

Hewlett-Packard 98041A Disc Interface Installation Manual





Manual Changes

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HP 98041A Disc Interface Installation Manual

(For Manual P/N 98041-90000, Dated May 1, 1978)

Page 8:

Add the following **CAUTION** under the heading "Installing the Disc Interface."

CAUTION

DUE TO TIMING CONSIDERATIONS, THE HP 98041A DISC INTERFACE SHOULD NOT BE PLUGGED INTO THE HP 9878 I/O EXPANDER WHEN USED WITH THE SYSTEM 35 OR SYSTEM 45. THE HP 98041A INTERFACE SHOULD BE PLUGGED DIRECTLY INTO THE BACK OF THE SYSTEM 35 OR SYSTEM 45 DESKTOP COMPUTER.

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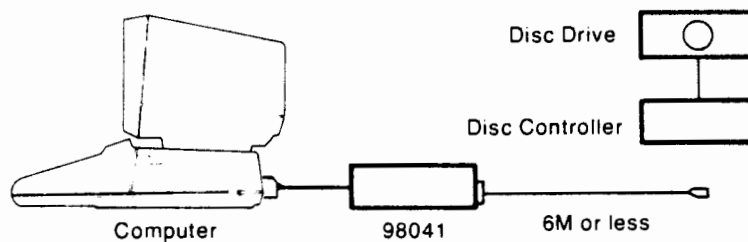
Page 10:

Change the first sentence of the first paragraph to read:

Only **one** mass storage controller may be connected to an HP 98041A Disc Interface.

Page 11:

Replace the Example System Configurations figure with the following figure:



Example System Configuration

NOTE

Only **one** Disc Controller with a maximum of **four** Disc Drive may be connected to a 98041A Disc Interface.

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Manual Supplement for

Peripheral Documentation

98041A Disc Interface Installation Manual

(For Manual P/N 98041-90000, Dated May 1, 1978)

The following Mass Storage Units are currently available for use with the 98041A Disc Interface.

Mass Storage Units	Related Manuals
	7906A User Manual P/N 07906-90901
7906M Option 100 20M Byte Disc Drive with a 13037B Disc Controller modified with 12745A HP-IB Adapter	7906A Installation Manual P/N 07906-90902 13037A/B Installation and Service Manual P/N 13037-90006 12745A HP-IB Adapter Manual P/N 12745-90901 Disc Cabinet Installation and Service Manual P/N 29425-90001 Prefilter Assembly Manual P/N 40019-90901
7906S 20M Byte Disc Drive without a controller unit. For use with a 7906M Opt. 100 unit.	7906A User Manual P/N 07906-90901 7906A Installation Manual P/N 07906-90902 Disc Cabinet Installation and Service Manual P/N 29425-90001 Prefilter Assembly Manual P/N 40019-90901

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7920M Opt. 100
50M Byte Disc Drive with
13037B Discs Controller modified
with 12745A HP-IB Adapter.

7920A Operating and Service Manual
P/N 07920-90001

7920A Operator's Manual
P/N 07920-90030

13037A/B Installation and
Service Manual
P/N 13037-90006

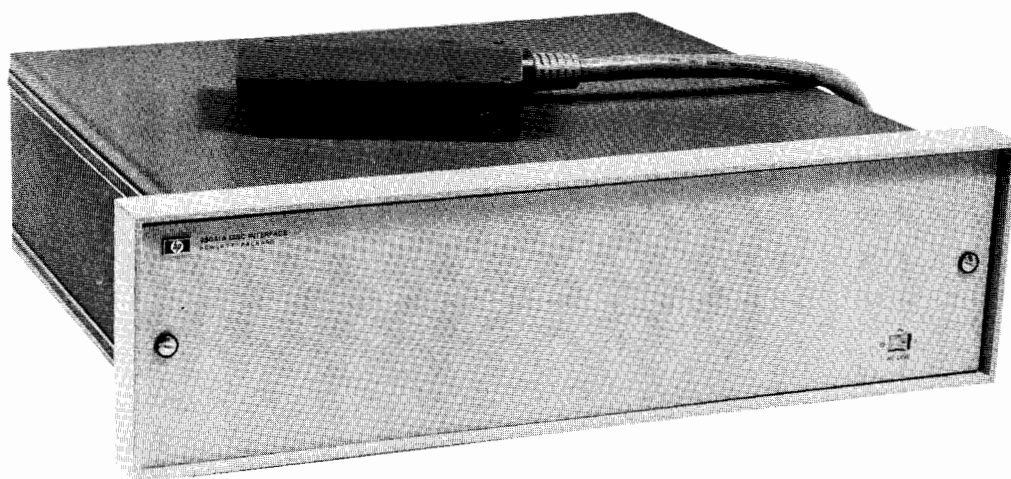
12745A Installation and
Service Manual
P/N 12745-90901

7920S
50M Byte Disc Drive
without a controller unit.
For use with a 7906M
Opt. 100 unit.

