



SyQuest®

Cartridge Disk Drive
SQ3105S/SQ3270S

User's Guide

Part Number 104637-002
Revision B

SyQuest Technology

47071 Bayside Parkway
Fremont, CA 94538-6517
Voice: (510) 226-4000
(800) 249-2440
Fax: (510) 226-4102
BBS: (510) 656-0473
Sales: (800) 245-CART

Europe

Voice: 32-11-673140
Fax: 32-11-683525
BBS: 32-11-683525

Asia

Voice: 65-294-8484
Fax: 65-294-7277

Configure Jumpers and Terminating Resistor Packs	10
Determine Mounting Orientation	16
Install the Drive in the Computer	17
Install the Utility Software and Format a Cartridge	21
Format Additional Cartridges	25
Operation	28
Read and Follow Handling and Safety Precautions	28
Avoid Operating System Software Conflicts	29
Study the Parts of the Drive	30
Insert the Cartridge	30
Remove the Cartridge	32
Remove the Cartridge When Power Fails	34
Observe the Two-color Activity LED	34
Write-protect the Cartridge	35

Congratulations...

Congratulations on your purchase of the SyQuest® SQ3105S/SQ3270S Cartridge Disk Drive! You'll soon discover the convenience and practicality of removable cartridge systems.

Features and Benefits

Here are just a few of the features and benefits of your new SyQuest cartridge disk drive.

- **Large storage capacity.** Provides either 105 or 256 megabytes of data storage space.
- **Unlimited storage.** Provides unlimited data storage capacity through the use of multiple cartridges.
- **Data transportability.** Makes transferring data between systems or platforms easy.
- **Data security.** Because data can be locked away, eliminates the inconvenience of securing a computer system or removing its entire disk drive.
- **Data organization.** Allows similar types of project data to be stored on individual cartridges.
- **Fast backup and retrieval of archival data.** Uses a fast transfer rate for quick backup and retrieval of archival data.

Support and Repair

BBS Support

SyQuest operates and maintains a 24-hour electronic bulletin board service (BBS) for your convenience. You can use SyQuest's BBS to:

- Get the latest versions of device drivers, installation and operation procedures, and general support information.
- Obtain a list of recommended device drivers for SyQuest disk drives. (Inclusion of a device driver on this list does not mean that SyQuest endorses the product.)
- Send electronic mail to SyQuest technical support personnel.

To access SyQuest's support BBS, call (510) 656-0473 (USA) or 32-11-683525 (Europe). The protocol for the SyQuest BBS is 8 data bits, 1 stop bit, no parity, and transmission rates up to 14,400 bps. The BBS supports the following transfer protocols: XMODEM, YMODEM, YMODEM BATCH, ZMODEM, and KERMIT. (You are responsible for all charges incurred when accessing and downloading information.)

Telephone Assistance

If you need assistance in setting up or operating your disk drive, contact the SyQuest Applications Engineering Group at (510) 226-4000.

2

SQ3105S/SQ3270S User's Guide

Maintenance and Repair Service

SyQuest disk drives require no preventative maintenance. Should your cartridge disk drive need servicing, SyQuest Customer Service Centers, located at SyQuest manufacturing facilities, are the *only* facilities authorized to service SyQuest drives. SyQuest does not sanction any third-party repair facilities. Any unauthorized tampering with or repair of the drive and the PC board will void the warranty. To contact the SyQuest Customer Service Center nearest you, call:

- USA: (800) 245-2278
- Europe: 32-11-673140
- Asia: 65-294-8484

Warranty

Contact your authorized SyQuest dealer or distributor for warranty information.

About This Guide

This section explains the standards and conventions used throughout this guide.

Product Designations

The SQ3105S and the SQ3270S cartridge disk drives are designated SQ3105S/SQ3270S because most of the procedures and information in this guide pertain to both drives. For the same reason, the SQ310 and the SQ327 cartridges are designated SQ310/SQ327. When information pertains to one cartridge disk drive or to one cartridge type only, that product's particular model number is used.

Cartridge Disk Drive

3

External vs. Internal Installation

You can install the SQ3105S/SQ3270S either internally or externally. This user's guide covers internal installation only. If you need information about external installation, call the SyQuest support BBS or the SyQuest Customer Service Center nearest you.

Conventions

- Commands you are to enter from your computer's keyboard appear in lowercase Courier font, e.g, `scprep`. You can enter commands in lower-, upper-, or mixed-case characters, unless otherwise directed.
- Messages that appear on your computer's screen will appear in mixed-case Courier font, e.g, Press 'Y' to continue or any other key to abort.
- Keys you are to press appear in angle brackets. For example, <Enter> denotes the Enter key on your keyboard.



NOTE: Notes provide advice or suggestions about the cartridge disk drive and cartridges, as well as other useful information.



CAUTION: Cautions alert you to operations that could cause damage to your hardware or software.

Before You Begin

Before you install the SQ3105S/SQ3270S disk drive, you should read and observe the precautions and suggestions in this section.

Purchase (and Install) Additional Items

In addition to the SQ3105S/SQ3270S disk drive, you will need one or more of the following items:

Host Bus Adapter (HBA)

A host bus adapter is only required for computers without a built-in SCSI¹ port. The HBA is a printed circuit board (i.e., an expansion board), which you install in one of your computer's expansion slots.

