear on the LCD.

❐ Press the **SELECT** button. **LdR Id X** (where **X** is the current SCSI ID) will now appear on the LCD.

❐ Press the **NEXT** button to select a higher ID, or the **PREVIOUS** button to select a lower ID.

❐ Press the **SELECT** button to accept the new ID for the robotics. **dRV SCSI** will now appear on the LCD.

❐ Press the **SELECT** button. **dRV Id X** (where **X** is the current drive ID) will now appear on the LCD.

❐ Press the **NEXT** button to select a higher ID, or the **PREVIOUS** button to select a lower ID.

❐ Press the **SELECT** button to accept the new ID for the drive. **CYCLE PWR** (blinking) will now appear on the LCD for approximately 10 seconds.

❐ Press and hold the **POWER** button for 2 seconds to power down the FastStor 22.

❐ Wait a few seconds then press the **POWER** button again to power up the FastStor 22. The new SCSI IDs are now in effect.

Note

You may need to power cycle your server and reconfigure your application software for them to see these new IDs as well.

Prepare and Install the Data Cartridges

❒ If necessary, unlock and open the front door to gain access to the cartridge storage slots.

❒ Make sure that the write-protect switch is set appropriately on each cartridge. Slide the switch to the appropriate position by pushing it with your finger.
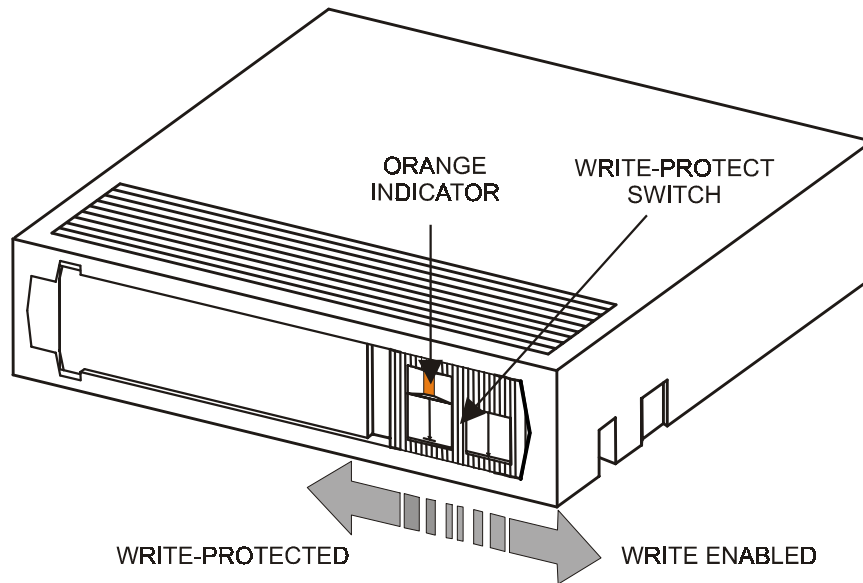
DLT Cartridge Write-Protect Switch

❒ Place data cartridges into slots 1 through 11.

Notes

- Never insert or remove cartridges from the storage slots unless **LdR REAdY** is displayed on the LCD.

- When installing data cartridges into your FastStor 22, the write-protect switch should be positioned at the top of the cartridge.

❒ Press the **MODE** button on the Operator's Panel until **LOAd SLOT** appears on the LCD.

❒ Press the **SELECT** button. **SNGL LOAd** appears on the LCD (To load a single tape, see instructions under **Mode 3 – LOAD SLOT**, later in this chapter).

❒ Press the **NEXT** button. **BULK LOAd** appears on the LCD.

❒ Press the **SELECT** button to execute the **BULK LOAd** command.

The FastStor 22 will now move each tape (data cartridge or cleaning) from slots 1 through 11 to slots 12 through 22. While executing the moves, the **LdR MOVE, LdR PICK**, and **LdR PLACE** messages will appear on the LCD. When the FastStor 22 has completed the command, **LdR REAdY** will again appear on the LCD.

❒ Install additional data cartridges into slots 1 through 11.

> **Note**
>
> If the I/E slot is configured as a cleaning slot, place a cleaning cartridge in it. If the I/E slot is configured as a storage slot, place an additional data cartridge in it. If the I/E slot is configured as an import/export slot (mail slot) be sure to leave it empty.

❏ Close the FastStor 22 door, turn the key a quarter-turn clockwise and remove it from the lock.

❏ If you have not already done so, turn on the host computer power and launch the software application.

The application will now control the FastStor 22. Use the MODE commands described on the following pages to manually perform FastStor 22 functions.
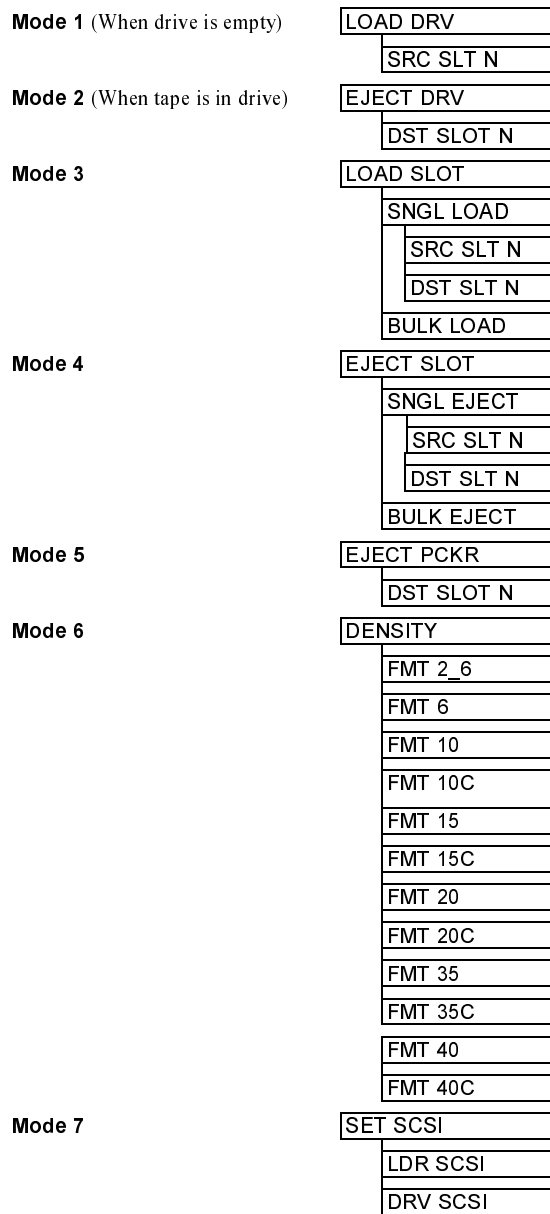
Drive Status Messages

During on-line operation, your FastStor 22 will place drive status messages on the top line of the LCD. The following table lists the messages that will appear on the LCD:

Drive Status Message	Description
CALIBRATE	Drive is calibrating head to tracks on tape
EJECTING	Drive is unloading tape
CLEANING	Drive is cleaning head with cleaning cartridge
ERASING	Drive is erasing tape
REAdING	Drive is reading tape
WRITING	Drive is writing to tape
SEEKING	Drive is seeking a position on tape
REWINdING	Drive is rewinding tape

FastStor 22 Modes

The following diagram is a quick reference guide to the modes described on the next few pages.

Mode 1 (When drive is empty) | LOAD DRV |
        | SRC SLT N |

Mode 2 (When tape is in drive) | EJECT DRV |
        | DST SLOT N |

Mode 3 | LOAD SLOT |
        | SNGL LOAD |
          | SRC SLT N |
          | DST SLT N |
        | BULK LOAD |

Mode 4 | EJECT SLOT |
        | SNGL EJECT |
          | SRC SLT N |
          | DST SLT N |
        | BULK EJECT |

Mode 5 | EJECT PCKR |
        | DST SLOT N |

Mode 6 | DENSITY |
        | FMT 2_6 |
        | FMT 6 |
        | FMT 10 |
        | FMT 10C |
        | FMT 15 |
        | FMT 15C |
        | FMT 20 |
        | FMT 20C |
        | FMT 35 |
        | FMT 35C |
        | FMT 40 |
        | FMT 40C |

Mode 7 | SET SCSI |
        | LDR SCSI |
        | DRV SCSI |

❐   To access any of the Modes, press the **MODE** button repeatedly until the LCD displays the desired mode on line 1.

To exit any of the Modes and return to **LdR REAdY**, press the **MODE** button.
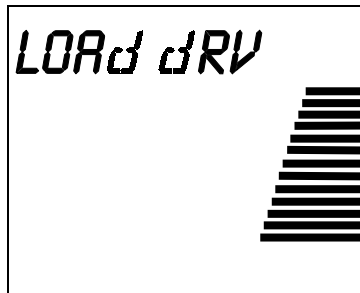
Mode 1 – LOAD DRV

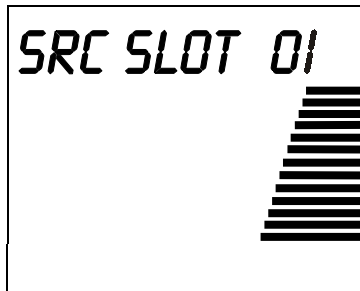This function loads a cartridge into the drive from a storage slot or the I/E slot.

Note

If a cartridge is already loaded in the drive, Mode 1 is not selectable.