7920A Operating and Service Manual
P/N 07920-90001

7920A Operator's Manual
P/N 07920-90030

Hewlett-Packard 98041A Disc Interface Installation Manual



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P.O. Box 301, Loveland, Colorado 80537
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Chapter 1

General Information



Introduction

The HP 98041A Disc Interface connects an HP System 45 Desktop Computer to a wide variety of high speed, mass storage peripherals.

The 98041A is installed initially by an HP customer engineer along with your mass storage units. This manual contains installation procedures and general system information that can be used to reconnect your system if it must be disconnected for some reason (e.g. moving, servicing, etc.) after the initial installation.

Equipment Supplied

The following items are supplied with each disc interface.

Description	Quantity	Part Number
Installation Manual	1	98041-90000
Power Cord	1	8120-1378*
Spare Fuse		
.75A,250V,NB	1	2110-0033
1.5A,250V,NB	1	2110-0043
Rack Mount Hardware		
Screws	4	2680-0103
Washer	4	3050-0257

* Part number for the standard power cord is shown. Refer to "Power Cords" in Chapter 2 for options.

Specifications

The following specifications are for the 98041A only. Refer to the Installation and Service manuals of each mass storage unit in your system for its specifications and operating limitations.

Environmental

Operating Temp 0° C to 55° C

Non-Operating Temp 40° C to 65° C

Relative Humidity 0 to 95% at 25° to 40° C (77° to 104° F) without condensation

Physical Dimensions

Height 13.3 cm (5.25 in)

Width 40.6 cm (16 in)

Length 30.5 cm (12 in)

Weight 9.34 kg (20 lbs 12 oz)

Initial Inspection

The disc interface and its accessories were carefully inspected before they were shipped to you. Please verify that the correct accessories are present; then inspect the disc interface for physical damage. If any damage is found, contact the nearest HP Sales and Service Office; office locations are listed at the back of this manual.

Maintenance Agreements

When you buy Hewlett-Packard equipment, service is an important factor. If you are to get maximum use from your equipment, it must be in good working order. An HP Maintenance Agreement is the best way to keep your equipment in optimum running condition.

Consider these important advantages:

- **Fixed Cost** – The cost is the same regardless of the number of calls, so it is a figure that you can budget.
- **Priority Service** – Your Maintenance Agreement assures that you receive priority treatment, within an agreed upon response time.
- **On-Site Service** – There is no need to package your equipment and return it to HP. Fast and efficient modular replacement at your location saves you both time and money.
- **A Complete Package** – A single charge covers labor, parts, and transportation.

- **Regular Maintenance** – Periodic visits are included, per factory recommendations, to keep your equipment in optimum operating condition.
- **Individualized Agreements** – Each Maintenance Agreement is tailored to support your equipment configuration and your requirements.

After considering these advantages, we are sure you will find that a Maintenance Agreement is an important and cost-effective investment.

For more information, please contact your local HP Sales and Service Office.



