GRiD

Model 3402 5 1/4-inch Pouch Diskette Drive Owner's Manual

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Limited Warranty and Limitation of Liability

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ABOUT THIS BOOK

This manual introduces you to the Model 3402 Pouch Diskette Drive. It shows you how to set up and operate the unit, and how to care for it.

Chapter 1 gives a physical description of the pouch diskette drive.

Chapter 2 explains how to connect and operate the pouch diskette drive, and how to use floppy diskettes.

Chapter 3 describes how to care for the pouch diskette drive.

The appendix explains how to set the address switches.

CHAPTER 1: PHYSICAL DESCRIPTION

This chapter introduces you to the Model 3402 Pouch Diskette Drive. It lists the accessories included with the diskette drive and gives a detailed description of the front and rear views of the unit.

The Model 3402 Pouch Diskette Drive is a member of the GRiDCase® Computer family of devices. The 3402 is a 5 1/4-inch double-density (360 Kbyte) floppy diskette drive in a compact package. The "Pouch Floppy" requires no power supply of its own in GRiDCase 1500 Series™ computers; on other GRiD® computers, such as the GRiDLite Plus™ or the GRiDCase Plus™, the pouch floppy must be connected directly to a power supply.

CHECKING THE CONTENTS OF THE BOX

Each shipping carton contains the following parts:

- Model 3402 Pouch Diskette Drive
- Model 6203 cable
- DC Power Cable
- Packing materials
- Documentation

Check for shipping damage or missing parts. If there are any problems, contact the GRiD representative who sold you the pouch diskette drive.

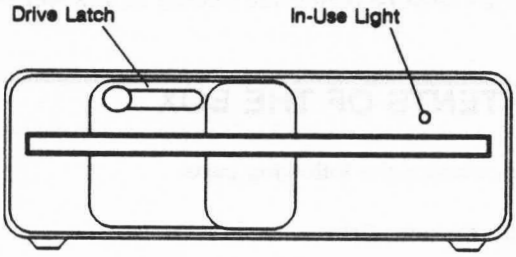
Keep the shipping carton and all original packing materials in the event you need to return your pouch diskette drive for service. Do not ship the unit in a carton other than the original shipping carton, as damage may result.

Also keep the cardboard protector that came in the diskette drive. Whenever you transport the unit you should protect the drive by placing this cardboard protector or a blank diskette in it.

THE FRONT VIEW

The front view of the diskette unit is shown in Figure 1-1 and is described in the paragraphs that follow.

Figure 1-1. Front View of 3402 Pouch Diskette Drive



Diskette Drive

The diskette drive is a 5 1/4-inch double-density (360 Kbyte) floppy diskette drive that holds double-sided, double density 5 1/4-inch floppy diskettes. For complete information on using the diskette drive and on the recommended floppy diskettes, see Chapter 2.

Drive Latch

The diskette drive latch above the diskette slot is used to lock in and eject floppy diskettes. After inserting a diskette, turn the latch clockwise until it points down to lock in the diskette. To remove the diskette, turn the latch counter-clockwise until it is horizontal, then pull the diskette out of the drive.

In-Use Light

The In-Use light, located above and to the right of the diskette slot, indicates when the floppy diskette drive is being accessed.

CAUTION:

Never turn off the computer when the in-use light is lit; this indicates that file access is taking place. Doing so could destroy files. Additionally, never remove a floppy diskette when the in-use light is illuminated, as this may damage your floppy diskette or diskette drive.

THE REAR VIEW

The rear view of the diskette unit is shown in Figure 1-2 and is described in the paragraphs that follow.

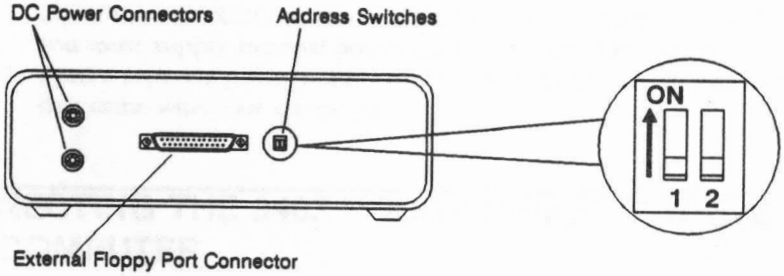


Figure 1-2. Rear View of 3402 Pouch Diskette Drive

External Floppy Port Connector

The external floppy port connector on the diskette drive is used to connect the pouch diskette drive to the computer. The connector is a 25-pin jack (female) connector. Chapter 2 gives instructions on connecting the diskette drive to your computer.