❒ To access **Mode 1**, repeatedly press the **MODE** button until the LCD appears as shown:

```
LOAd dRV
```

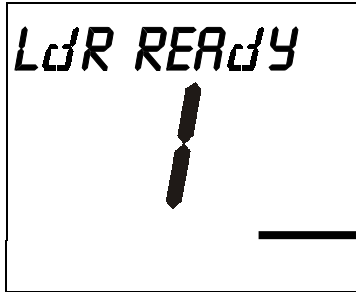❒ Press the **SELECT** button. The LCD appears as shown:

```
SRC SLOT 01
```

Note

If the source slot is empty, a blinking **RESELECT** will appear on the LCD. The blinking **RESELECT** indicates that you attempted to select an invalid source slot.

❒ Use the **NEXT** or **PREVIOUS** button to scroll through the slot choices. Press **SELECT** when the slot you wish to load is displayed.

Your FastStor 22 will load the desired cartridge into the drive. After completing the task, the FastStor 22 will return to **LdR REAdY**, and the slot number of the cartridge in the drive (example shown is slot 1) will be displayed in the center of the LCD as shown below.
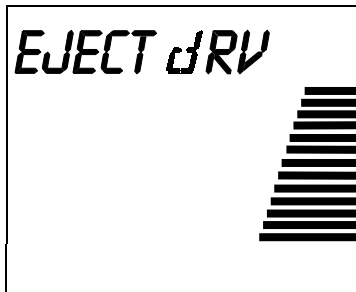

Mode 2 – EJECT DRV

This function ejects a cartridge from the drive and places it into the storage slot that it was loaded from.
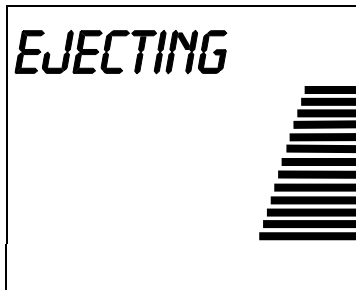

Note

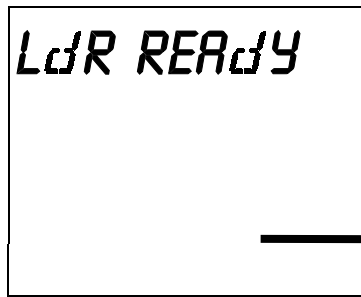If the drive is empty, **Mode 2** is not selectable on the LCD.

❐ To access **Mode 2**, press the **MODE** button until the LCD appears as shown:

❐ Press the **SELECT** button. The LCD will appear as shown while the drive ejects the tape.

When your FastStor 22 has completed the command, it will return to **LdR REAdY** as shown below:

```
LdR REAdY
```

Mode 3 – LOAD SLOT

This function moves a cartridge from a front storage slot to a rear storage slot, or bulk loads rear slots 12 – 22 by moving the cartridges from slots 1 – 11.

❒   To access **Mode 3**, press the **MODE** button until the LCD appears as shown below:

```
LOAd SLOT
```

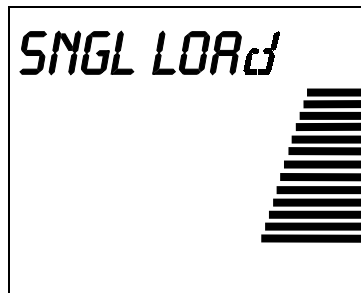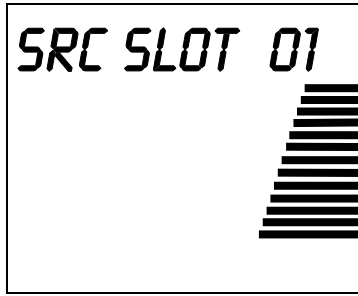❒   Press the **SELECT** button. The LCD will appear as shown below:

```
SNGL LOAd
```
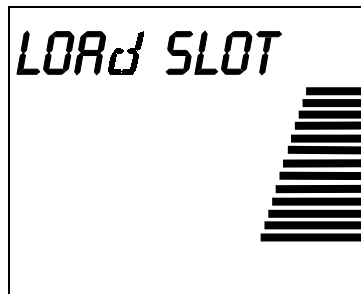
❒ To move a single cartridge from a front storage slot to a rear storage slot, press the **SELECT** button. The LCD will appear as shown below:

```
SRC SLOT 01
```

❒ Use the **NEXT** or **PREVIOUS** button to scroll through the slot choices. Press **SELECT** when the slot you wish to move is displayed. The following will appear on the LCD:
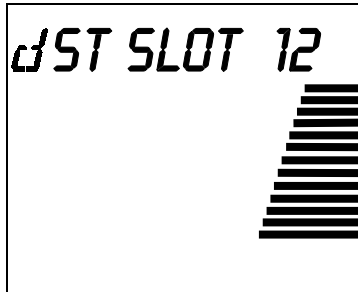
```
dST SLOT 12
```

❒ Use the **NEXT** or **PREVIOUS** button to scroll through the slot choices. Press **SELECT** when the slot you wish to load is displayed. Your FastStor 22 will move the cartridge from the selected front source slot to the selected rear slot.

> **Note**
>
> If the **SELECT** button is pressed and the source slot is empty, a blinking **RESELECT** will appear on the LCD. The blinking **RESELECT** indicates that you attempted to select an invalid source slot. If the **SELECT** button is pressed and the rear slot is full, a blinking **RESELECT** will appear on the LCD. The blinking **RESELECT** indicates that you attempted to select an invalid destination slot.

❒ To bulk load rear slots 12-22, press the **MODE** button until **LOAd SLOT** appears on the LCD, then press the **SELECT** button. While **SNGL LOAD** appears on the LCD, press the **NEXT** button. The LCD will appear as shown below:
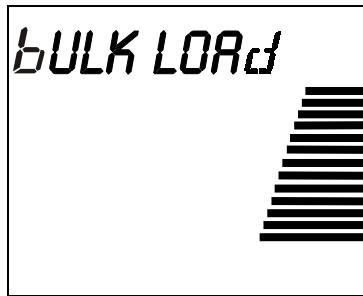
bULK LOAd

❒ Press the **SELECT** button. Your FastStor 22 will move the cartridges from slots 1-11 and place them in slots 12-22.

Note

If front slots 1 – 11 are empty, or if the rear slots are already full, **BULK LOAD** will be ignored and your FastStor 22 will return to **LdR REAdY**.

After moving the cartridges your FastStor 22 will return to **LdR REAdY**.

Mode 4 – EJECT SLOT

This function moves a cartridge from a rear slot to a front slot, or bulk unloads rear slots 12 – 22 by moving the cartridges to slots 1 – 11.

❒ To access **Mode 4**, press the **MODE** button until the LCD appears as shown below:

EJECT SLOT

❐ Press the **SELECT** button. The LCD will appear as shown below:

```
SNGL EJECT
```
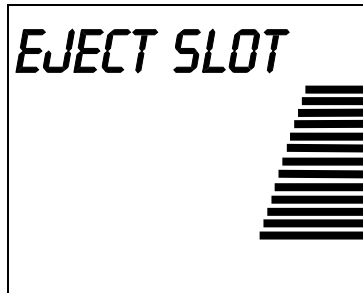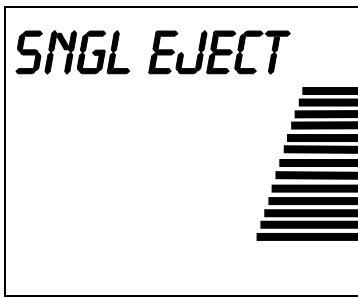
❐ To move a single cartridge from a rear slot to a front slot press the **SELECT** button. The LCD will appear as shown below:

```
SRC SLOT 12
```
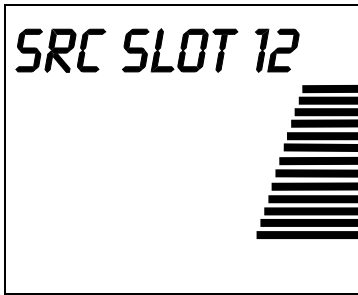
❐ Use the **NEXT** or **PREVIOUS** button to scroll through the source slot choices. Press **SELECT** when the slot you wish to move is displayed. The LCD will appear as shown below:
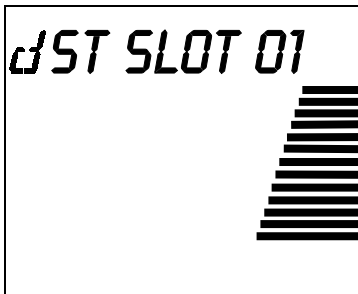
```
dST SLOT 01
```

Note

If the **SELECT** button is pressed and the source slot is empty, a blinking **RESELECT** will appear on the LCD. The blinking **RESELECT** indicates that you attempted to select an invalid source slot.

❐ Use the **NEXT** or **PREVIOUS** button to scroll through the destination slot choices. Press **SELECT** when the slot you wish to move the cartridge to is displayed. Your FastStor 22 will move the cartridge from the selected rear source slot to the selected front destination slot, then it will return to **LdR REAdY**.

❒ To perform a bulk eject of slots 12-22, press the **MODE** button until **EJECT SLOT** appears on the LCD, then press the **SELECT** button. While **SNGL EJECT** appears on the LCD, press the **NEXT** button. The LCD will appear as shown below:
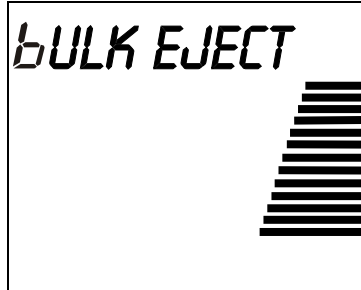
bULK EJECT

❒ To move the cartridges from the rear slots to slots 1-11, press the **SELECT** button.

❒ Your FastStor 22 will move the cartridge from rear slots 12 – 22 to front slots 1 – 11. When the command is completed, your FastStor 22 will return to **LdR REAdY**.