Chapter 2

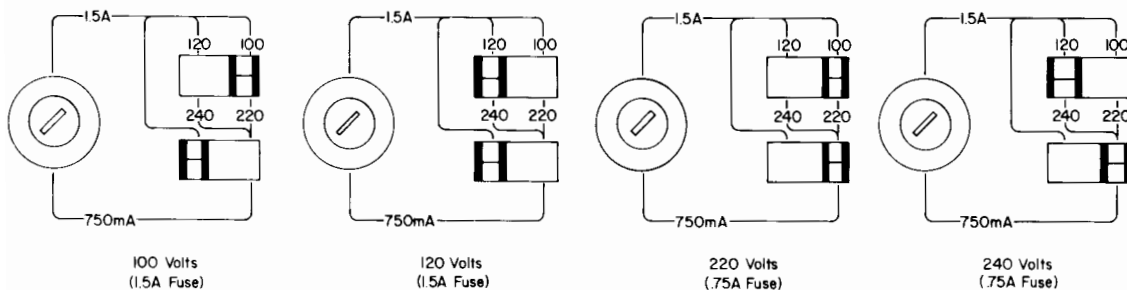
Installation

Power Requirements

The disc interface operates from power line voltages of 100, 120, 220 or 240 volts ac. The range of operation is within +5% and -10% of each nominal voltage. Two switches on the disc interface back panel permit selection of any one of the four nominal voltages (see the next figure). The line frequency must be within 48 to 66 Hz. The disc interface requires a maximum of 120 voltamps.

CAUTION

THE DISC INTERFACE MAY BE DAMAGED IF THE LINE VOLTAGE SWITCH SETTINGS ARE INCORRECT. CHECK THE SWITCH SETTINGS BEFORE APPLYING POWER.



Line Voltage Switches

Grounding Requirements

The National Electrical Manufacturers' Association (NEMA) recommends that the disc interface be grounded to protect operating personnel from electrical shock. The disc interface is equipped with a three-conductor power cable which, when connected to an appropriate receptacle, grounds the cabinet of the interface.

Fuses

The disk interface must be fitted with a 1.5 amp normal blow fuse for 100-120 volt operation or a .75 amp normal blow fuse for 220-240 volt operation. Fuse part numbers are listed in the Equipment Supplied Table in Chapter 1.

WARNING

BEFORE CHANGING THE FUSE, BE SURE THAT THE DISC INTERFACE IS DISCONNECTED FROM ANY POWER SOURCE.

To remove a fuse, press in on the cap of the fuse holder and twist the cap in the direction indicated by the arrow on the cap. Pull the cap free and remove the fuse.

To install a fuse, place either end of the fuse into the pocket in the cap, replace the fuse and cap in the holder and reinstall the cap by pressing in on the cap and twisting it in the opposite direction from the arrow.

Always be sure that the correct fuse is used. The wrong fuse could result in damage to the disc interface if a malfunction or unusual line voltage occurs.

Power Cords

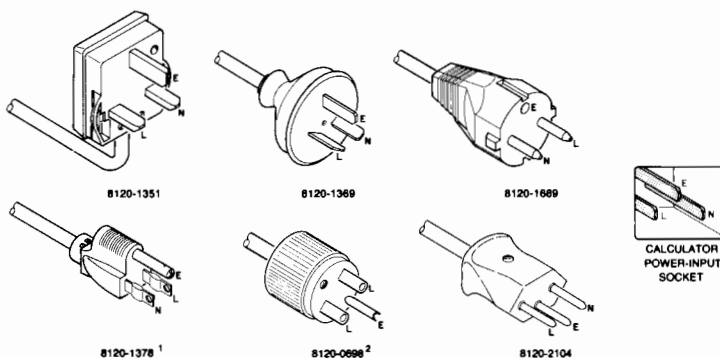
Power cords supplied by HP will have polarities matched to the power-input socket on the equipment, as shown below:

- L = Line or Active Conductor (also called 'live' or 'hot')
- N = Neutral or Identified Conduct
- E = Earth or Safety Ground

WARNING

IF IT IS NECESSARY TO REPLACE THE POWER CORD, THE REPLACEMENT CORD MUST HAVE THE SAME POLARITY AS THE ORIGINAL, OTHERWISE A SAFETY HAZARD FROM ELECTRICAL SHOCK TO PERSONNEL, WHICH COULD RESULT IN INJURY OR DEATH, MIGHT EXIST. IN ADDITION, THE EQUIPMENT COULD BE SEVERELY DAMAGED IF EVEN A RELATIVELY MINOR INTERNAL FAILURE OCCURRED.

Power cords with different plugs are available for the equipment; the part number of each cord is shown below. Each plug has a ground connector. The cord packaged with the equipment depends upon where the equipment is to be delivered. If your equipment has the wrong power cord for your area, please contact your local HP Sales and Service Office.



¹UL and CSA approved for use in the United States of America and Canada with equipment set for either 100 or 120 Vac operation.

²UL and CSA approved for use in the United States of America and Canada with equipment set for either 200 or 240 Vac operation.