Contact your SyQuest dealer /distributor to determine which type of HBA you should purchase for your system. Then follow the instructions included with the HBA to install the board. (The SQ3105S/SQ3270S is connected to the HBA with a SCSI cable, as explained in the following section.)

SCSI Cable

The SCSI cable is required to connect the SQ3105S/SQ3270S to the HBA or to a built-in SCSI port. A SCSI cable is provided with the host bus adapter; you can purchase a SCSI cable for use with a built-in SCSI port from your SyQuest dealer/distributor.

SQ310/SQ327 Cartridge

For the SQ3105S, you can only use the SyQuest SQ310 cartridge. For the SQ3270S, you can use the SyQuest SQ310 or the SQ327 cartridge.

¹ Small computer system interface.

You can purchase the appropriate cartridge from a SyQuest dealer/distributor.

Mounting Rails

Mounting rails are required for use in the IBM® PC-AT® and in some compatibles. You'll need to mount these rails to the cartridge disk drive prior to installation.

You can purchase a mounting rail kit (screws included) from SyQuest or from a SyQuest dealer/distributor.

Device Driver Software

A special device driver is required to support cartridge interchangeability and to allow addressing of two physical drives.

The device driver software program for SyQuest standard host bus adapters—for the IBM PC, PC-XT, PC-AT or compatibles with PC-DOS/MS-DOS®—is contained on the SyQuest SQ3105S/SQ3270S Utility Software diskette included with the cartridge disk drive. All other device-driver software recommended by SyQuest supports cartridge interchangeability.¹



CAUTION: If you use software device drivers that do not support cartridge interchangeability, **you may lose data**. If you use the wrong device driver, data loss occurs whenever the cartridge is changed while the system is turned on.

¹ SyQuest provides removable cartridge device drivers to support several different HBAs. Contact the SyQuest support BBS nearest you for more information.

Front Panel

You can purchase a disk drive that is the color of your computer from your SyQuest dealer/distributor:

- Off-white for IBM PS/2® or compatibles
- Platinum for Macintosh®
- Black for any computer model

Read and Follow Handling and Safety Precautions

Be sure to read and follow these important handling and safety precautions:

- Leave the drive in its static-shielded bag until you are ready to install it.
- Always handle the drive carefully by the edge or frame. Never apply pressure to the PC board or the top cover.
- Before installation, turn off all power to your system, and unplug all cables connected to it, including the computer power cord.
- Observe the following electrostatic-discharge precautions during installation:
 - Do not touch the PC board or the I/O connector pins. See Figure 1 for the location of these components.

You can purchase the appropriate cartridge from a SyQuest dealer/distributor.

Mounting Rails

Mounting rails are required for use in the IBM® PC-AT® and in some compatibles. You'll need to mount these rails to the cartridge disk drive prior to installation.

You can purchase a mounting rail kit (screws included) from SyQuest or from a SyQuest dealer/distributor.

Device Driver Software

A special device driver is required to support cartridge interchangeability and to allow addressing of two physical drives.

The device driver software program for SyQuest standard host bus adapters—for the IBM PC, PC-XT, PC-AT or compatibles with PC-DOS/MS-DOS®—is contained on the SyQuest SQ3105S/SQ3270S Utility Software diskette included with the cartridge disk drive. All other device-driver software recommended by SyQuest supports cartridge interchangeability.¹



CAUTION: If you use software device drivers that do not support cartridge interchangeability, **you may lose data**. If you use the wrong device driver, data loss occurs whenever the cartridge is changed while the system is turned on.

¹ SyQuest provides removable cartridge device drivers to support several different HBAs. Contact the SyQuest support BBS nearest you for more information.

Front Panel

You can purchase a disk drive that is the color of your computer from your SyQuest dealer/distributor:

- Off-white for IBM PS/2® or compatibles
- Platinum for Macintosh®
- Black for any computer model

Read and Follow Handling and Safety Precautions

Be sure to read and follow these important handling and safety precautions:

- Leave the drive in its static-shielded bag until you are ready to install it.
- Always handle the drive carefully by the edge or frame. Never apply pressure to the PC board or the top cover.
- Before installation, turn off all power to your system, and unplug all cables connected to it, including the computer power cord.
- Observe the following electrostatic-discharge precautions during installation:
 - Do not touch the PC board or the I/O connector pins. See Figure 1 for the location of these components.

During the installation process, you will:

- Set the SCSI ID number by configuring the unit select jumper settings.
- Remove the terminating resistor packs, if necessary.
- Determine the drive's mounting orientation.
- Install the drive in the computer and connect:
 - The drive to the SCSI port or the HBA via the SCSI cable.
 - The computer's internal power cord to the drive.
 - The drive's ground wire to the computer
- Install the SyQuest utility software and format a cartridge.

Configure Jumpers and Terminating Resistor Packs

CAUTION: Be sure to follow the electrostatic-discharge precautions on page 7.

► To prepare the cartridge disk drive for installation:

1. Carefully remove the SQ3105S/SQ3270S drive from its static-shielded bag.
2. Locate the DC power connector, SCSI drive connector, unit select jumpers, and terminating resistor packs, all shown in Figure 2.