Mode 5 – EJECT PCKR

This function ejects a tape left in the Media Picker at power down to any empty destination slot.

❐ To access **Mode 5**, press the **MODE** button until the LCD appears as shown below:

EJECT PCKR
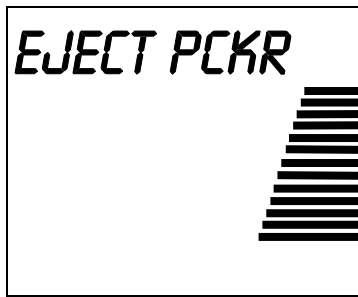
❐ Press the **SELECT** button to select **Mode 5**. The LCD will appear as shown while the Media Picker ejects the tape.
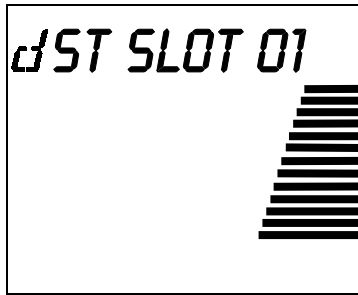
dST SLOT 01

❐ Use the **NEXT** or **PREVIOUS** button to scroll through the destination slot choices. Press **SELECT** when the slot you wish to place the tape in is displayed. When your FastStor 22 has completed the command, it will return to **LdR REAdY**.

> **Note**
>
> If the destination slot is full, a blinking **RESELECT** will appear on the LCD. The blinking **RESELECT** indicates that you attempted to select an invalid destination slot.

Mode 6 – DENSITY

This function sets the density format of the data cartridge.

All unformatted DLTtape™ III, DLTtape™IIIXT, and DLTtape™ IV data cartridges can be formatted to the densities shown in the following table:

Drive Model	Data Cartridge	Cartridge Density (native mode)	Cartridge Density (compressed mode)
DLT 4000	DLTtape III DLTtape IIIxt DLTtape IV	2.6, 6.0, 10.0 GB 15.0 GB 20.0 GB	20.0 GB 30.0 GB 40.0 GB
DLT 7000	DLTtape III DLTtape IIIxt DLTtape IV	2.6, 6.0, 10.0 GB 15.0 GB 20.0, 35.0 GB	20.0 GB 30.0 GB 40.0, 70.0 GB
DLT 8000	DLTtape III DLTtape IIIxt DLTtape IV	2.6, 6.0, 10.0 GB 15.0 GB 20.0, 35.0, 40.0 GB	20.0 GB 30.0 GB 40.0, 70.0, 80.0 GB

Maximum Capacity

Notes

- A density menu can only be used with a tape loaded in the drive.

- The density of previously recorded DLT data cartridges cannot be changed unless the tape is reformatted which will result in all data being lost.

- The default density of unformatted data cartridges is dependent upon the drive installed in your FastStor 22, and the type of tape being used.

❒   To access **Mode 6**, press the **MODE** button until the LCD appears as shown below:
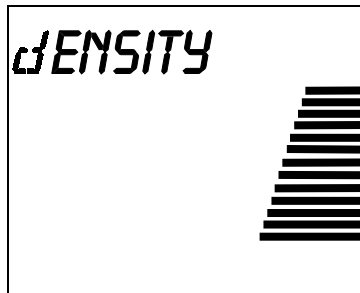
❒ Press the **SELECT** button. The LCD will appear as shown below (where XX is the lowest native mode density selectable for this cartridge):

FMT XX
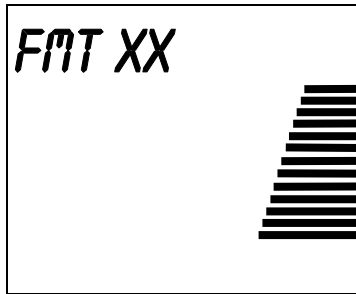
❒ Press the **NEXT or PREVIOUS** button to scroll through the density choices. Press **SELECT** when the desired density setting is displayed. When your FastStor 22 has completed the command, it will return to **LdR REAdY**.

> ### Notes
>
> • Attempting to select **Mode 6** when the drive is empty will result in a **NO TAPE** error message appearing on the LCD. Press **MODE** to return the FastStor 22 to **LdR REAdY**.
>
> • If a **NOT LOADED** error message appears on the LCD when pressing **SELECT**, the current tape has not completed loading. Press **MODE** to clear the error and return the FastStor 22 to **LdR REAdY**.
>
> • If a **CANNOT FMT** error message appears on the LCD when pressing **SELECT**, the drive cannot reformat the cartridge (i.e., TK85 cartridge in a DLT4000 drive). Press **MODE** to clear the error and return the FastStor 22 to **LdR REAdY**.

Mode 7 – SET SCSI

This function sets the SCSI ID of the robotics and/or the drive.

> ### Note
> SCSI ID changes are not effective until power is cycled on the FastStor 22.

❒ To access **Mode 7**, press the **MODE** button repeatedly until the LCD appears as shown below:

SET SCSI

❐ Press the **SELECT** button to select **Mode 4**. The LCD will appear as shown below:

```
LdR SCSI
```

❐ Press **SELECT** to choose the FastStor 22 robotics. The LCD will appear as shown below (where **X** is the current SCSI ID of the robotics):

```
L dR Id X
```
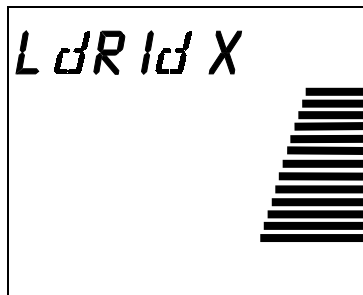
❐ Press **NEXT** or **PREVIOUS** button to scroll through the ID choices. Press **SELECT** when the desired SCSI ID is displayed. The LCD will appear as shown below:

```
dRV SCSI
```

❐ Press **SELECT**. The LCD will appear as shown below (where **X** is the current SCSI ID of the drive):
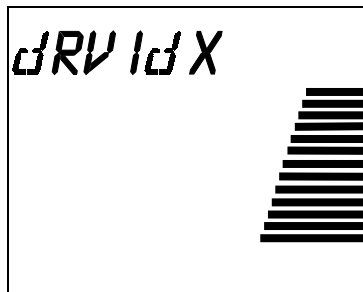
```
dRV Id X
```

❒ Press the **NEXT** or **PREVIOUS** button to scroll through the ID choices. Press **SELECT** when the desired ID is displayed. The LCD will appear as shown below. The **CYCLE PWR** message will blink for approximately 10 seconds and then the FastStor 22 will return to **LdR REAdY**.
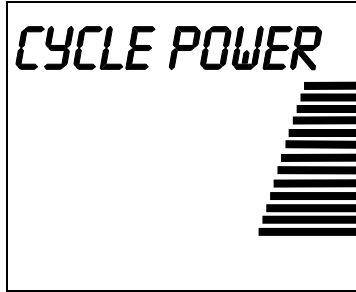
❒ Press and hold the **POWER** button for approximately 2 seconds to power down the FastStor 22, then wait two or three seconds and press the **POWER** button again. The new ID will now be in effect.

Normal Maintenance

Cleaning the Drive Head

Keeping a drive clean is the single most important requirement for achieving and maintaining superior performance. Cleaning the head should always be performed as the first step if the **CT** field appears on the LCD. The tape head may be cleaned once a month, or when the **CT** field appears on the Operator's Panel LCD.

Note

ADIC recommends that you use the built-in **AUTOCLEAN** function if your application does not support an auto clean cycle. See the **CFG SLOTS** section under the **DIAGNOSTICS MENU** functions in Chapter 4.

Cleaning Tape

Use a DLT cleaning tape to clean the drive heads. A cleaning cartridge, or a coupon for a free cleaning tape is shipped with your FastStor 22.
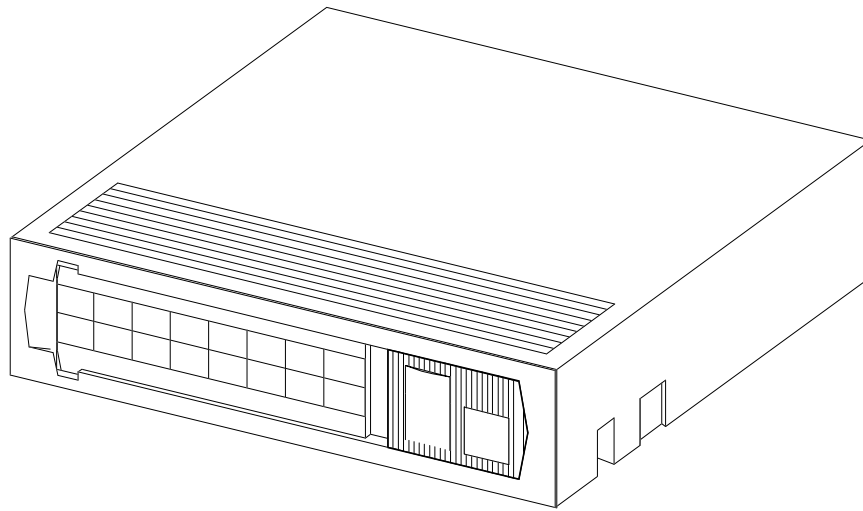
DLT Cleaning Tape

Note

Cleaning the head should always be performed as the first step if the **CT** field appears on the LCD.

Note

The cleaning tape is exhausted after it has performed 20 cleanings. The cleaning tape includes a label with 20 small boxes printed on it. Always place a check mark in a box each time the tape performs a cleaning. Replace the cleaning cartridge when it has performed 20 cleanings (all boxes will be checked).