DC Power Connectors

The two DC power connectors are used to provide power to the diskette drive when it is used with GRiD computers other than GRiD 1500 Series computers, such as the GRiDCase Plus, GRiDCase EXP™, GRiDLite™, and GRiDLite Plus.

Address Switches

The address switches, located on the left hand side of the back of the pouch diskette drive, set an address that the computer uses to direct data to and from the diskette drive. The switch settings also determine the sequence in which the computer addresses multiple devices. Consult Appendix A to determine the correct switch settings for your device

CHAPTER 2: SET UP AND OPERATION

This chapter shows you how to set up and operate your Model 3402 Pouch Diskette Drive.

To set up the pouch diskette drive, you need the following items:

- GRiD computer with External Floppy Port connector
- 3402 Pouch Diskette Drive
- 6203 External Floppy Port Cable
- DC Power Cable (not required for GRiDCase 1500 Series computers)

POWER REQUIREMENTS

If you have a GRiDCase 1500 Series computer, the diskette drive draws its power from the computer; no external power supply needs to be attached to the drive. The drive obtains its power from the computer through the 6203 floppy port cable.

If you have a GRiDCase Plus, GRiDCase EXP, GRiDLite, or GRiDLite Plus, you must supply external power directly to the diskette drive. You don't need a separate power supply to do this, you can use the power supply that came with your computer.

CONNECTING THE 3402 POUCH DISKETTE DRIVE TO THE COMPUTER

You use the Model 6203 External Floppy Port Cable to connect the pouch diskette drive to the External Floppy Port connector on your GRiD computer.

The following procedure explains how to connect the 3402 Pouch Diskette Drive to the computer.

1. Turn off the computer and any other devices.

CAUTION:

Always turn off the power to all peripherals and your computer before connecting or disconnecting any device to the external floppy port or any other connector. Failure to do so may damage your computer and/or diskette drive.

2. Set the address switches on the pouch diskette drive to the appropriate positions. These switches set the device's address, allowing the computer to exchange data with it. Consult Appendix A to determine the correct switch settings.

3. Attach one end of the Model 6203 external floppy port cable to the connector on the rear panel of the pouch diskette drive. Because of its trapezoidal shape, the cable plugs into the connector in only one way. If it doesn't fit in easily the first time, turn the end of the cable upside down.

CAUTION:

Only use the cable provided with the pouch diskette drive to attach it to your computer (GRiD cable model 6203). Any other cable may cause damage to your computer or to the diskette drive.

4. Attach the other end of the external floppy port cable to the external floppy port connector on the right side or rear of the computer. Gently tighten the thumbscrews on each end of the cable. Be careful not to overtighten the thumbscrews as you may damage the connector.

Figure 2-1 shows an external floppy port cable connecting the 3402 Pouch Diskette Drive to the GRiDCase 1520 computer.

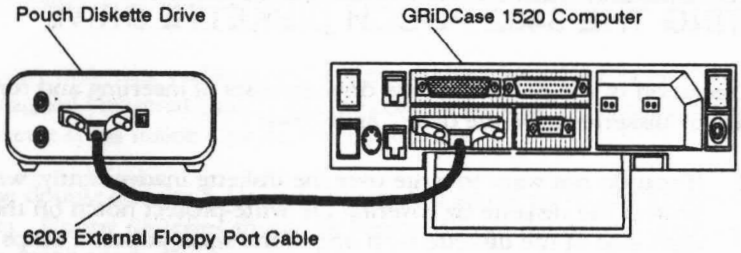


Figure 2-1. Pouch Diskette Drive Connected to GRiDCase 1520

5. If you have a GRiDCase Plus, GRiDCase EXP, GRiDLite, or GRiDLite Plus computer, you must supply power to the DC connector on the rear of the diskette drive. Connect your computer's existing power supply to one of the DC connectors on the rear of the diskette drive. Connect the separate DC power cable supplied with the diskette drive between the other DC connector on the rear of the diskette drive and the power connector on the rear of your computer.