Three SCSI ID unit select jumpers are provided with the drive. You can order additional jumpers from SyQuest or from a SyQuest dealer/distributor.

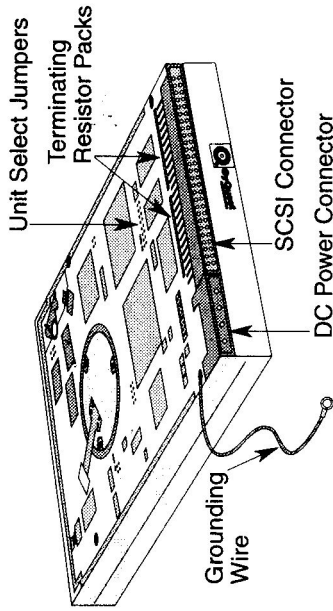


Figure 2. Locating Cartridge Disk Drive Components

3. Set the SCSI ID number by configuring the unit select jumper(s), as shown in Figure 3. Choose the correct configuration from Table 1.

Each SCSI device, such as the SQ3105S/SQ3270S cartridge disk drive, must have a unique SCSI ID number to identify it on a particular SCSI bus¹. (This number does not have any effect on non-SCSI device ID numbers used by other devices in the computer system.) Choose the SCSI ID number you will assign to your cartridge disk drive. You can set the SCSI ID to any number from 0 (the default) to 7. The default SCSI ID for most host adapters is 7.

¹ The SCSI bus consists of the built-in SCSI port/host adapter board and the cables and SCSI devices connected to it.

Be sure that the number is not already assigned to another SCSI device connected to the same HBA. For example, an internal ST506 hard disk drive may have an ID number that is the same as the one you chose for the SQ3105S/SQ3270S drive. These two ID numbers have no effect on each other because they are assigned to devices on different buses. Only SCSI devices attached to the same host bus adapter require a unique ID number.

If there is more than one HBA in the system, the number of SCSI buses will equal the number of HBAs plus any built-in SCSI ports. Therefore, you are allowed to use duplicate ID numbers, provided they are connected to different buses.

NOTE: No jumpers are required if you have only one SQ3105S/SQ3270S drive and no other SCSI devices connected to the host bus adapter. (The SCSI ID number has been set at the factory to 0.) The row of pins closest to the front panel is ground.

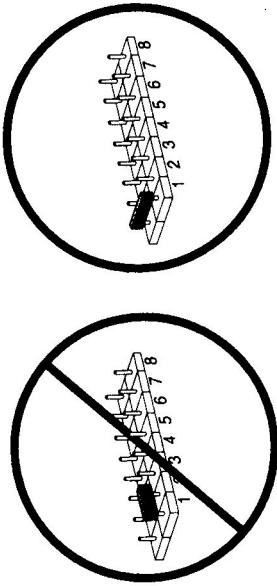
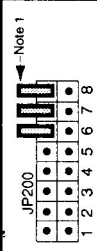
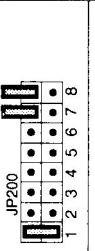
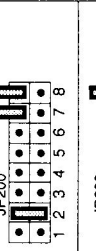
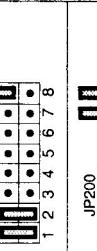
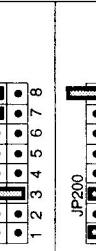
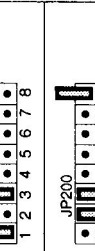
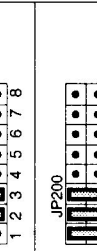
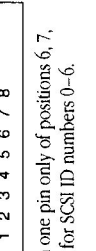


Figure 3. Setting the Unit Select Jumpers

Table 1. Select Unit Jumper Settings for SCSI ID Numbers

SCSI ID Number	Unit Select Jumper Settings
0	
1	
2	
3	
4	
5	
6	
7	

Note 1: Store unused jumpers on one pin only of positions 6, 7, and/or 8, as shown in the figures for SCSI ID numbers 0-6.

CAUTION: Do not set jumpers across positions 5, 6, 7, or 8. These jumpers are reserved. If you install a jumper on any of these positions, **you will lose data.**

4. Determine whether you need the two SCSI terminating resistor packs that have been installed in your cartridge disk drive. (Figure 4 shows the location of the terminating resistor packs.)

It is the physical location of the drive, *not* its SCSI ID number, that determines the need for the SCSI terminating resistor packs. Only the last physical device on the SCSI bus requires terminating.

- If the SQ3105S/SQ3270S is the last or only device connected to the HBA, you need the SCSI terminating resistor packs.
- If the SQ3105S/SQ3270S is not the last or only SCSI device connected to the HBA, remove the SCSI terminating resistor packs, as shown in Figure 4, and store them in a safe place.

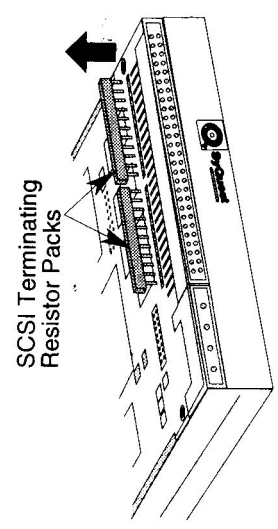


Figure 4. Locating and Removing the SCSI Terminating Resistor Packs

CAUTION: Do not remove or replace only one of the SCSI terminating resistor packs; both must be installed or removed for operation.

