

Your system supports up to four drives. To expand your storage capacity, you can install 5.25-inch or 3.5-inch of the following types:

- * SCSI hard disk drives, and either SmartDrives or ST-506 hard disk drives.
- * Tape or disk cartridge drives.

Additional Storage Devices - The computer supports:

DRIVE	CAT.NO.
52MB SmartDrive	25-4124
105MB SmartDrive	25-4130
40MB SCSI Hard drive	25-4159 (requires 25-4161 adapter)
80MB SCSI Hard drive	25-4160 (requires 25-4161 adapter)
170MB SCSI Hard drive	25-4162 (requires 25-4161 adapter)
440MB SCSI Hard drive	25-4167 (requires 25-4161 adapter)
20MB Hard Card	25-1032
40MB Hard Card	25-4059
160MB SCSI Tape backup	25-4166 (requires 25-4161 adapter)
60MB Tape backup	25-4079
20MB Disk Cartridge	25-4064A

INSTALLATION OVERVIEW

When installing internal options, be sure to:

- * Remove and replace the computer cover as directed.
- * Check the configuration of the serial or parallel adapter if you are connecting a serial or parallel device.
- * Run the Setup utility to complete the installation of drives, memory, serial/parallel adapters, or video expansion adapters.

When installing expansion adapters, be sure that:

- * The metal slot cover on the expansion adapter is seated correctly in the back panel slot.
- * The fastening screw is securely tightened.
- * The front end of the expansion adapter fits into the corresponding plastic expansion adapter guide (long expansion adapters only).
- * The expansion adapter is securely mounted in the expansion adapter slot.

REMOVING THE COVER

You must remove the cover to install internal options. Before removing the cover, turn the computer off and disconnect all electrical cables from the computer.

WARNING! Be sure the computer is in a safe work area before you remove the cover.

To remove the cover:

1. If necessary, use the keylock key to unlock the cover.
2. Remove the 3 cover mounting screws from the back of the computer.
3. Slide the cover toward the front of the computer until it clears the base of the computer.
4. Lift the lid of the computer off.

REPLACING COVER

Replace the cover after installing options. Never operate the computer while it is open. To replace the cover:

1. Carefully place the computer cover on the computer.
2. Slide the cover toward the back of the computer until it fits into place.
3. Replace and tighten the 3 cover mounting screws from the back of the computer.
4. Lock the cover, if necessary.
5. Connect the peripheral and power cables.

JUMPERS

FEATURE	DESCRIPTION	JUMPER SETTING
IDE IOCHRDY	Enabled*	E1 and E2 installed
	Disabled	E1 and E2 no connection
IDE DIAG	Normal operation*	E3 and E4 no connection
	Diagnostic mode	E3 and E4 installed
I/O Recovery	Enabled*	E8 and E9 installed
	Disabled	E8 and E9 no connection
*Indicates factory setting		

Normally, 3.5 inch drives are installed on the drive platform. You can also install 3.5 inch drives in the drive tower, using a 5.25 inch adapter.

After installing a new drive, run the Setup utility to update the system configuration as recorded in the CMOS RAM.

NOTES TO HARD DISK OWNERS:

Before installing a hard drive, record the following drive information on the worksheet at the end of your manual:

- * Drive type and type number
- * Number of heads and cylinders
- * Head and cylinder numbers of defective tracks

This information either is on a media error map attached to the hard drive or is in the hard drive installation guide. You need the drive type number when you configure your system and the head and cylinder information when you format the hard disk.

After installing the hard drive, position the computer as you plan to use it (on its side or flat) before you format the hard disk.

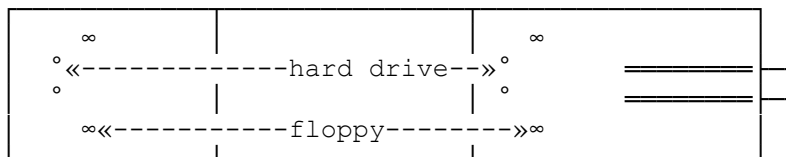
INSTALLING A 3.5 INCH DRIVE

Note: If you are installing a 3.5 inch drive in a 5.25 inch drive, bay, use a 5.25 inch mounting adapter.

1. Adjust the selector switches and terminating resistors on the drives as necessary. See the drive installation guide for more information.
2. If the drive is a diskette drive, remove the plastic insert from the front of the computer cover.
3. Select the appropriate mounting holes for your drive. See the drive installation guide for more information. Mount the drive on the drive platform, using the screws provided with the computer. Then, mount the drive platform in the computer.
4. Connect the drive power and data cables. See the drive installation for more information.

INSTALLING A 5.25 INCH DRIVE

1. Adjust the selector switches and terminating resistors on the drives as necessary. See the drive installation guide for more information.
2. Remove the drive rails from the selected drive slot by pressing the drive rail latch tabs toward each other and sliding the rails out of the tower.
To remove an installed drive, disconnect the drive cables and unlatch the drive by pressing the rail tabs toward each other. Then, pull on the drive to remove it from the tower.
3. Check to be sure a metal grounding clip is attached to each rail. Then, using the appropriate holes, mount the rails onto the sides of the drive. The grounding clips must be present to ground the system.