   Figure 2-2 shows the diskette drive connected to a GRiDLite Plus computer.

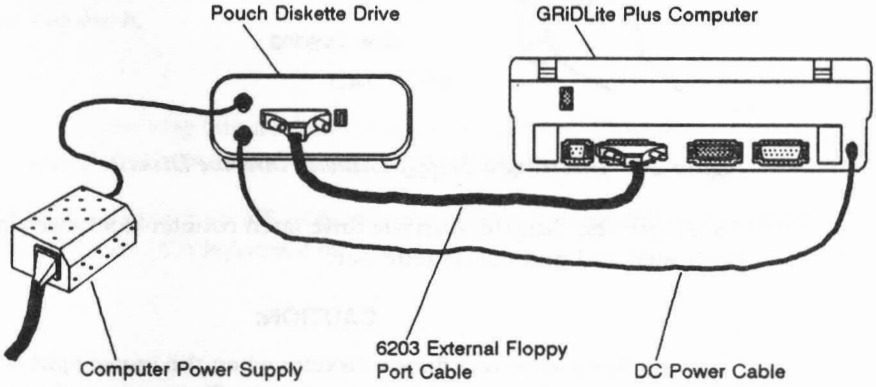


Figure 2-2. Pouch Diskette Drive Connected to GRiDLite Plus

6. Turn on the computer.

OPERATING THE 3402 POUCH DISKETTE DRIVE

Operation of the pouch diskette drive consists of inserting and removing floppy diskettes from the drive. As follows:

1. If you do not want to write over the diskette inadvertently, write protect the diskette by covering the write-protect notch on the upper right side of the diskette with one of the small adhesive strips provided with your diskette.

2. Hold the diskette with the label side up. The oval opening at the bottom of the diskette goes in first (see Figure 2-3)

3. Push the diskette into the drive as far as it goes and turn the drive latch clockwise until it points down. This locks the diskette into the drive.

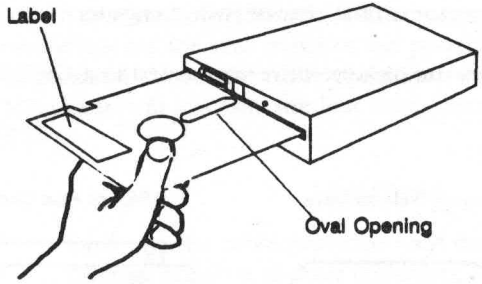


Figure 2-3. Inserting a Floppy Diskette into the Diskette Drive

To remove the diskette, turn the drive latch counter-clockwise until it is horizontal and pull the diskette out.

CAUTION:

Never remove a floppy diskette when the in-use light is lit. The in-use light means that the file access is taking place. Releasing the floppy diskette at this time could damage files.

Floppy Diskettes

Floppy diskettes, or "floppies," are plastic disks that have been coated with a magnetic material (much like the coating on audio recording tape). The diskette spins inside a protective plastic case.

One double-density 5 1/4-inch floppy disk stores up to 360 kilobytes of data. Floppy diskettes should be removed from the drive when they are not being used. By changing diskettes you can store and retrieve information for many different applications.

You should use floppy diskettes with the following characteristics:

Double-sided
Double-density
Soft sectored
48 tpi (tracks per inch)

Formatting Floppy Diskettes

The diskette drive expects floppy diskettes to have their data organized in a particular format. To ensure that a new diskette can be read and written by the diskette drive, you must format each diskette before the diskette drive can use it.

CAUTION:

Formatting any medium erases all data on it. Therefore, when formatting diskettes use extreme caution.

To format a diskette for MS-DOS, run the FORMAT command as described in the GRiD *MS-DOS Reference* manual.

Write Protecting Floppy Diskettes

If you have data stored on a floppy diskette that you want to protect from being inadvertently written over, you can write protect it by covering over the write-protect notch on the upper right side of the diskette. Use one of the small adhesive strips supplied in your box of diskettes to cover this notch.