➤ To reinstall the terminating resistor packs:

1. Be sure to insert pin 1, shown as a white rectangle in Figure 5, into the correct pin 1 socket.
2. Press down on each terminating resistor pack until it is securely seated in the socket.

Install the Drive in the Computer

The following instructions should work for most computers. Because features, such as cabling requirements, may differ between computers, you may need to adapt these instructions for use with your particular computer model.

⚠ CAUTION: Be sure to follow the electrostatic-discharge precautions on page 7.

► **To install the SQ3105S/SQ3270S in the computer:**

1. Turn off all power to your system, and unplug all cables connected to it, including the computer power cord.
2. Remove the computer's front panel and top cover. For instructions, refer to your computer user's manual.
3. Select the drive slot into which you will install the drive.
 - If a drive already occupies the slot, remove it.
 - If you select a 5.25-inch drive slot, you can purchase a standard 3.5-to-5.25 adapter to accommodate the SQ3105S/SQ3270S. Install the cartridge disk drive in the adapter at this time. (Refer to the instructions included with the adapter.)
 - If your computer requires mounting rails, described on page 6, mount the rails on the drive now. (Refer to the instructions included with the mounting rail kit.)

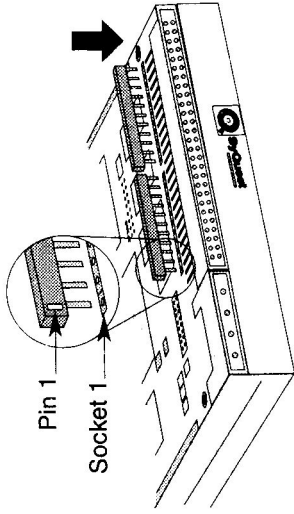


Figure 5. Reinstalling the SCSI Terminating Resistor Packs

Determine Mounting Orientation

The SyQuest-recommended mounting orientations are shown in Figure 6.

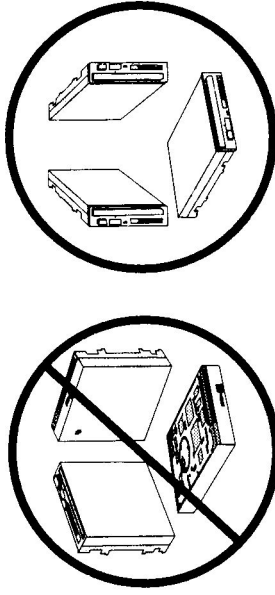


Figure 6. Recommended Mounting Orientation



NOTE: Depending on your computer's configuration, you may have to connect the cables (see steps 5 through 8) before you complete step 4.

4. Insert the drive into the drive slot.
 - If you are not using a 3.5-to-5.25 adapter or mounting rails, slide the drive into the previously selected drive slot.
 - If you are using a 3.5-to-5.25 adapter, slide the adapter, which should contain the drive, into the drive slot.
 - If you have installed mounting rails, slide the mounting rails, which should be mounted to the drive, into the drive slot.
5. Connect the 50-pin SCSI cable to the drive (refer to Figure 7). Make sure that pin 1 of the cable connector, indicated by the colored stripe, is aligned with pin 1 of the drive.

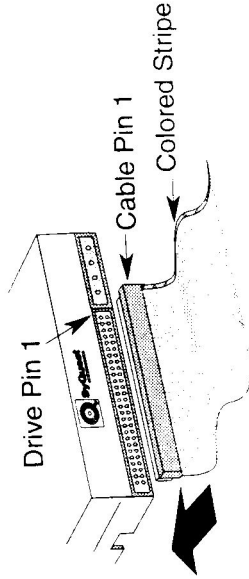


Figure 7. Connecting the 50-pin SCSI Cable to the Drive

The SCSI cable connector is designed to prevent damage to the SQ3105S/SQ3270S, such as inadvertently installing the cable incorrectly (i.e., upside down).

6. Connect the 4-conductor DC internal power cable to the drive, as shown in Figure 8.

The SQ3105S/SQ3270S has a 4-pin DC power connector (shown in Figure 8) mounted on the printed circuit board. Most computers are already configured with the power connectors attached, and these connectors should be used.

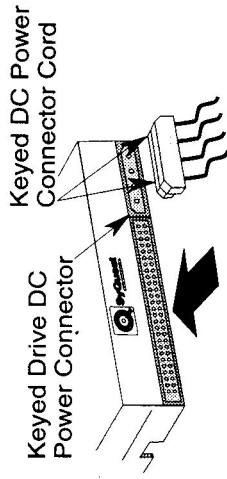


Figure 8. Connecting the DC Internal Power Cable

7. Attach the grounding wire to a suitable grounding surface (a metallic part of the computer chassis) with a screw.
8. Connect the free end of the SCSI cable to the host bus adapter connector or to the built-in SCSI port. Make sure that pin 1 of the cable is connected to pin 1 of the built-in SCSI port or to pin 1 of the HBA's connector (refer to the installation instructions in the HBA documentation).

Install the Utility Software and Format a Cartridge

SyQuest recommends that you use the software utilities supplied by SyQuest or alternate approved utilities for the host bus adapter you are using.