The following table tells you when to use the cleaning tape:

If . . .	It means . . .	You should . . .
1. The **CT** field appears on the Operator's Panel LCD	The drive head needs cleaning or the tape is bad	Use the cleaning tape to clean the drive head. When cleaning is complete, log the cleaning onto the label.
2. A particular data cartridge causes the **CT** field to appear on the Operator's Panel LCD	The data cartridge may be damaged	Back up the data from this cartridge onto another cartridge, it may be damaged. A damaged cartridge may cause unnecessary use of the cleaning cartridge.
3. The **CT** field re-appears after performing a cleaning and reloading the data cartridge.	Cleaning was not accomplished because the cleaning tape has exhausted all cleaning cycles. **OR** The data cartridge may be damaged	Replace the cleaning cartridge. Back up the data from this cartridge onto another cartridge, it may be damaged. A damaged cartridge may cause unnecessary use of the cleaning cartridge.

Drive Head Cleaning Procedure

The following procedure is to be used only if your application does not support an auto clean cycle and you choose not to use the **AUTOCLEAN** feature (refer to Chapter 4 for a detailed description of the **AUTOCLEAN** sub-function under the **CONFIGURE SLOT** section), or the **CLEAN DRV** function under the **DIAGNOSTICS MENU** (refer to *Chapter 4 Troubleshooting and Diagnostics* for a detailed description of the **CLEAN DRV** function).

Manually Cleaning the Drive Head

> **Caution**
>
> **Cleaning cartridges are considerably more abrasive to the drive's recording head than standard data cartridges. Usage should be kept within the recommended limits.**

> **Notes**
>
> - To initiate the cleaning cycle manually you must be aware of the present state of the FastStor 22 and the drive that you wish to clean.
> - If a cartridge is present in the drive, you must first use the **Mode 2 - EJECT DRV** operation to remove the cartridge. You can then proceed with these instructions.

❒ If necessary, unlock and then open the front door of the FastStor 22.

❒ Insert the cleaning cartridge into any empty storage slot.

❒ Use **Mode 1 – LOAD DRV** to load the cleaning tape into the drive.

The cleaning cycle will be performed. When cleaning is completed, perform the following instructions:

❒ Use **Mode 2 – EJECT DRV** to unload the cleaning tape from the drive and place it back in the storage slot.

❒ Remove the cleaning cartridge and check a usage box on the label.

❒ To resume normal operation, close the front door of the FastStor 22 and lock it.

Cleaning the Enclosure

The outside of the enclosure can be cleaned with a damp towel. If you use a liquid all-purpose cleaner, apply it to the towel. Do not directly spray the enclosure.

Chapter

4

Troubleshooting and Diagnostics

This Chapter. . .

❐ contains some general suggestions to aid you in solving problems –
   should you ever run into them

❐ includes information on error codes and the built-in diagnostics

Installation Problems

Usually, problems encountered during the installation of your FastStor 22 are caused by improper SCSI bus configuration, application software configuration errors or by an OS that has not been correctly configured. If the application software that you are attempting to use is not communicating with your library after installation, check the following:

✓ **SCSI IDs:** Make sure that the IDs you selected for the FastStor 22 robotics and tape drive are not the same as the ID used by any other SCSI device on that bus, including the host SCSI adapter card.

✓ **SCSI Cabling:** Verify that all SCSI cables are securely connected at both ends and that the jack screws are secured. Also, check the length and integrity of your SCSI cabling. The total length of a SCSI bus must not exceed 25 meters (82 feet) for HVD configurations, 12 meters (39.4 feet) for LVD/SE configurations, and 3 meters (9.8 feet) for SE configurations. Try replacing suspect cables with known good cables.

> **Note**
>
> The length of the internal SCSI cabling inside your FastStor 22 is one foot. This length must be included in any calculations of bus length.

✓ **Termination:** Check that all SCSI buses are properly terminated.

✓ **Compatibility:** Ensure that your FastStor 22 and its tape drive are compatible with the SCSI adapter card and application software you plan to use.

> **Note**
>
> For a list of compatible SCSI adapters and application software, check with your application software vendor.

✓ **SCSI Adapter Card Installation:** Verify that you have installed your SCSI adapter card correctly. Refer to the documentation that came with your card for installation and troubleshooting instructions. Pay particular attention to any steps describing the settings of various jumpers and/or switches on the card. Check that the card is seated fully in the I/O connector.

✓ **Application Software Installation:** Refer to the documentation included with your software for instructions on how to verify installation.

Loader and Drive Operational Problems

Many problems with the operation of your FastStor 22 and/or DLT drive occur when the drive is not cleaned on request or when you use incorrect data cartridges. If you have been successfully operating the application software and the FastStor 22 in the past, but are now experiencing problems reading and writing data, check the following:

✔ If you are writing data, make sure that the cartridge is write enabled (move the write-protect switch to the enabled position).

✔ If the cartridge has been in use for a long time or if it has been used frequently, try using a new cartridge.

✔ Check the data cartridge you are using to confirm compatibility with your drive model.

Diagnostic Menu

In this section we discuss each of the diagnostic functions available through the Operator's Panel keypad.

Note

Your FastStor 22 will automatically exit the **dIAG MENU** and return to **LdR READY** if the keypad is idle for 30 seconds.

The **DIAGNOSTIC MENU** is accessed by pressing and holding first the **NEXT** button and then the **MODE** button concurrently for approximately 5 seconds. The LCD will appear as shown below:
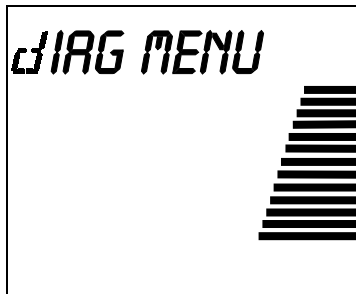
The following functions are available under the **dIAG MENU**:

dSP FW	When executed, this function displays the drive type (DLT 4000, DLT 7000, DLT 8000) and the revision of operating firmware used by the FastStor 22 microprocessors and the drive.
SIGN ON	Use this function if your application software does not support the FastStor 22, but does support the **SCALAR** library.
CHG MOdE	Use this function to change the Mode of Operation from/to **RANDOM** or **SEQUENTIAL**.
NUM SLOTS	You may need to use this function to select the maximum number of storage slots in your FastStor 22 (16, 20, or 22/23) if your application supports a limited number of slots.
CFG SLOTS	Use this function to configure the I/E Slot (data slot, import/export slot, cleaning slot, or none) and/or slot 22 (data slot, cleaning slot, or none).
AUTOCLEAN	This function will automatically perform a drive head cleaning whenever the drive issues a Cleaning Requested status.

CYCLE TEST   This function allows you to verify the functionality of the FastStor 22 robotics. **CYCLE TEST** exercises the FastStor 22 robotics by executing a sequence of pick and place operations, moving the cartridges between the slots and the drive.

CLEAN dRV   The **CLEAN dRV** function permits you to clean the drive head manually. Use this function if your application software does not support an auto cleaning cycle.

LOAd FW   When executed, this function allows you to upgrade the FastStor 22 firmware via the SCSI bus.

dSP COUNTS   The FastStor 22 keeps track of how many times certain events have occurred. The **dSP COUNTS** function returns these numbers to the display.

BARCOdE   This function allows you to enable/initialize, or disable the barcode reader when one has been installed in your FastStor 22. You can also use this function to read the barcode labels installed on the data cartridges within your FastStor 22.

UPG dRV FW   This function allows you to upgrade the drive firmware using a FUP tape.

DISPLAY FIRMWARE

❑ After entering the **dIAG MENU**, press the **MODE** button to access the **dSP FW** function. The LCD will appear as shown below:
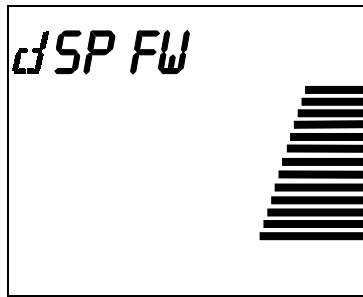
❑ Press the **SELECT** button to select the **dSP LdR FW** function. The LCD will appear as shown below:

❑ Press the **SELECT** button to display the revision for the loader firmware. The LCD will appear as shown below (**NNNN** is the revision number of the firmware):

```
Ld FW NNNN
```
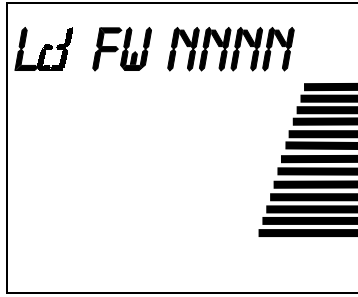
❑ Press **NEXT** to access the **dSP dRV FW** sub-function. The LCD will appear as shown below:

```
dSP dRV FW
```
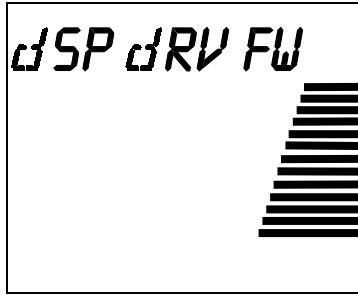
❑ Press **SELECT** to display the revision of the drive firmware. The LCD will appear as shown below (**NNNN** is the revision number of the firmware):

```
dR FW NNNN
```