Taking care of Floppy Diskettes

To prevent destroying data on your floppy diskettes, treat them with care. Always keep the following tips in mind:

- Do not touch the surface of the diskette where it is visible through the holes cut in the plastic cover.
- An invisible scratch on the surface of the diskette, or even a fingerprint, can cause errors.
- Keep diskettes away from magnetic office items such as paper clip dispensers, magnetic paper holders, telephones, etc.
- Do not set the diskette on top of a TV, color monitor, speaker, or CRT.
- Do not expose diskettes to microwaves or infrared rays.
- Do not expose diskettes to temperatures below 50°F (10°C) or above 140°F (60°C).
- For optimum long-term storage, keep diskettes at a temperature between 60° and 70°F (15° to 20°C).
- Never use a damaged diskette.
- Do not remove a diskette from the drive while the in-use light is lit. Removing the diskette at this time can destroy data.

- Do not leave your program or data diskettes in the drive while traveling. Doing so may seriously damage the diskette. Instead, insert the cardboard protector provided with the drive, or a blank diskette, into the drive when you are transporting it.

- Keep your diskettes away from cigarette smoke.

- Label and date all diskettes. This is especially important when making back-up copies.

Backing Up Files on Floppy Diskette

We cannot overemphasize the importance of making copies of your important files. This process of "backing up" files protects your work from accidental data loss due to writing one file over another, power failure, media failures. etc. Make backups of files daily, if not more often.

MS-DOS users can make back-up copies using the XCOPY, COPY, BACKUP, or DISKCOPY commands as described in the GRiD *MS-DOS Reference* manual. For a discussion on backing up your GRiD software files by duplicating them to floppy diskettes, refer to the Duplicate command (CODE-D) in the GRiDManager section of the *GRiD Software* manual.

STARTING UP THE OPERATING SYSTEM (BOOTING)

The computer follows a specific order when choosing the storage device from which to load the operating system software. This device ordering is shown in Table 2-1. The computer first searches for the operating system software in ROM, and if it does not find the software there, it looks on the hard disk system, and so on.

You can override the normal loading sequence and choose the device from which you want the computer to load the operating system software. To start from another device, hold down the key indicated in Table 2-1 for several seconds as you turn on the power switch.

Table 2-1. Order of Devices Searched During Booting

Device	Keys
Read Only Memory	**R** (ROM)
Hard Disk	**H** (Internal or external hard disk, depending on switch settings)
Internal Floppy	**F** (Internal floppy or pouch floppy*)
External Floppy	**E** (Pouch floppy* or a floppy connected to the external bus on a GRiDCase Plus computer, depending on switch settings)

*If your GRiD computer is equipped with an internal floppy disk drive, then pressing the **F** key causes the operating system to be loaded from the internal floppy drive, and **E** causes it to be loaded from the pouch diskette drive (depending on other external device switch settings). If your GRiD computer is equipped with an internal hard disk only, then pressing the **F** key when starting your system causes the operating system to be loaded from the pouch diskette drive.

NOTE: If you have several of the same types of devices connected to your computer, the computer only searches the first device of each type (designated by the address switch settings) for the operating system software. For example, if you have a hard disk and two diskette drives, the computer searches the hard disk and then the first diskette drive.

The following steps explain how to load the operating system from a 5 1/4-inch pouch floppy diskette and how to return control to the internal floppy or hard drive.

1. Turn off the computer.

2. Insert the system diskette (the diskette that contains the operating system) into the pouch diskette drive.

3. Set the address switches on the pouch diskette drive to 00 (off, off). Refer to Appendix A for more information on device address switch settings.

4. Turn on the computer while holding down the **F** key on the keyboard for several seconds.

The diskette drive will activate and the in-use light will light up as the computer loads the operating system from the floppy diskette. If the diskette does not contain the operating system software, an error message is displayed.

To return control to an internal drive, type the drive letter of the drive followed by a colon and press **Return**. For example, to return control to an internal hard disk, type C: and **Return**.

CHAPTER 3: MAINTENANCE

This chapter describes how to care for your GRiD 3402 Pouch Diskette Drive. Although the pouch diskette drive is basically durable, you should treat it as you would any precision instrument—with care.

WARNINGS

Observe the following warnings. Not following these warnings could lead to possible physical injury.

- Do not operate the pouch diskette drive in a dirty or dusty environment.
- Do not get the pouch diskette drive wet; electrical equipment should not be operated in a moist environment.
- Do not operate the pouch diskette drive in any potentially flammable atmosphere.
- Do not attempt to open the pouch diskette drive case; it contains no user-serviceable parts. Such action can damage the pouch diskette drive.