If you do not have a SyQuest-approved HBA, contact the HBA manufacturer for support. If methods other than approved cartridge-change software drivers are used, the system will not support cartridge-change operations without rebooting the system.

Before you can use your SQ3105S/SQ3270S drive, you must install the device driver from the SyQuest SQ3105S/SQ3270S Utility Software diskette. During this installation procedure, you will also format, or initialize¹, a new SQ310/SQ327 cartridge for use with your operating system.



NOTE: The installation/formatting procedure described below may be slightly different than the one for your system. If so, simply follow the instructions that appear on your screen. If you need assistance, call the SyQuest support BBS or the SyQuest Customer Service Center nearest you.

Instructions for formatting additional cartridges begin on page 25.

➤ **To install the SQ3105S/SQ3270S utility software and to format a cartridge:**

1. Boot your computer.

¹ The terms *format* and *initialize* are used interchangeably throughout this procedure.

Cartridge Disk Drive

21

9. Secure the drive in the drive slot.

- If you are not using a 3.5-to-5.25 adapter or mounting rails, secure the drive with four of the screws provided with the SQ3105S/SQ3270S.
- If you are using a 3.5-to-5.25 adapter, secure the adapter with four of the screws included with the drive.
- If you have installed mounting rails, drive is secure already.



CAUTION: Screws should not extend into the drive chassis or touch any components, including the PC board (refer to Figure 1 on page 8).

10. If a drive panel previously covered the drive slot, remove the drive panel from the computer's front panel, as shown in Figure 9.

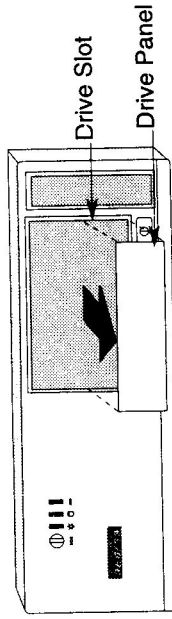


Figure 9. Removing the Drive Panel

11. Replace the computer cover and front panel according to the instructions in your computer user's manual.

20

SQ3105S/SQ3270S User's Guide

Install the Utility Software and Format a Cartridge

SyQuest recommends that you use the software utilities supplied by SyQuest or alternate approved utilities for the host bus adapter you are using.

If you do not have a SyQuest-approved HBA, contact the HBA manufacturer for support. If methods other than approved cartridge-change software drivers are used, the system will not support cartridge-change operations without rebooting the system.

Before you can use your SQ3105S/SQ3270S drive, you must install the device driver from the SyQuest SQ3105S/SQ3270S Utility Software diskette. During this installation procedure, you will also format, or initialize¹, a new SQ310/SQ327 cartridge for use with your operating system.



NOTE: The installation/formatting procedure described below may be slightly different than the one for your system. If so, simply follow the instructions that appear on your screen. If you need assistance, call the SyQuest support BBS or the SyQuest Customer Service Center nearest you.

Instructions for formatting additional cartridges begin on page 25.

➤ **To install the SQ3105S/SQ3270S utility software and to format a cartridge:**

1. Boot your computer.

¹ The terms *format* and *initialize* are used interchangeably throughout this procedure.

Cartridge Disk Drive

21

9. Secure the drive in the drive slot.

- If you are not using a 3.5-to-5.25 adapter or mounting rails, secure the drive with four of the screws provided with the SQ3105S/SQ3270S.
- If you are using a 3.5-to-5.25 adapter, secure the adapter with four of the screws included with the drive.
- If you have installed mounting rails, drive is secure already.



CAUTION: Screws should not extend into the drive chassis or touch any components, including the PC board (refer to Figure 1 on page 8).

10. If a drive panel previously covered the drive slot, remove the drive panel from the computer's front panel, as shown in Figure 9.

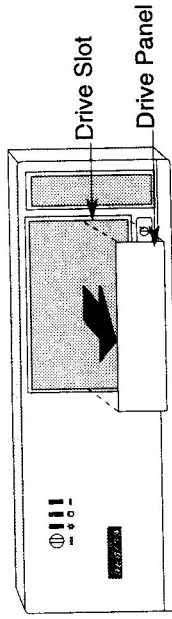


Figure 9. Removing the Drive Panel

11. Replace the computer cover and front panel according to the instructions in your computer user's manual.

20

SQ3105S/SQ3270S User's Guide

2. At the PC-DOS/MS-DOS prompt (C:\>), type the following command, and press <Enter>:

```
md syquest
```

This creates a new directory on your hard disk drive.
3. Then change to the new SYQUEST directory by typing the following command and pressing <Enter>:

```
cd syquest
```
4. Assuming the designation of your 3.5-inch diskette drive is A, type the following command at the C:\SYQUEST> prompt, and press <Enter>. (If the diskette drive designation is not A, type the appropriate letter in place of the a in the following command.)

```
xcopy a: /p
```
5. Press <Y> after each file name appears to copy the entire contents of the SyQuest SQ3105S/SQ3270S Utility Software diskette to the SYQUEST directory on your hard disk drive.
6. When the copying process is complete, remove the SyQuest SQ3105S/SQ3270S Utility Software diskette from the 3.5-inch diskette drive, and store it in a safe place.

