

# Apple Hard Disks: 20SC, 40SC, 80SC



## Overview

Now Macintosh™, Apple® IIe, or Apple IIgs™ personal computer owners can boost disk storage capacity from a choice of high-performance external hard disks.

Providing 20, 40, or 80 megabytes of storage capacity, Apple Hard Disks are ideally suited to the growing requirements of business and professional users who want to store multiple applications programs and data files in one convenient location.

Besides offering ample storage (10,000 pages with the 20-megabyte disk), Apple Hard Disks let you access data up to six times faster than 3.5-inch floppy-disk drives.

## Features

▶ 20, 40, or 80 megabytes of storage

▶ Fast data access:  
—30 milliseconds with the 40SC  
and 80SC Hard Disks  
—85 milliseconds with the 20SC

▶ Industry-standard Small Computer System Interface (SCSI)

## Benefits

▶ Provides space for data-intensive files, large documents, and sophisticated applications.  
▶ Lets you build a powerful AppleShare™ system that can access up to 80 megabytes of information (when used with Apple's new file server software).  
▶ Makes it easy to work in the AT&T UNIX® environment (when you use the Apple Hard Disk 80SC).

▶ Finds data significantly faster than the 3.5-inch floppy drives.

▶ Provides faster data transmission than a serial interface.  
▶ Allows expansion with additional hard disks, tape backup systems, or other SCSI peripherals.  
▶ Provides connection to the Apple Tape Backup 40SC for efficient file backup and restoration.  
▶ Assures a growth path.

# Apple Hard Disk 20SC

## System Requirements

To use an Apple Hard Disk 20SC with a Macintosh personal computer, you must have:

- ▶ Apple SCSI System Cable
- > Apple SCSI Cable Terminator

To use an Apple Hard Disk 20SC with an Apple IIe or IIgs, you must have:

- ▶ Apple II SCSI Interface Card
- ▶ Apple SCSI System Cable
- ▶ Apple SCSI Cable Terminator

## Product Details

▶ **SCSI Expansion**  
SCSI expansion lets you connect as many as three addi-

tional SCSI devices to an Apple IIe or Apple IIgs, or as many as six to a Macintosh.

## Technical Specifications

### Recording Media

Two double-sided rigid fixed disks with two dual read/write heads

### Capacity

Data capacity:	20 megabytes (formatted)
Data surfaces:	4
Heads/Surfaces:	1
Block size:	512
Total disk blocks:	39,360
Sectors/Tracks:	32

### Characteristics

Average seek time:	85 milliseconds
Transfer rate:	
Macintosh Plus:	265,000 bytes per second
Macintosh SE:	660,000 bytes per second
Macintosh II:	937,000 bytes per second
Rotational speed:	2,744 rpm
Startup time:	15 seconds
Spin-down time:	25 seconds

### Interface

Connects directly to the Macintosh Plus, Macintosh SE, or Macintosh II via the external SCSI DB-25 connector.	Connects to the Apple IIe or Apple IIgs via the expansion port, using the Apple II SCSI Interface Card.
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### Electrical requirements

Line voltage:	85 to 270 volts AC
Frequency:	47 to 64 hertz
Maximum power:	30 watts

### Environmental requirements

Operating temperature:	50° to 104° F (10° to 40° C)
Storage temperature:	32° to 122° F (0° to 50° C)
Relative humidity:	20% to 80% (noncondensing)
Altitude:	0 to 10,000 ft. (0 to 3,048 m)

### Size and weight

Height: 3.1 in. (78.5mm)	Depth: 10.5 in. (266 mm)
Width: 9.7 in. (246mm)	Weight: 9 lbs. (4kg)

## Ordering Information

**Apple Hard disk 20SC**  
Order No. M2620

With your order you'll receive:

- ▶ Apple Hard Disk 20SC
- ▶ Owner's Guide
- ▶ Setup Disk
- ▶ Power cord
- ▶ Limited warranty statement

**Apple SCSI System Cable**  
Order No. M0206  
**Apple Cable Terminator**  
Order No. M0209  
**Apple II SCSI Interface Card**  
Order No. A2B2087

# Apple Hard Disk 40SC

## System Requirements

See the Apple Hard Disk 20SC for the Apple Hard Disk 40SC system requirements.

## Product Details

### ► ProDos

ProDos 1.1 can only access 32 megabytes of storage, regardless of drive capacity

Future ProDos updates will allow full access to the 40 megabyte capacity

### ► SCSI Expansion

SCSI expansion lets you connect as many as three additional SCSI devices to an Apple IIe or Apple IIgs or as many as six to a Macintosh.