CAUTIONS

Observe the following cautions. Not following these cautions could damage your unit.

- Always turn off the power to your GRiD computer BEFORE attaching or detaching the pouch diskette drive. Failure to do so may damage your computer and your diskette drive.

- Operate the pouch diskette drive only when the surrounding temperature is from 50° to 114°F (10° to 46°C).
- Operate the pouch diskette drive only when the relative humidity level is from 20% to 80% noncondensing.
- Store the pouch diskette drive where the surrounding temperature is from -40° to 149°F (-40° to 65°C).
- Do not store or set up the pouch diskette drive in direct sunlight.
- Do not subject the pouch diskette drive to unnecessary shock or vibration.
- When cleaning the pouch diskette drive, never use any cleaning agent such as dust wax, spray cleaner, or any abrasive substance

CLEANING THE 3402 POUCH DISKETTE DRIVE

Before cleaning the pouch diskette drive, make sure it is disconnected from your computer.

To clean the case, use a slightly damp, soft cloth and, if necessary, a mild, nonabrasive detergent.

CAUTION:

Never use any cleaning agent such as dust wax, spray cleaner, or any abrasive substance.

Wipe the case clean and then dry it.

If necessary, dust the rear panel of your pouch diskette drive with a dry cloth.

WARNING:

To prevent shock hazard, never apply any liquid inside the diskette drive opening.

STORING YOUR 3402 POUCH DISKETTE DRIVE

The pouch diskette drive can be stored between the temperatures -40° and 149°F (-40° to 65°C). Keep it in a clean environment, free from dust and dirt.

TRAVELING WITH YOUR 3402 POUCH DISKETTE DRIVE

When traveling with your pouch diskette drive, carry it with you instead of checking it as luggage. Many transportation carriers do not cover the replacement cost of your disk unit should they lose or damage it. If you do check it as luggage, always pack it in the original shipping carton and packing materials that came with your diskette drive.

Always protect your pouch diskette drive by placing the travel diskette provided with the unit or a blank diskette into the drive whenever you transport it.

It should be safe to x-ray the disk unit or any peripherals in airport security checks, but you must make the final decision. You can have it hand-checked, if you wish.

APPENDIX: SWITCH SETTINGS

This appendix gives the switch settings that apply when connecting the Model 3402 Pouch Diskette Drive to a GRiD computer. The pouch diskette drive's address switches are located on the back of the drive to the right of the external floppy port connector.

NOTE: The switch settings on external devices are read when the computer starts up. If you change the switch settings after your computer has been powered on, you must restart it for the new settings to take effect.

SWITCH SETTINGS UNDER MS-DOS

Table A-1 shows the switch settings to use for various computer configurations, and the resulting MS-DOS device letter assignments.

Table A-1. Switch Settings under MS-DOS

Configuration	Switch 1	Switch 2	Device Letter	Logical Device Letter
Internal floppy disk with or without internal hard disk	OFF	OFF	A	C (without hard disk) D (with hard disk)
	ON	OFF	B	D (without hard disk) E (with hard disk)
Internal hard disk only	OFF	OFF	A	B
Two internal floppy disks	OFF	OFF	A	D
	ON	OFF	C	none

If you are using the pouch diskette drive with a GRiDCase Plus computer that has the peripheral bus option, you may have additional disk devices attached to the system. In this case, the device letter assignments may differ from the above table and the following rules apply:

- Set the switches to OFF, OFF to cause the pouch floppy to be assigned device letter A.

- Set the switches to ON, OFF to cause the pouch floppy to be assigned the last floppy disk drive device letter. (Floppy disk device letters are assigned before hard disk device letters.) For example, if you have two other floppy diskette devices (devices A and B), then the pouch floppy is assigned device letter C.

CAUTION:

Never use the same switch setting on two different diskette drives or two different hard disk drives attached to the peripheral bus connector. If you do so your GRiDCase Plus will not start-up.

SWITCH SETTINGS UNDER GRID-OS

Under GRiD-OS, you must set the switches on the pouch diskette drive to OFF, OFF. It is assigned the device name "Portable Floppy Disk."

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