Format Additional Cartridges

► To format additional cartridges:

1. Boot your computer.
2. Insert an unformatted cartridge into the SQ3105S/SQ3270S drive; insert an SQ310 cartridge into the SQ3105S drive, or insert an SQ310 or an SQ327 cartridge

Cartridge Disk Drive

25

- Display the following message:

Would you like this program to copy the device driver file (SQDRIVER.SYS) to your C: drive and update your CONFIG.SYS file?

12. Press <Y>.

The program will display the following message:

Saved C:CONFIG.SYS as C:CONFIG.QQQ
 Updated C:CONFIG.SYS
 SQDRIVER.SYS exists on C:

13. Press any key to continue.

The program will display the following message:

Partitioning and formatting completed.
 System must be rebooted for the new volumes to be accessible. Would you like to reboot now?
 Press Ctrl+Alt+Del to reboot, or any other key to continue

14. Remove the SyQuest SQ3105S/SQ3270S Utility Software diskette from the 3.5-inch diskette drive.

15. Press and hold the <Ctrl> and <Alt> keys, and then press the key to reboot your system.

► To copy the files from the SyQuest SQ3105S/SQ3270S Utility Software diskette onto your hard disk drive:

1. Reinsert the SyQuest SQ3105S/SQ3270S Utility Software diskette into a 3.5-inch diskette drive.

24

SQ3105S/SQ3270S User's Guide

into the SQ3270S drive. (See "Insert the Cartridge" on page 30 for instructions.)

3. At the PC-DOS/MS-DOS prompt (C:\>), type the following command, and press <Enter>:

```
cd syquest
```

4. At the C:\SYQUEST> prompt, type the following command, and press <Enter>:

```
sqprep
```

After the program scans devices, the Drive Table menu will appear.

5. Select the number that corresponds to the drive into which you inserted the cartridge, and press <Enter>.

The program will ask you to verify that the software is accessing the correct drive.

6. If the activity LED is on, press <Y>, and go to step 8.
7. If the activity LED is not on, press any key to abort the formatting procedure. Then:
 - Remove the cartridge from the drive (see page 32).
 - Power down the system.
 - Make sure all cables are connected properly and the drive has been installed correctly.
 - Call the SyQuest support BBS or the SyQuest Customer Service Center nearest you if you need assistance.
 - Go back to step 1, and try again.
8. From the next menu, select the following option, and press <Enter>:

- 1 Prepare Cartridge For DOS

9. From the next menu, select the following option, and press <Enter>:

- 1 Automatic DOS Preparation

The following message will appear:

```
WARNING - This option deletes all the files on the selected disk
```

Press 'Y' to continue or any other key to abort

10. Press <Y>.

The program will:

- Format the drive
- Transfer the following files to the cartridge:
IO.SYS and MSDOS.SYS (invisible files), and
COMMAND.COM from your C (hard disk) drive
SQDRIVER.SYS and CONFIG.NEW (which the program changes to CONFIG.SYS) from the utility diskette

11. Press any key to continue.

The program will display the following message:

```
Partitioning and formatting completed.  
System must be rebooted for the new  
volumes to be accessible. Would you like  
to reboot now?
```

Press Ctrl+Alt+Del to reboot, or any other key to continue

12. Press and hold the <Ctrl> and <Alt> keys, and then press the key to reboot your system.

Operation

This section provides general operating instructions for day-to-day use of the SQ3105S/SQ3270S drive and the SQ310/SQ327 cartridge. This section also includes instructions for write-protecting the SQ310/SQ327 cartridge.

Read and Follow Handling and Safety Precautions

Be sure to read and follow these important handling and safety precautions when using either the SQ3105S/SQ3270S drive or the SQ310/SQ327 cartridge:

- Always follow the electrostatic-discharge precautions on page 7.
- Never leave the cartridge partially inserted in the drive.
- Use only SyQuest-approved cartridges. Use of other cartridges may result in unreliable data.
- Do not turn off the computer to remove the cartridge. If power has been turned off, wait at least 30 seconds before removing the cartridge. Removing the cartridge before it has completely stopped spinning may result in damage to the recording surface and read/write heads.
- Always remove the cartridge before moving the drive or the computer.
- Do not apply cleaners or lubricants of any kind to the drive or cartridge.
- To keep the cartridge free of dust or contamination and to protect it from shock damage, always store it in the protective case when the cartridge is not installed in the computer.

- Never open the cartridge; this may result in contamination of the recording surface, possible damage to the cartridge and the drive, and loss of data.
- Allow the cartridge to stabilize at room temperature for approximately one hour before using it in an environment different from the one in which it was stored (e.g., moving the cartridge from a cold car into a warm room or from a warm car into an air-conditioned environment).
- Do not drop the cartridge; this may damage it, causing head crashes and loss of data.
- Do not use a bulk tape-eraser to erase the cartridge. The cartridge has servo information written on the recording surface, which bulk erasing will remove.
- Do not expose the cartridge to magnetic fields.
- Do not apply cartridge labels that will interfere with the operation of the drive or cartridge door. Use only the label provided.
- Never place a cartridge label over another cartridge label.
- Do not write on the cartridge labels with a graphite pencil. The graphite dust from the pencil could contaminate the recording surface.

Avoid Operating System Software Conflicts

Avoid performing operations between different versions of the PC-DOS/MS-DOS operating system. If you do so, you may not be able to retrieve data.