❑ Press **NEXT** to access the **dSP MTN FW** sub-function. The LCD will appear as shown below:

```
dSP MTN FW
```
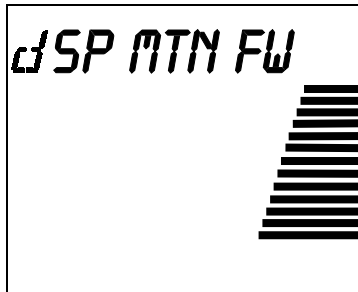
❐ Press **SELECT** to display the firmware revision for the Motion firmware. The LCD will appear as shown below (**NN** is the revision number of the firmware):

```
MTN FW NN
```

❐ Press **NEXT** to access the **dSP FP FW** sub-function. The LCD will appear as shown below:

```
dSP FP FW
```

❐ Press **SELECT** to display the firmware revision for the front panel firmware. The LCD will appear as shown below (**NNNN** is the revision number of the firmware):

```
FP FW NNNN
```

❐ Press **NEXT** to access the **dSP bT FW** sub-function. The LCD will appear as shown below:

```
dSP bT FW
```

❒ Press **SELECT** to display the firmware revision for the boot firmware. The LCD will appear as shown below (**NNNN** is the revision number of the firmware):
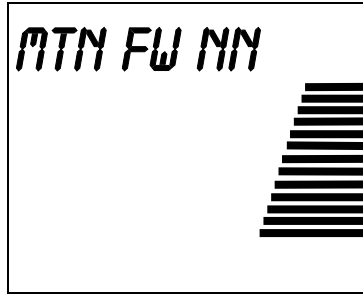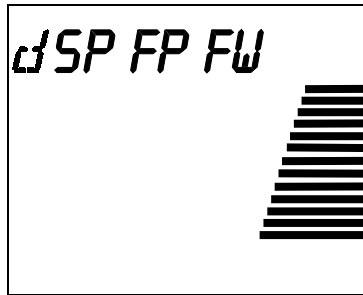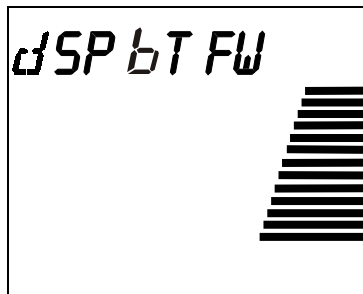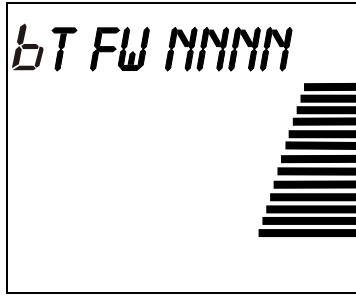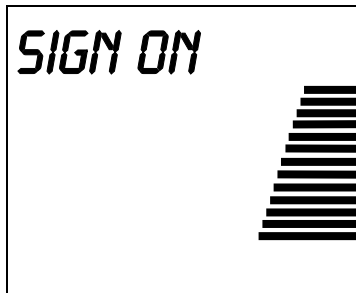
bT FW NNNN

❒ Press **SELECT**. Your FastStor 22 will return to **LdR REAdY**.

SIGN ON

❒ After entering the **dIAG MENU**, press the **MODE** button until **SIGN ON** appears on the LCD as shown below:

SIGN ON

❒ Press **SELECT** to display the current sign on string.

❒ Press the **NEXT** or **PREVIOUS** button to toggle the sign on string between **FASTSTOR/SCALAR**.

❒ Press **SELECT**. Your FastStor 22 will return to **LdR REAdY**.

CHANGE MODE

Your FastStor 22 is capable of operating in either Random-Access or Sequential-Access modes.

When in Random-Access mode, the FastStor 22 allows software selection of *any* data cartridge in *any* order. You can logically divide cartridge usage to satisfy particular data storage needs. For example, you can assign one or more cartridges to specific data functions (such as certain directories or network servers), or you can assign specific cartridges to individual users or groups (such as Sales or Engineering).

When in Sequential-Access mode, all cartridges present are considered to be a single volume. The FastStor 22 operating firmware predefines the selection of the cartridges. After initialization, the firmware will always load the first cartridge found (counting from 1 through 23) into the drive. After the application software has filled this cartridge and issued an eject command, the FastStor 22 will automatically unload the drive, return the cartridge to its storage slot, and then load the next cartridge in order. Empty storage slots are ignored. Your FastStor 22 will continue this process until the last tape in the sequence has been used. It is important to note that while in Sequential-Access mode, the FastStor 22 robotics is not logically connected to the SCSI bus and does not respond to SCSI commands.

❒ After entering the **dIAG MENU**, press the **MODE** button until **CHG MOdE** appears on the LCD as shown below:
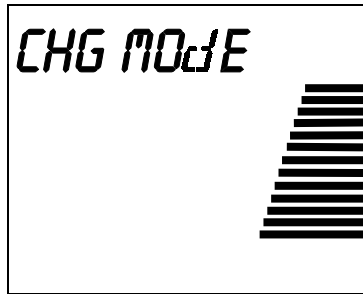
❒ Press the **SELECT** button to display the current mode.

❒ Press the **NEXT** or **PREVIOUS** button to toggle the mode between **SEQUENTIAL** and **RANdOM**.

❒ Press the **SELECT** button. **CYCLE POWER** will blink and appear on the LCD for approximately 10 seconds.

❒ Press and hold the **POWER** button for two seconds to power down your FastStor 22.

❒ Wait a few seconds, then press the **POWER** button again to power up the FastStor 22.

When in Sequential-Access mode, the FastStor 22 replaces the **LdR REAdY** message with a **SEQ REAdY** message.

If you press **MODE** while the FastStor 22 is in Sequential-Access mode, a **STOP SEQ** menu will appear on the LCD. Pressing **SELECT** while in this menu will cause a **SEQ ENdING** message to replace the **LdR REAdY** message and Sequential mode will finish after the currently loaded cartridge is unloaded. Pressing **MODE** after the cartridge is unloaded will cause FastStor 22 to enter the normal menu structure.

When the **SEQ ENdING** message is displayed, pressing **MODE** before the current cartridge is unloaded will cause a **RESUME SEQ** menu to be displayed. Pressing **SELECT** while in this menu will cause the previous **STOP SEQ** request to be canceled and Sequential mode will continue with the current cartridge as if **STOP SEQ** had never been requested.

When the last cartridge in the volume has been filled, a **SEQ dONE** message will replace the **SEQ REAdY** message.

When the **SEQ dONE** message is displayed, pressing **MODE** will cause a **START SEQ** menu to be displayed. Pressing **SELECT** while in this menu will cause Sequential mode to restart. Pressing **MODE** while in this menu will cause FastStor 22 to enter the normal menu structure.

NUMBER OF SLOTS

If your application software does not support the maximum number of storage slots (22/23) available in your FastStor 22, use this function to set the number of slots to a lower value. You may choose between **16**, **20** or **MAXIMUM**.

❐ After entering the **dIAG MENU**, press the **MODE** button until **NUM SLOTS** appears on the LCD as shown below:

```
NUM SLOTS
```
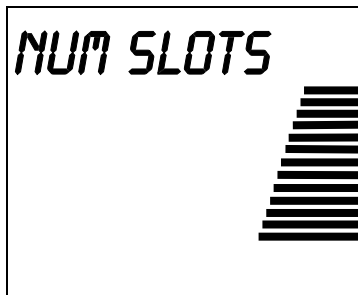
❐ Press the **SELECT** button to select the **NUM SLOTS** function. The LCD will appear as shown below:

```
MAXIMUM
```

❐ Press the **NEXT** or **PREVIOUS** button to scroll between **MAXIMUM**, **16**, or **20**. Press **SELECT** when the number of slots you wish to configure is displayed on the LCD. The LCD will blink and display **CYCLE POWER** for 10 seconds before your FastStor 22 returns to **LdR REAdY**.

❐ Press and hold the **POWER** button for two seconds to power down your FastStor 22.

❐ Wait a few seconds then press the **POWER** button again to power up your FastStor 22. The LCD will display **LdR REAdY.**

Note

If you select 16 or 20, the I/E slot and slot 22 will automatically be configured to **NONE** if previously configured as **dATA SLOT**.
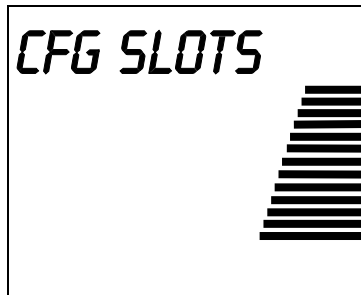

CONFIGURE SLOTS

Use this function to configure the I/E slot and slot 22. The I/E slot can be configured as a data storage slot, an Import/Export slot, AUTOCLEAN, or none. Slot 22 can be configured as a data storage slot, AUTOCLEAN, or none.

Notes

- Before attempting to configure slot 22, the I/E slot must be configured as **I/E SLOT**. If the I/E slot is configured as **DATA SLOT**, **AUTOCLEAN**, or **NONE**, the LCD will blink **RESELECT** while trying to configure slot 22.

- You can view the current configuration of the I/E slot and slot 22 by noting the first option displayed on the LCD after entering either sub-function. For example, if **AUTOCLEAN** is displayed on the LCD after selecting **SLOT 22** under the **CFG SLOTS** diagnostics function, slot 22 has been configured for a cleaning cartridge.

- You can only configure slot 22 and the I/E slot as **NONE** if **NUM SLOTS** is configured for 16 or 20.

- Any time you can change the configuration of the I/E slot or slot 22, you will be instructed to cycle power.