## Technical Specifications

### Recording Media

Two double-sided rigid fixed disks with two dual read/write heads

### Capacity

Data capacity:	40 megabytes (formatted)
Data surfaces:	4
Heads/Surfaces:	1
Block size:	512
Total disk blocks:	78,246
Sectors/Tracks:	32

### Characteristics

Average seek time:	30 milliseconds
Transfer rate:	
Macintosh Plus:	265,000 bytes per second
Macintosh SE:	660,000 bytes per second
Macintosh II:	937,000 bytes per second:
Rotational speed:	3,662 rpm
Startup time:	13 seconds
Spin-down time:	18 seconds

### Interface

Connects directly to the Macintosh Plus, Macintosh SE, or Macintosh II via the external SCSI DB-25 connector.	Connects to the Apple IIe or Apple IIgs via the expansion port, using the Apple II SCSI Interface Card.
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### Electrical requirements

Line voltage:	85 to 270 volts AC
Frequency:	47 to 64 hertz
Maximum power:	60 watts

### Environmental requirements

Operating temperature:	50° to 104° F (10° to 40° C)
Storage temperature:	32° to 122° F (0° to 50° C)
Relative humidity:	20% to 80% (noncondensing)
Altitude:	0 to 10,000 ft. (0 to 3,048 m)

### Size and weight

Height: 3.1 in. (78.5mm)	Depth: 10.5 in. (266 mm)
Width: 9.7 in. (246mm)	Weight: 9 lbs. (4kg)

## Ordering Information

### Apple Hard disk 40SC

Order No. M2644

With your order you'll receive:

- Apple Hard Disk 40SC
- Owner's Guide
- Setup Disk
- Power cord
- Limited warranty statement

### Apple SCSI System Cable

Order No. M0206

### Apple Cable Terminator

Order No. M0209

### Apple II SCSI Interface Card

Order No. A2B2087



# Apple Hard Disk 80SC

## System Requirements

See the Apple Hard Disk 20SC for the Apple Hard Disk 80SC system requirements.

## Product Details

### ► ProDos

ProDos 1.1 can only access 32 megabytes of storage, regardless of drive capacity. Future ProDos updates will

allow full access to the 40 megabyte capacity

### ► SCSI Expansion

SCSI expansion lets you connect as many as three addi-

tional SCSI devices to an Apple IIe or Apple IIgs or as many as six to a Macintosh.

## Technical Specifications

### Recording Media

Three double-sided rigid fixed disks with two dual read/write heads

### Capacity

Data capacity:	80 megabytes (formatted)
Data surfaces:	6
Heads/Surfaces:	1
Block size:	512
Total disk blocks:	156,370
Sectors/Tracks:	32

### Characteristics

Average seek time:	30 milliseconds
Transfer rate:	
Macintosh Plus:	265,000 bytes per second
Macintosh SE:	660,000 bytes per second
Macintosh II:	937,000 bytes per second
Rotational speed:	3,662 rpm
Startup time:	13 seconds
Spin-down time:	18 seconds

### Interface

Connects directly to the Macintosh Plus, Macintosh SE, or Macintosh II via the external SCSI DB-25 connector.	Connects to the Apple IIe or Apple IIgs via the expansion port, using the Apple II SCSI Interface Card.
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### Electrical requirements

Line voltage:	85 to 270 volts AC
Frequency:	47 to 64 hertz
Maximum power:	60 watts

### Environmental requirements

Operating temperature:	50° to 104° F (10° to 40° C)
Storage temperature:	32° to 122° F (0° to 50° C)
Relative humidity:	20% to 80% (noncondensing)
Altitude:	0 to 10,000 ft. (0 to 3,048 m)

### Size and weight

Height: 3.1 in. (78.5mm)	Depth: 10.5 in. (266 mm)
Width: 9.7 in. (246mm)	Weight: 9 lbs. (4kg)

## Ordering Information

**Apple Hard disk 80SC**  
Order No. M2688

With your order you'll receive:

- Apple Hard Disk 80SC
- Owner's Guide
- Setup Disk
- Power cord
- Limited warranty statement

### **Apple SCSI System Cable**

Order No. M0206

### **Apple Cable Terminator**

Order No. M0209

### **Apple II SCSI Interface Card**

Order No. A2B2087