4. Slide the drive into the drive tower until the rails lock into place.
5. Connect the drive, power, and data cables. See your disk drive installation guide for more information.

INSTALLING A SMARTDRIVE

A SmartDrive (IDE hard disk drive) is a hard disk drive with a built-in controller. Because a hard disk controller usually occupies one of the expansion slots in a computer, using a SmartDrive frees one of the expansion slots for some other use and saves you the cost of a separate controller. The SmartDrive is designed to work with its built-in controller, so you get maximum performance and guaranteed compatibility at a lower cost than with other drive/controller combinations.

To help you connect the SmartDrive cable correctly, the SmartDrive connector on the main logic board is keyed; it has one pin fewer than an

unkeyed connector. Omitting a pin creates an empty slot on the connector. This open area on the connector is called the key.

The connector on your SmartDrive data/controller cable might also be a keyed connector. A keyed connector on a cable has one fewer hole than an unkeyed connector, and again, the empty area on the connector is called the key.

To connect a keyed SmartDrive cable, simply align the keys on the two connectors and then firmly press the cable connector onto the main logic board connector.

If your cable connector is not a keyed connector, you must locate Pin 1 on the cable connector and on the main logic board connector. On the cable, one wire is a different color from the other wires. This wire is connected to Pin 1 on the cable connector. On the main logic board, "1" is printed next to Pin 1 of the main logic board connector.

To connect an unkeyed SmartDrive cable, align Pin 1 of the cable connector with Pin 1 of the main logic board connector and then press the cable connector onto the main logic board connector.

After installing a SmartDrive (or any hard disk drive), run the Setup Utility to update your system configuration. To run Setup, insert the Utilities Diskette into Drive A and turn on the computer.

After you reset the computer, use the FDISK, FORMAT, and COPY commands to partition the drive (if necessary), high-level format each partition, and copy data and programs to the hard disk.

Caution: Do not use the Format Hard Disk utility on the utilities diskette with a SmartDrive, any other IDE hard disk drive, or a SCSI hard disk drive.

FDISK - PREPARING THE HARD DRIVE

Fdisk creates a partition for MS-DOS on the hard disk. CAUTION: Reconfiguring the hard disk with fdisk destroys all existing files. Be sure you have backed up your data!

1. With the MS-DOS disk in drive A, at the dos A> prompt type:
FDISK
2. At the Disk Options menu, choose option 1, create DOS partition, and press ENTER.
3. At the Create DOS Partition menu, choose option 1, create primary DOS partition, and press ENTER.
4. At the Create Primary DOS Partition menu, press ENTER to accept the default (yes) answer to the question:
"Do you wish to use the maximum size for a DOS partition and make the DOS partition active (Y/N).....? [Y]"
Fdisk displays the message "System will now restart".

FORMAT - PREPARING THE HARD DRIVE

The format command prepares the hard disk to accept MS-DOS files. You must use this command before you can use any disk (hard or floppy) with the computer. CAUTION: Formatting destroys any previously existing data

on a disk.

1. Place the MS-DOS disk in drive A, and at the A> prompt type:
FORMAT C: /S

In response, FORMAT displays the following:
"WARNING, ALL DATA ON NON-REMOVABLE DISK DRIVE X: WILL BE LOST!"

Proceed with the format by typing Y and pressing ENTER.

TYPE HEAD CYLINDER PRECOMP PARK SECTORS SIZE (Megabytes)

SCSI

None

1	4	306	128	305	17	10
2	4	615	300	615	17	20
3	6	615	300	615	17	30
4	8	940	512	940	17	62
5	6	940	512	940	17	46
6	4	615	None	615	17	20
7	8	462	256	511	17	30
8	5	733	None	733	17	30
9	15	900	None	901	17	112
10	3	820	None	820	17	20
11	5	855	None	855	17	35
12	7	855	None	855	17	49
13	8	306	128	319	17	20
14	7	733	None	733	17	42
15						
16	4	612	0	663	17	20
17	5	977	300	977	17	40
18	7	977	None	977	17	56
19	7	1024	512	1023	17	59
20	5	733	300	732	17	30
21	7	733	300	732	17	42
22	5	733	300	733	17	30
23	4	306	0	336	17	10
24						
25	4	615	0	615	17	20
26	4	1024	None	1023	17	34
27	5	1024	None	1023	17	42
28	10	981	None	980	17	81
29	8	512	256	512	17	34
30						
31						
32						
33						
34						
35	9	1023	None	1023	17	76
36	10	1024	1023	1023	17	85
37	5	989	128	989	17	41
38	5	1024	1024	1024	17	42
39	6	820	820	820	17	40
40	8	1024	1024	1024	17	68
41	6	306	153	306	17	15

Any (Non Standard Hard Disk)

Non Standard Hard Disk Drive

Heads [0]

Cylinders [0]

Precompensation

 Cylinder # or 'NONE' [0]

Head Landing Zone [0]

Sectors Per Track [0]

Enter the above information from
your hard drive users manual.

< ESC > Return to Selection Screen

<ENTER> Complete One Entry