For example, do not use the same cartridge to perform operations under MS-DOS 5.0 and under MS-DOS 6.0.

Study the Parts of the Drive

Before you use the SQ3105S/SQ3270S cartridge disk drive, study the illustration in Figure 10 to familiarize yourself with the drive's controls and indicators.

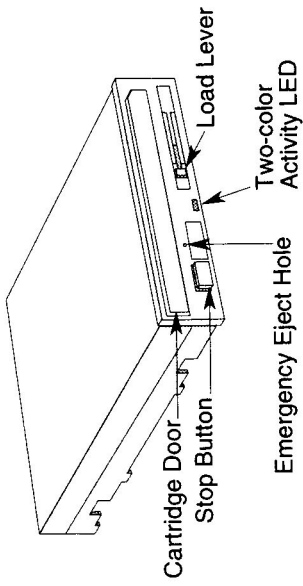


Figure 10. Parts of the SQ3105S/SQ3270S Drive

Insert the Cartridge

- To insert the SQ310/SQ327 cartridge into the SQ3105S/SQ3270S drive:
 1. Hold the cartridge so the cartridge head access door (shown in Figure 11) faces the drive and the silver write-protect indicator faces downward.

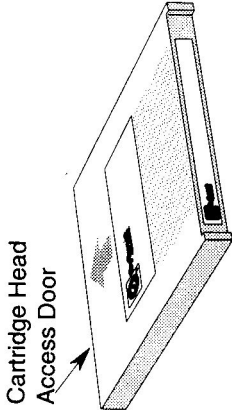


Figure 11. Parts of the SQ310/SQ327 Cartridge

2. Slide the cartridge into the drive through the drive's cartridge door, as shown in Figure 12. When the cartridge comes to a stop, the load lever on the front panel of the drive pops out. Refer to Figure 10 on page 30 for the location of the load lever.

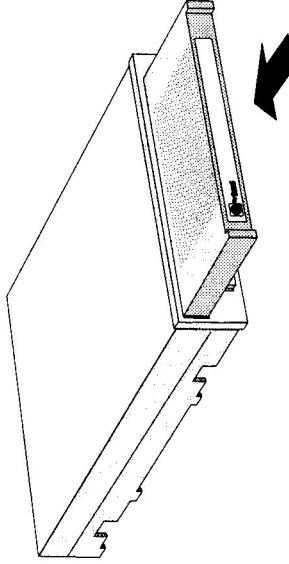


Figure 12. Inserting the Cartridge into the Drive

3. Push the load lever to the right, as far as it will go (see Figure 13).

The drive will begin to spin up the cartridge, and the activity LED will flicker amber, then glow a steady green.

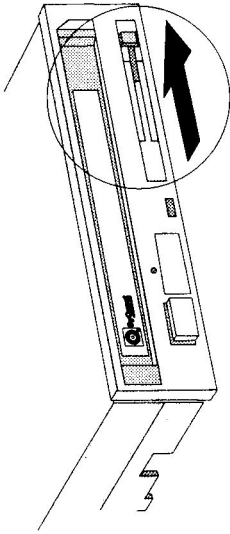


Figure 13. Pushing the Load Lever to the Right



NOTE: If the drive stops during this start-up sequence and the LED turns green and then flashes amber every one-half second or so, an error has occurred. Remove the cartridge, as described in the following section. Then try inserting the cartridge again. If this doesn't work, call the SyQuest support BBS or the SyQuest Customer Service Center nearest you for assistance.

Remove the Cartridge

- To remove the SQ310/SQ327 cartridge from the SQ310SS/SQ3270S drive:

1. Press the stop button, as shown in Figure 14.

The drive will begin to spin down the cartridge, and the activity LED will flicker amber. When the drive stops, the cartridge load lever will pop out.

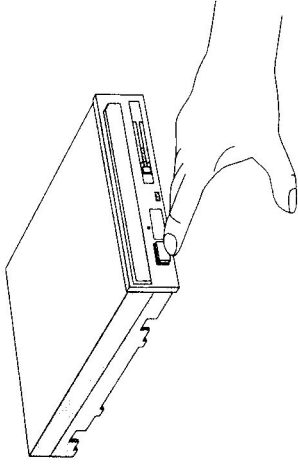


Figure 14. Pressing the Stop Button

2. Push the load lever to the left, as far as it will go (see Figure 15). The cartridge will eject partway.

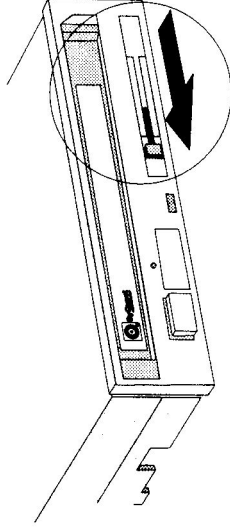


Figure 15. Ejecting the Cartridge

3. Remove the cartridge, and place it in its protective case.

Remove the Cartridge When Power Fails

In the event of a power failure, you can remove the cartridge using the emergency eject hole.

► To remove the cartridge using the emergency eject hole:

1. Wait at least 30 seconds before you perform this procedure.
2. Insert a cylindrical metal pin, such as a straightened paper clip, into the emergency eject hole.
The cartridge load lever will pop out.
3. Push the load lever to the left, as far as it will go (see Figure 15 on page 33). The cartridge will eject partway.
4. Remove the cartridge, and place it in its protective case.