❏ After entering the **dIAG MENU**, press the **MODE** button until **CFG SLOTS** appears on the LCD as shown below:

CFG SLOTS

❏ Press the **SELECT** button to select the **CFG SLOTS** function. The LCD will appear as shown below:
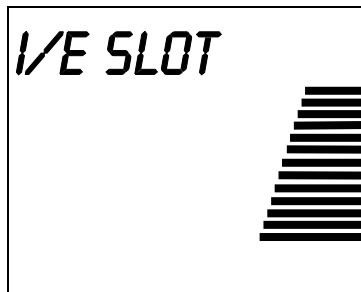
I/E SLOT

❏ Pressing the **NEXT** or **PREVIOUS** button will toggle between the **I/E SLOT** and **SLOT 22** sub-functions.

❏ Press **SELECT** when the slot you wish to configure is displayed on the LCD.

❑ After entering the **I/E SLOT** sub-function, pressing **NEXT** and **PREVIOUS** will scroll between **I/E SLOT**, **dATA SLOT**, **AUTOCLEAN**, and **NONE**.

❑ Press **SELECT** when the configuration you wish to choose is displayed on the LCD.

❑ If you select **I/E SLOT**, the LCD will blink and display **CYCLE POWER** for 10 seconds before your FastStor 22 returns to **LdR REAdY.** Press and hold the **POWER** button for two seconds to power down the FastStor 22. Wait a few seconds then press the **POWER** button again to power up the FastStor 22. The LCD will display **LdR REAdY**.

❑ If you select **AUTOCLEAN**, the LCD will blink and display **I/E (SEL)**. In this instance, place a cleaning tape in the **I/E Slot** and press **SELECT**. The LCD will blink and display **CYCLE POWER** for 10 seconds and the FastStor 22 will return to **LdR REAdY**. Press and hold the **POWER** button for two seconds to power down the FastStor 22. Wait a few seconds then press the **POWER** button again to power up the FastStor 22. The LCD will display **LdR REAdY**.

Notes

• If you select **I/E SLOT** and the slot was previously configured as **AUTOCLEAN**, the LCD will blink and display **I/E (SEL)**. In this instance, you will need to remove the cleaning tape from the slot and then press **SELECT**.

• If you select **dATA SLOT** and the slot was previously configured as **AUTOCLEAN**, the LCD will blink and display **I/E (SEL)**. In this instance, you will need to remove the cleaning tape from the slot and then press **SELECT**.

❑ To configure slot 22, press **SELECT** when **SLOT 22** is displayed on the LCD.

Note

To configure slot 22, the I/E slot must be configured as **I/E SLOT**. A blinking **RESELECT** indicates the I/E slot is configured for another sub-function.

❑ Pressing the **NEXT** or **PREVIOUS** button will scroll between **dATA SLOT**, **AUTOCLEAN** or **NONE**.

❑ Press **SELECT** when the configuration you wish to choose is displayed on the LCD.

❑ If you select **dATA SLOT**, the LCD will blink and display **CYCLE POWER** for 10 seconds before the FastStor 22 returns to **LdR READY.** Press and hold the **POWER** button for two seconds to power down the FastStor 22. Wait a few seconds then press the **POWER** button again to power up the FastStor 22. The LCD will display **LdR READY**.

Note

If you select **dATA SLOT** and the slot was previously configured as **AUTOCLEAN**, the LCD will blink and display **I/E (SEL)**. In this instance, you will need to remove the cleaning tape from the slot and then press **SELECT**.

❐ If you select **AUTOCLEAN**, the LCD will blink and display **I/E (SEL)** as shown below:

I/E (SEL)

❐ Place a cleaning tape in the I/E slot and press **SELECT**. The Media Picker will move the tape from the I/E slot to slot 22. The LCD will blink and display **CYCLE POWER** for 10 seconds. Press and hold the **POWER** button for two seconds to power down the FastStor 22. Wait a few seconds then press the **POWER** button again to power up the FastStor 22. The LCD will display **LdR REAdY**.

> **Notes**
>
> - If slot 22 is configured as **AUTOCLEAN**, you can not pick or place from this slot through the Operator Panel.
>
> - To remove a cleaning tape from slot 22, you must reconfigure slot 22 to **dATA SLOT** within the **CFG SLOTS**, **SLOT 22** function in the **dIAG MENU**. The Media Picker will automatically pick and place the tape into the I/E slot.
>
> - If a data cartridge already exists in slot 22 when you execute **AUTOCLEAN**, the LCD will display **dEST FULL**. You will need to **EJECT PCKR** and use **EJECT SLOT** mode to remove the cartridge from slot 22 before attempting to configure slot 22 for **AUTOCLEAN**.

AUTOCLEAN

AUTOCLEAN will automatically perform a drive head cleaning whenever the drive issues a Cleaning Requested status. After completion of the head cleaning, your FastStor 22 will automatically return the cleaning cartridge to the I/E slot of slot 22.

> **Notes**
>
> - When AUTOCLEAN is enabled, the application does not have access to the I/E slot or slot 22, depending on which is configured for AUTOCLEAN.
>
> - If the cleaning cartridge is ever in any slot other than the I/E slot or slot 22, AUTOCLEAN will not function.

If, during the cleaning, the drive issues a cleaning tape expired condition, your FastStor 22 will display the following blinking message on the LCD:

```
CYCLE AC
```
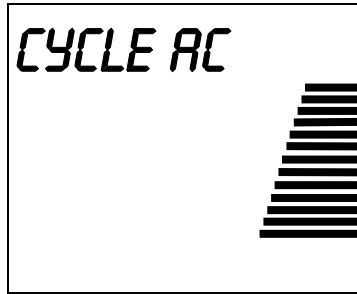
To clear the error condition, press the **MODE** button. Now use the front panel to replace the cleaning cartridge with a new one. You must first disable **AUTOCLEAN** to eject the expired cleaning cartridge. You will then need to re-enable it using a new cleaning cartridge.

Disabling AUTOCLEAN

❐ After entering the **dIAG MENU**, press the **MODE** button until **CFG SLOT** appears on the LCD as shown below:

```
CFG SLOT
```
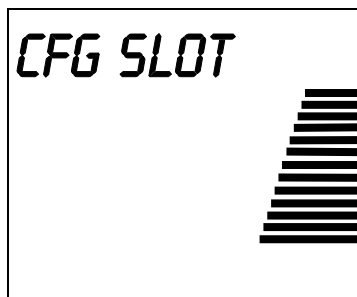
❐ Press the **SELECT** button to access the **CFG SLOT** function. If the I/E slot is configured for **AUTOCLEAN**, press **SELECT**. If slot 22 is configured for **AUTOCLEAN**, press **NEXT** until Slot 22 is displayed. Press **SELECT**.

❐ Press the **PREVIOUS** or **NEXT** button until **dATA SLOT** appears on the LCD as shown below:

```
dATA SLOT
```
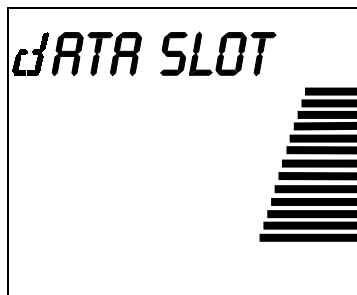
❏ Press **SELECT**. The LCD will display the following blinking message.

```
I/E (SEL)
```

❏ Remove the expired cleaning tape from the I/E slot and press **SELECT**.

> ### Notes
>
> - You will be instructed to CYCLE POWER. Disregard this command at this time. You will be instructed and required to CYCLE POWER when you re-enable AUTOCLEAN.
>
> - When you are ready to re-enable AUTOCLEAN, please review the previous section, CONFIGURE SLOT, to enable either the I/E slot or slot 22 for AUTOCLEAN.

CYCLE TEST

> ### Notes
>
> - Before executing **CYCLE TEST**, verify that the drive is empty. If necessary, use **Mode 2 – EJECT DRIVE**, to remove any cartridge from the drive.
>
> - Before executing **CYCLE TEST**, verify that all 22 (23, if the I/E slot is configured as data slot) cartridge slots have cartridges installed. If required, install additional cartridges.
>
> - If **AUTOCLEAN** is enabled and a cleaning tape is in the **I/E SLOT**, **CYCLE TEST** will not use the **I/E SLOT** during the test.

❏ After entering the **dIAG MENU**, press the **MODE** button until **CYCLE TEST** appears on the LCD as shown below:

```
CYCLE TEST
```
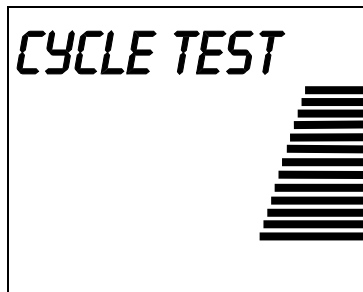
❒ Press **SELECT**. **CYCLES 1** will appear on the LCD as shown below:

```
CYCLES 1
```
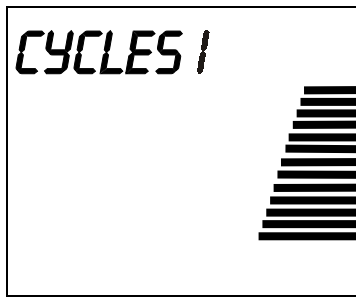
❒ Press **NEXT** until the desired number of cycles is displayed, then press **SELECT**.

Notes

- If you want the FastStor 22 to execute **CYCLE TEST** continually, press **PREVIOUS** until **CYCLES 0** is displayed, then press **SELECT**.

- To terminate continous **CYCLE TEST**, press and hold the **MODE** button for approximately 10 seconds.

During **CYCLE TEST** execution, the FastStor 22 moves the cartridges from one slot to another, and places each cartridge into the drive. When **CYCLE TEST** is completed, your FastStor 22 will return to **LdR REAdY**.

CLEAN DRIVE

The following procedure is to be used only if your application does not support an auto clean cycle.