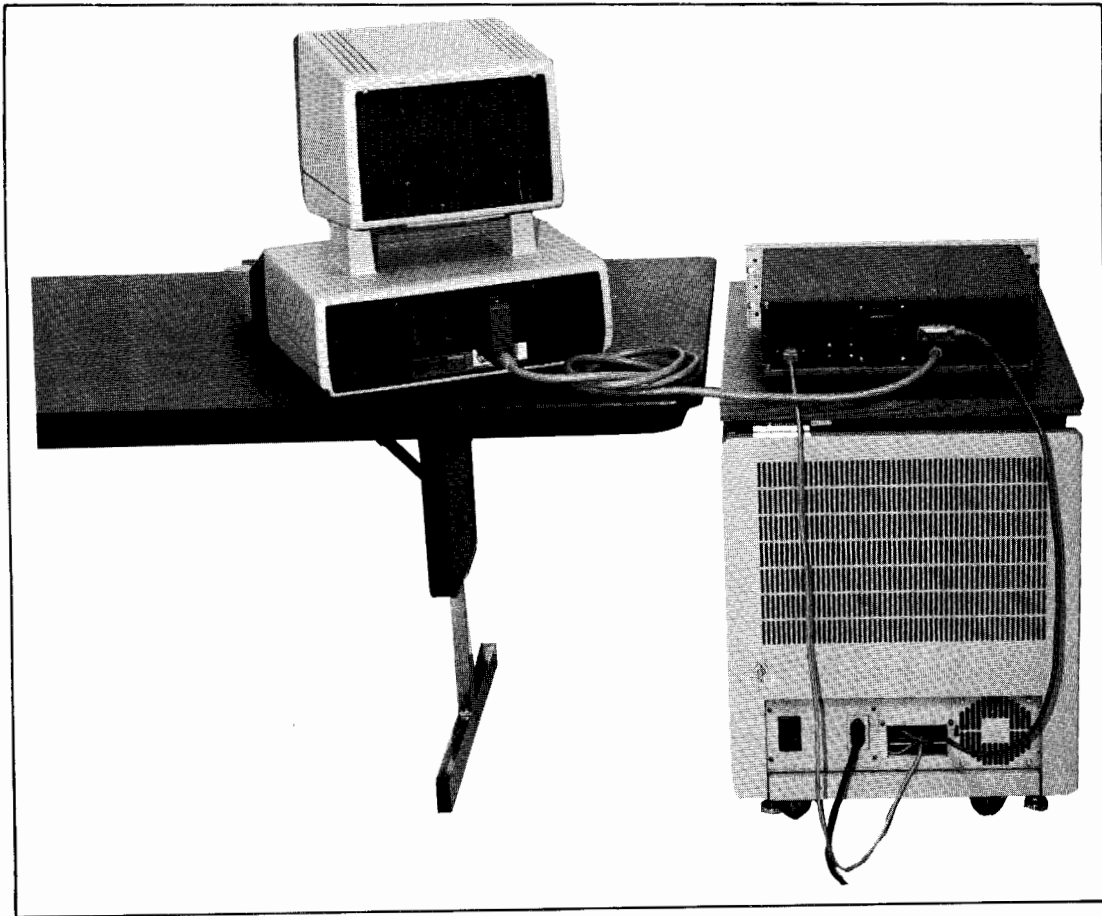
Power Cords



Installing the Disc Interface

The disc interface is installed between the computer and the mass storage units in your system. Be sure that the computer and the disc interface are both off before connecting any cables to the equipment.

Plug the disc interface I/O card, shown below, into any one of the I/O slots in the back of the computer. The mass storage controller unit (or units) connect to the HP-IB connector located on the back of the 98041A central data unit. The next figure shows a 98041A Disc Interface connected to a System 45 Computer and an HP 13037B Disc Controller with a 7906A Disc Drive.