Observe the Two-color Activity LED

You can tell what your drive is doing by observing its two-color activity LED.

- A steady green light means the drive is idle and working properly.
- A flickering amber light indicates that the drive is spinning the cartridge up or down.

- A flickering amber light means the computer is accessing the drive.
- A green light followed by a flashing amber light indicates that there is a problem with the drive. Remove the cartridge, as described on page 32. Then try inserting the cartridge again. If this doesn't work, call the SyQuest support BBS or the SyQuest Customer Service Center nearest you.

Write-protect the Cartridge

When you write-protect the cartridge, the data on it cannot be altered or erased.

► To write-protect the SQ310/SQ327 cartridge:

1. Turn the cartridge over, as shown in Figure 16, and locate the silver write-protect switch.

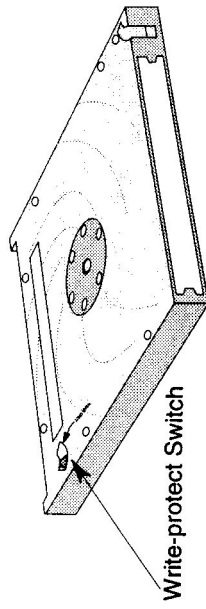


Figure 16. Locating the Write-protect Switch

2. Using the end of a ball-point pen, rotate the switch toward the READ ONLY arrow, as shown in Figure 17.

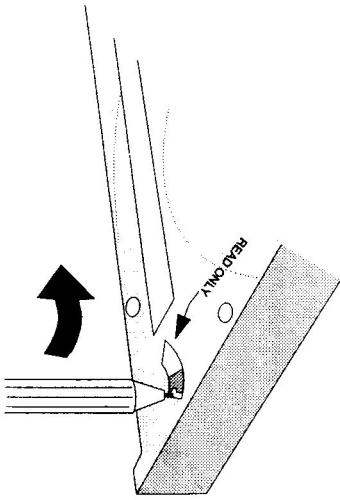


Figure 17. Write-protecting the Cartridge

Copyright

© 1994 SyQuest Technology. All rights reserved.

This document and all material contained in it are copyrighted. The document may not be copied, in whole or in part, without the written consent of SyQuest Technology.

Credits

IBM, PC-AT, and PS/2 are registered trademarks of International Business Machines, Inc.

Macintosh is a registered trademark of Apple Computer, Inc.

MS-DOS is a registered trademark of Microsoft Corporation.

SyQuest is a registered trademark of SyQuest Technology, Inc.

All other brand and product names are trademarks or registered trademarks of their respective holders.

Disclaimer

SyQuest Technology makes no warranty of any kind with regard to this material, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose. SyQuest Technology shall not be liable for errors contained in this document or for incidental or consequential damages in connection with the furnishing, performance, or use of this information.

The information contained in this document is subject to change without notice. The contents of this document may be revised without prior notice.

SyQuest Technology also reserves the right to make changes and/or improvements to its products without incurring any obligation to incorporate such changes or improvements in units previously sold or shipped.

Technical Data Restrictions

In the case of sale to or use of units by the Department of Defense, use, duplication, or disclosure of any software, firmware, or related documentation is subject to restrictions stated in paragraph (c) (1) (ii) of the

"Rights in Technical Data and Computer Software" clause at DFAR 252 227-7013.

For civilian agencies, use, reproduction, or disclosure of the software and related documentation is subject to restrictions set forth in FAR 52.227-19. Unpublished rights are reserved under the copyright laws of the United States.

FCC Warning

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

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

If necessary, consult your dealer or an experienced radio/television technician for additional suggestions. The booklet entitled *How to Identify and Resolve Radio-TV Interference Problems*, prepared by the Federal Communications Commission, may be helpful. This booklet, Stock No. 004-000-003454, is available from the U. S. Government Printing Office, Washington, DC 20402.

Safety Standards

This product meets the following national and international regulations:

- UL 1950 Standard for Safety of Information Processing and Business Equipment
- UL Standard for Safety of Information Technology
- CSA C22.2 No. 154 Data Processing Equipment
- CSA C22 No. 220 Information Processing Equipment
- IEC 435 Safety Requirements for Data Processing Equipment
- IEC 380 Safety of Electrical Energized Office Equipment
- IEC 950 Safety of Information Technology Equipment in Electrical Business Equipment
- VDE 0871/1984
- VFG 243/1991

Inquiries

While every effort has been made to ensure that the information provided herein is correct, please notify us in the event of any errors. Mail comments about this document to SyQuest Technology, Technical Publications, 47071 Bayside Parkway, Fremont, CA 94538, or call (800) 245-2278. Please include your name, address, and telephone number, and the title and part number of the document.

Document History

Part Number 104637-002 (CO472)

Revision A - Production Release, March 1994

Written by Manual 3, Inc., San Jose, CA 408-293-9654

Part Number 104637-002 (CO472)

Revision B - Production Release, May 1994

Written by Manual 3, Inc., San Jose, CA 408-293-9654

Cartridge Disk Drive

SQ3105S/SQ3270S User's Guide