Note

The **CLEAN DRIVE** function uses **I/E SLOT** for the cleaning tape if neither the I/E slot nor slot 22 have been configured for **AUTOCLEAN**.

❒ After entering the **dIAG MENU**, press the **MODE** button until **CLEAN dRIVE** appears on the LCD as shown below:

```
CLEAN dRV
```

❒ Press **SELECT** to begin the drive head cleaning process. The FastStor 22 will automatically pick the cleaning tape from the slot configured for **AUTOCLEAN** and place it into the drive. If neither slot is configured for **AUTOCLEAN**, the LCD will blink and appear as shown below:

```
I/E (SEL)
```
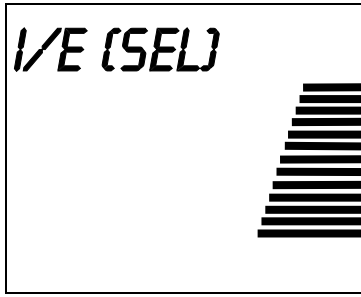
❒ If necessary, place a cleaning tape in the I/E slot then press **SELECT**. The FastStor 22 will move the cleaning tape to the drive and cleaning will begin. During cleaning the following message will appear on the LCD and the Activity Bars will indicate drive activity.

```
CLEANING
```
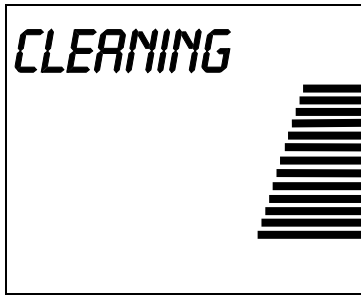
Notes
• If you press **SELECT** before placing the cleaning cartridge in the I/E slot, the FastStor 22 will continue to display the blinking **I/E (SEL)** message.
• If a data cartridge is in the I/E slot or slot 22 and you press **SELECT**, the FastStor 22 will treat it like a cleaning cartridge and load it into the drive.
• If a cartridge is in the drive when you press **SELECT**, a **DRIVE FULL** error will be posted. Clear the error by pressing the **MODE** button. Use the **EJECT DRV** mode to remove the cartridge from the drive, then start the cleaning process again.

When the cleaning is finished, the drive will automatically eject the cartridge, and the FastStor 22 will place it back in the I/E slot (or slot 22).

❒ Remove the cleaning cartridge from the I/E slot (or slot 22), then press **SELECT** to return your FastStor 22 to **LdR REAdY**.

LOAD FIRMWARE

Whenever ADIC releases new firmware for the FastStor 22, complete instructions on how to use the **LOAD FIRMWARE** function to perform the upgrade is included on the firmware diskette.
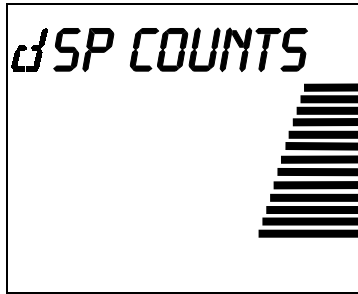
DISPLAY COUNTS

❒ After entering the **dIAG MENU**, press the **MODE** button until **dSP COUNTS** appears on the LCD as shown below:

```
dSP COUNTS
```

❒ Press the **SELECT** button to access the first event. The display will appear as shown below:

```
FRT PK
```
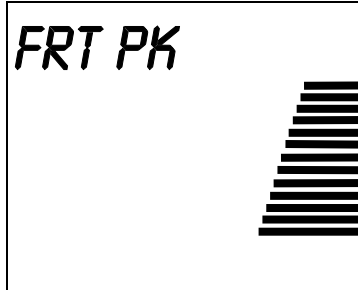
❒ Press **SELECT**. Your FastStor 22 will return the number of times the FastStor 22 has picked a cartridge from any of the front slots. The LCD will display a message similar to the following:

```
(000000XX)
```
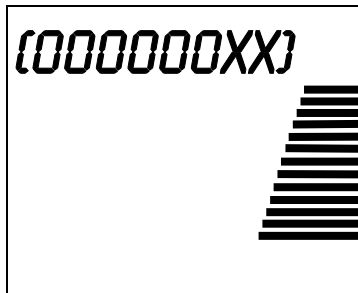
❒ Press **NEXT** to access the next event.

The events the FastStor 22 records are listed below:

- Front Pick Cartridge
- Rear Pick Cartridge
- Drive Pick Cartridge
- Front Place Cartridge
- Rear Place Cartridge
- Drive Place Cartridge

- Front Pick Retries
- Rear Pick Retries
- Drive Pick Retries
- Front Place Retries
- Rear Place Retries
- Drive Place Retries

- Drive Door Retries

Pressing the **SELECT** button when the return value for **dRV dR RE** is displayed will return your FastStor 22 to **LdR READY**. Also, pressing the **MODE** button at any time will return the FastStor 22 to **LdR READY**.

BARCODE READER

The **bARCOdE** function allows you to enable or disable your barcode reader, program your FastStor 22 to read all barcode labels upon initialization if desired, and issue a read barcode command from the Operator Panel.

> ### Notes
>
> - The **bARCOdE** function will not display on the LCD if a barcode reader is not installed.
>
> - When the barcode reader is initially installed, the reader is enabled and will scan all tapes for barcodes during the FastStor 22 initialization.

❒   After entering the **dIAG MENU**, press the **MODE** button until **bARCOdE** appears on the LCD as shown below:

```
bARCOdE
```
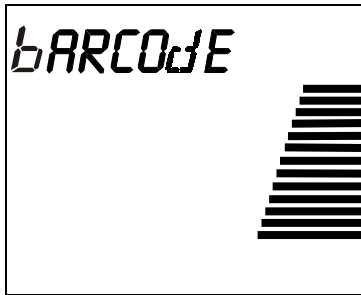
❒   Press **SELECT** to enable/initialize, or disable the barcode reader or read barcode labels. The LCD will appear as shown below:

```
bCOdE ENAb
```
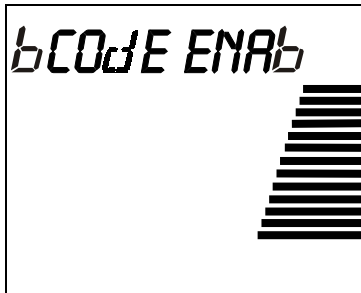
❒   Press the **NEXT** or **PREVIOUS** button to access the following sub-functions: **bCOdE ENAb**, **INIT bCOdE**, and **Rd bCOdES**. Press **SELECT** when the function you wish to perform is displayed on the LCD.

❑ If **bCOdE ENAb** is displayed when you press **SELECT**, the LCD will appear as shown below:
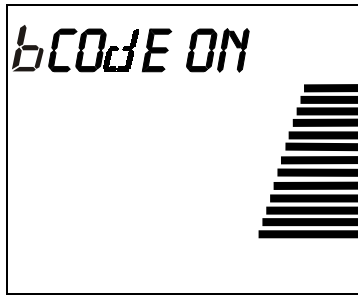
bCOdE ON

❑ Press the **NEXT** or **PREVIOUS** button to toggle between **bCOdE ON** and **bCOdE OFF**.

❑ Press **SELECT** when the desired function is displayed.

Your FastStor 22 will return to **LdR REAdY**.

❑ To read all barcode labels upon FastStor 22 initialization, press the **NEXT** button while **bCOdE ENAB** is displayed on the LCD. The LCD will appear as shown below:
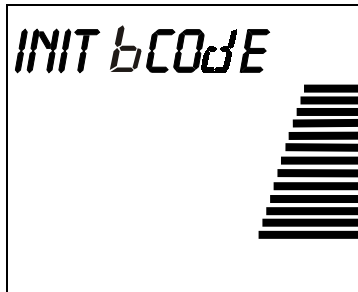
INIT bCOdE

❑ Press **SELECT** to enter the **INIT bCOdE** sub-function.

❑ Press the **NEXT** or **PREVIOUS** button to toggle between **INITbC ON** and **INITbC OFF**. Press **SELECT** when the function you wish to perform is displayed on the LCD.

Your FastStor 22 will return to **LdR REAdY**.

> **Note**
>
> Although you can select **INITbC ON** with the barcode reader disabled, the FastStor 22 will not read barcode labels upon initialization.

❒ To read all barcode labels within your FastStor 22, press the **NEXT** button while **bCOdE ENAB** is displayed. The LCD will appear as shown below:
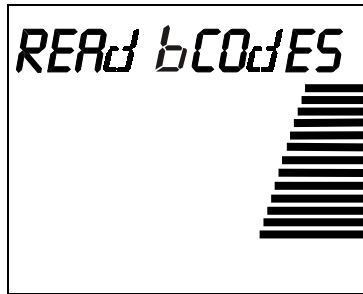
REAd bCOdES

❒ Press **SELECT** to enter the **Rd bCOdES** sub-function. Press **SELECT** again to read the barcode labels.

Note

If the barcode reader is not enabled, **NO bCOdE** will appear on the first line of the LCD and an **E** will appear in the center of the display.

❒ Press the **MODE** button to return your FastStor 22 to **LdR REAdY**.

UPGRADE DRIVE FIRMWARE

The following procedure is to be used only when you are upgrading the drive firmware using a Firmware Upgrade (FUP) tape.