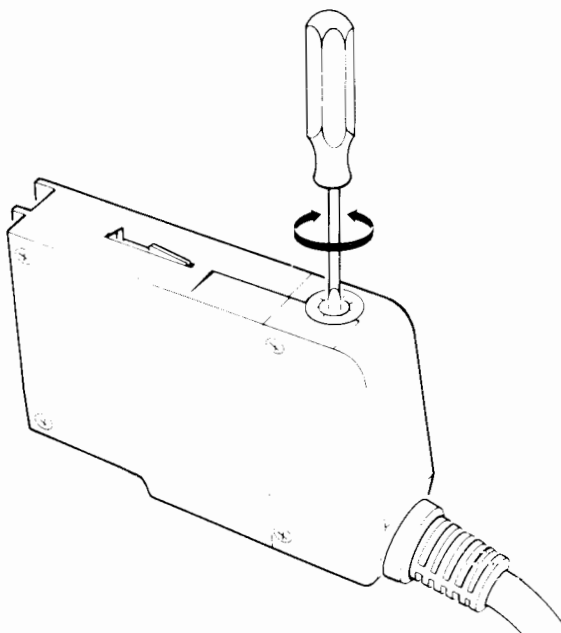


Connecting the HP 98041A Disc Interface

Interface Select Code

The 98041A is preset at the factory to select code 12. Select code 12 is the computer's default select code whenever a MASS STORAGE IS statement is executed that specifies a mass storage unit connected to the disc interface. Refer to "Mass Storage Operations" in the computer's Operating and Programming Manual for details concerning mass storage program statements.

If you need to change the select code setting on the disc interface, it should be set to a select code between 1 and 12. The select code switch is accessible through a small hole on the top of the disc interface I/O card. To change the setting, rotate the switch using a small screwdriver until the arrow on the switch points to the desired select code number.



Changing the Select Code

HP-IB Capabilities

The 98041A Disc Interface is a valid implementation of the HP-IB IEEE Standard 488-1975. The special use of specific secondary commands that are unique to specific mass storage controllers, however, does not permit using other HP-IB peripherals (such as Plotters, Printers, Tape Drives, etc.) with the 98041. All other HP-IB peripherals should be connected to the computer via a 98034A HP-IB Interface.

NOTE

Although both interfaces use the same type of connector, only properly designed mass storage controllers should be connected to the 98041A Disc Interface. General HP-IB peripherals should be connected to the 98034A HP-IB Interface.

Refer to Supplement A to this manual for a complete list of the HP mass storage units that are compatible with the 98041A.

Connecting Mass Storage Controllers

Up to two mass storage controller units may be connected to an HP 98041A Disc Interface. These controllers can be separate units that can each control several disc drives, or a controller and a disc drive built into one unit. The most typical system, however, consists of one disc controller connected to one or two disc drives.

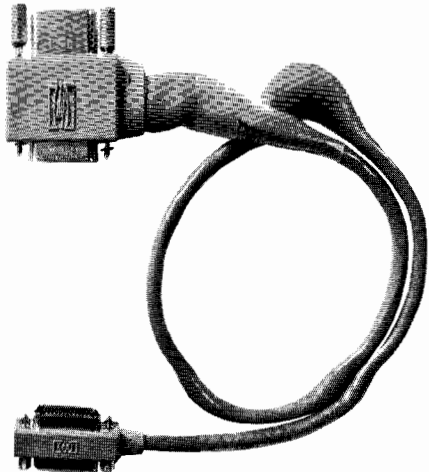
Mass Storage Unit Installation

The installation procedure for the various mass memory units that are compatible with the disc interface are contained in their respective Installation and Service Manuals. Refer to Supplement A for a listing of the manual part number for each compatible unit.

Interconnecting Cables

Standard HP-IB cables are used to connect the mass storage controllers in your system to the disc interface. Listed below are the accessory numbers of the various cables that are available.

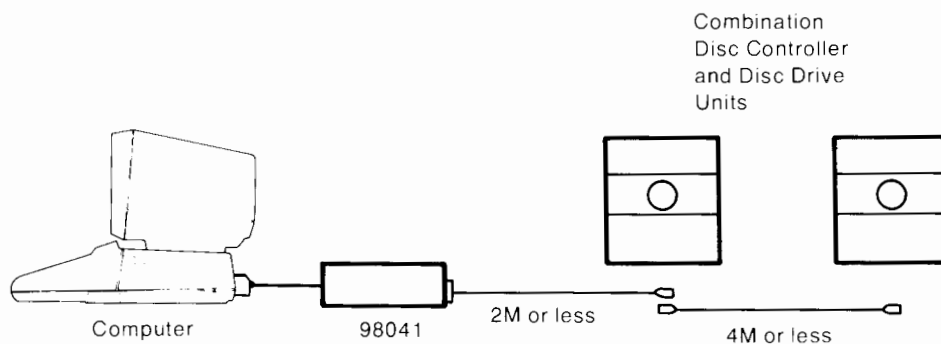
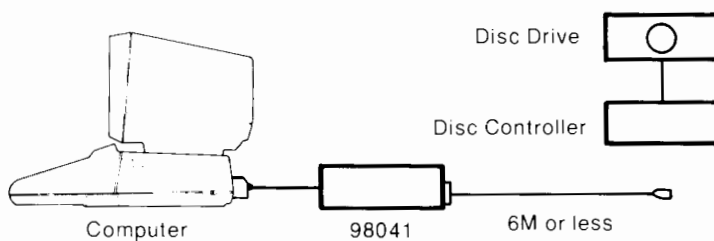
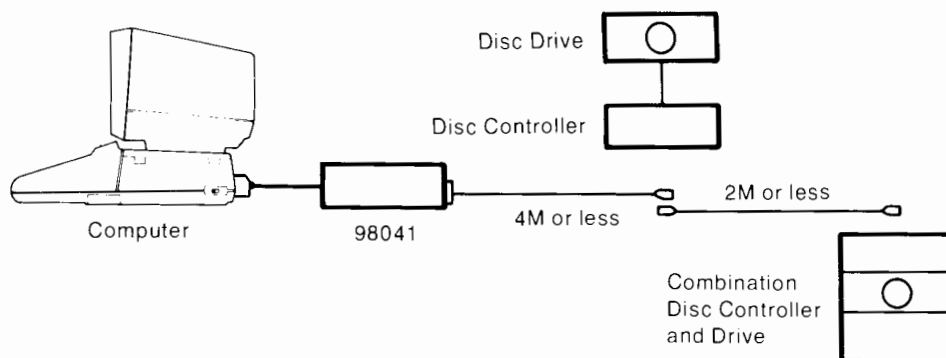
Length	Accessory Number
1 metre	10631A
2 metres	10631B
4 metres	10631C



Standard HP-IB Cables

Cable Length Restrictions

The total cable length connecting the disc interface with the mass storage controllers connected to it must be less than or equal to 6 metres. The cable may be distributed between the disc interface and the mass storage controllers in any manner that is practical, as long as the total length does not exceed 6 metres. This cable length restriction does not, however, include any cables used to connect a controller to its various disc drives. Refer to the installation manual for each disc drive and disc controller unit in your system for information concerning the cables and connections between those units. The next figure shows example system configurations using the allowable cable length of 6 metres between the disc interface and various disc controller units.



Example System Configurations

ROM Requirements

The disc interface requires that the Mass Storage ROM be properly installed in the computer to provide the statements necessary to store data on the mass storage units. Refer to the Mass Storage Techniques Manual (HP P/N 09845-90070) for ROM installation and programming information.

Rack Mounting

The 98041A Disc Interface can be mounted in an instrument rack by fastening the front panel casting to the rack with the four mounting supplied with the interface. Remove the interface's front panel by turning the two screws located on either side of the front panel. These screws releases the front panel when they are turned 90° in either direction. Lift off the front panel to expose the two mounting holes on each side of the front casting. After securing the unit to the rack, replace the front panel.

System Verification Test

Refer to your computer's System Test manual for the procedure used to verify that your 98041A Disc Interface and mass storage units are properly installed and functional. If you need assistance concerning your Hewlett-Packard equipment, contact the nearest HP Sales and Service Office for assistance. A complete listing of office locations is included at the back of this manual.

Repackaging the Disc Interface

Whenever the 98041A unit is to be moved or shipped, it should be properly repackaged to minimize the possibility of damaging the unit.

Packaging Materials

If you save the original packaging materials, they may be reused for repackaging. You can also obtain the correct containers and packaging materials from an HP Sales and Service Office. Any heavy duty container can be used, provided that it has double wall construction of 160 kilograms (350 pounds) test material.

- Wrap the disc interface in heavy paper or plastic and place it in the shipping container.
- Place sufficient shock absorbing material on all sides of the unit to cushion it and prevent any movement inside the container.
- Seal the container and mark "FRAGILE" on it to ensure careful handling.
- If the mass storage units in your system are to be moved or shipped, refer to the repackaging instructions in each unit's Installation and Service manual.