❒ After entering the **dIAG MENU**, press the **MODE** button until **UPG DRV FW** appears on the LCD as shown below:

UPG dRV FW

❒ Press **SELECT** to begin the drive firmware upgrade process. A blinking **IE (SEL)** will appear on the LCD as shown below:

```
I/E (SEL)
```

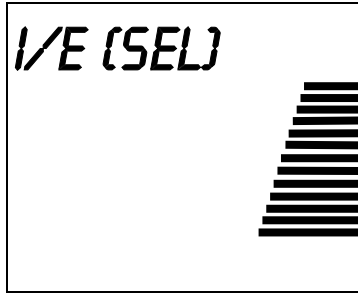❒ If not already installed, place a FUP tape in the I/E slot then press **SELECT**. If you press **SELECT** before placing the FUP tape in the I/E slot, **UPG DRV FW** will appear momentarily on the LCD and then the blinking **IE (SEL)** message will reappear.

The drive will be placed in a "prepare for firmware upgrade via tape" mode. The FastStor 22 will move the FUP tape to the drive and the upgrade process will begin. The following message will appear on the LCD, the three front panel LEDs will alternate between **POWER** on, **ACTIVITY** off, **ALARM** on, **POWER** off, **ACTIVITY** on, **ALARM** off, and the Activity Bars will indicate drive activity; also, the **POWER** button will be disabled during the upgrade.

```
UPdATING
```
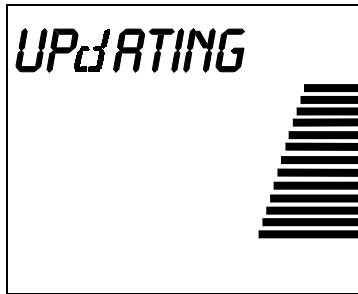
When the update process is completed, the FastStor 22 will auto-unload the tape and return it to the I/E slot. The following message will be blinking on the LCD:

```
I/E (SEL)
```

❒ Remove the FUP tape from the I/E slot, then press **SELECT** to return the FastStor 22 to **LdR REAdY**.

If the following message appears on the LCD after several minutes, perform the following:

```
dRIVE PGRM
E
```
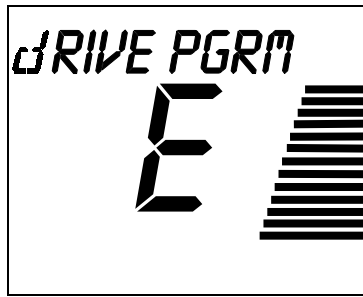
❑ Verify that the tape is a valid FUP tape and not a data or cleaning cartridge.

❑ If you believe the tape is OK, repeat the update process. If the FastStor 22 displays the same error message, call ATAC for assistance.

FastStor 22 Error Codes

If, during operation of your FastStor 22 an error occurs, the FastStor 22 will halt the current operation and an error message will be displayed on the operator's display. In all cases, after removing the cause of the problem, cycle power on your FastStor 22 and try the last operation again.

Error Message Listing

A description of each of the FastStor 22 error messages is provided in the following table:

Error Name	Description
SERIAL RCV	Inter-processor communication error
SRC EMPTY *	The source location is empty
DEST FULL *	The destination location is full
CPU RX ERR	The motion CPU is not ready to receive
CPU TX ERR	The motion CPU is not ready to transmit
SLOT EMPTY	No slot beam was detected
PWR SWITCH	The front power switch was pressed
HALT	The motion CPU has been halted by a low ACT line
CAM LIMIT	A cam limit has been reached w/o tripping a sensor
JAW SENSOR	A jaw sensor was tripped
INV MOV OP *	An invalid move operation occurred
REAR TAPE	A rear tape sensor was not tripped
FRONT TAPE	A front tape sensor was not tripped
REAR SLOT	A rear slot sensor was not tripped
FRONT SLOT	A front slot sensor was not tripped
PCKR FULL *	The media picker was full
PCKR EMPTY *	The media picker was empty
SLOT FULL *	There was medium in slot
NVM SELECT	NVRAM selection failure
NVM WRITE	NVRAM write failure
DRIVE EJCT	Drive failed to eject medium
DRIVE LOAD	Unable to load medium into drive
DRIVE UNLD *	Drive not logically unloaded
DRIVE HNDL	Drive 'Operate Handle' timeout
DRIVE BUSY	Drive busy, cannot unload tape
DRIVE PGRM	Attempt to set drive parameters failed
DRIVE DOOR	Drive door stepper motor limit
DRIVE FULL *	The drive was full
CT FAILED	Cleaning tape failed to clean drive
DRIVE POST	Drive failed its POST
ROBOT POST	Robotics failed its POST

* These errors will not appear on the LCD if the error occurred during SCSI interaction.

> **Note**
>
> During the FastStor 22 POST, if the **CT FAILEd, dRIVE BUSY, dRIVE dOOR, dRIVE EJCT, dRIVE HNdL, dRIVE LOAd, dRIVE PGRM,** or **dRIVE UNLd** error occurs, **dRIVE POST** will appear on the Operator's Panel LCD. All other errors occurring during the FastStor 22 POST will result in **RObOT POST** being displayed.

Environmental Considerations

For best performance of your FastStor 22, and to minimize the chance of condensation, please observe the following guidelines:

❒ Install your FastStor 22 on a level surface. Do not place the FastStor 22 on a carpeted surface.

❒ If you expose cartridges to temperatures outside the operating limits, 10-40°C (50-104°F), stabilize them by leaving the cartridges in the operating temperature for a minimum of two hours before you use them.

❒ Avoid temperature problems by ensuring that the FastStor 22 rear panel is not obstructed so that the drive has adequate ventilation.

❒ Position the FastStor 22 where the temperature is relatively stable (i.e., away from open windows, fan heaters, and doors).

❒ Avoid leaving cartridges in severe temperature conditions, for example, in a car standing in bright sunlight.

❒ Avoid transferring data (reading from and writing to cartridges) when the temperature is changing by more than 10° C (15° F) per hour.

When You Need Customer Assistance

Before calling ATAC, follow these steps – which will help you take full advantage of your call:

❒ Review all documentation carefully. (Experience has demonstrated that most questions are answered in your documentation.)

❒ Be prepared to explain whether the software or hardware has worked properly at anytime in the past. Have you changed anything recently?

❒ Pinpoint the exact location of your problem, if possible. Note the steps that led to the problem. Are you able to duplicate the same problem or is it a one-time occurrence?

❒ Note any error messages displayed on your PC screen or file server. Write down the exact error message.

❒ If at all possible, call while at your computer, with ADIC 's FastStor 22 installed and turned on.

❒ If running on a network, have all relevant information available (i.e. type, version #, network hardware, etc.).

❒ Be prepared to provide:
  • Your name and your Company's name
  • Model number
  • Serial number of the FastStor 22 (located inside the unit, under the bottom cartridge slot)
  • Serial number of drive assembly (located on rear panel, above SCSI connectors)
  • Software version numbers
    – device driver
    – archive/restore
  • Hardware configuration, including firmware version, date and number
  • Type of PC, DOS version, clock speed, RAM, network type, network version, and any special boards installed
  • A brief description of the problem
  • Where you purchased your ADIC FastStor 22

Having this information available when you call for customer assistance will enable ADIC's Technical Assistance Center personnel to resolve your problem in the most efficient manner possible.

Note

In the US and Canada, call ATAC at 1-800-827-3822.
In Europe, call ATAC at +800.9999.3822.

Appendix
A

Specifications

This Appendix…

❒ Contains specification information on the FastStor 22 and the DLT drive

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Drive:

Type:	FastStor 22 with DLT 4000 drive — Quantum model DLT 4000
	FastStor 22 with DLT 7000 drive — Quantum model DLT 7000
	FastStor 22 with DLT 8000 drive — Quantum model DLT 8000
Data Capacity:	Up to 40 GB per 1800 ft cartridge (DLTtape IV and DLT 4000 drive)
(compressed mode)	Up to 70 GB per 1800 ft cartridge (DLTtape IV and DLT 7000 drive)
	Up to 80 GB per 1800 ft cartridge (DLTtape IV and DLT 8000 drive)
Data Transfer Rate:	3.0 MB/sec. sustained (180 MB/min., DLT 4000 drive)
(compressed mode)	10.0 MB/sec. sustained (600 MB/min., DLT 7000 drive)
	12.0 MB/sec. sustained (720 MB/min., DLT 8000 drive)

Loader:

Media type:	DLT ½-inch, metal-particle cartridges
Capacity:	Up to 1.76 TB
Cartridge Change:	10 seconds max
Indicators/Controls:	4 button keypad with LCD menu display, Power button, Power LED, Activity LED and Alarm LED to monitor and control system status, diagnostics and configuration
Interface:	FastStor 22 with DLT 4000 drive — SE or HVD, Fast SCSI, 68-pin HD
	FastStor 22 with DLT 7000 drive — SE or HVD, Fast/Wide SCSI, 68-pin HD
	FastStor 22 with DLT 8000 drive — LVD/SE or HVD, Fast/Wide SCSI, 68-pin HD

Reliability:

Maintenance:	Drive head cleaning with DLT cleaning cartridge when indicated by drive, or automatic with Autoclean enabled.
MSBF:	Greater than 250,000 cartridge changes (net, drive and media) with scheduled maintenance.
MTBF:	More than 80,000 power-on hours
MTTR:	Within 30 minutes

Physical:

Dimensions:	17.5" (w) x 21.0" (d) x 8.75" (h)
Weight:	40.0 lb
Shipping Weight:	50 lb

Power Consumption:

Less than 85 Watts

Environment:

Electrical:	100-120/220-240 Vac Auto-ranging, 1.2-0.6 Amps, 50-60 Hz
Temperature:	10° C to 40° C (Operating)
Humidity:	5% to 80% RH, non-condensing (Operating)
	95% maximum (Storage/Shipping)
Vibration:	0.3 g (5-500-5 Hz), Operating
	Tested per ISTA for storage/shipping
Shock:	3 g Operating
	Impact tested per ISTA for storage/shipping