

How to Buy a Computer

In this document, readers will become familiar with the process of buying a computer. A brief overview with supplemental information will be provided about the components that comprise a “good” computer system purchase. Other topics will include vendor practices and warranty and service plan considerations.

Buyer Considerations

There are 3 main concepts buyers should consider before buying a new or used computer. They are application, the price of the computer, and the computer components used.

A. Application

1. What do you want to do with your computer?

- Word processing, spreadsheets
- Internet
- Desktop publishing
- Digital video editing
- Computer programming
- Computer games



2. Next, you must determine the usage and compatibility issues related to the computer.

Portability Issues - Do you need a computer that is highly portable? If so, you should probably consider on purchasing a laptop.

Compatibility - What type of computers do your contacts use? This will influence whether you get a Windows-based system or a Macintosh-based system.

DID YOU KNOW?

- Among kids 6 to 11, Internet use is split evenly between boys and girls.
- 95% of schools had Internet access and 63% of public-school classrooms were wired.

“E-turning to the Classroom,” Newsweek, September 18, 2000, p. 74J

3. Assess your comfort level with computers.

This will help you later when choosing the type of warranty and service plan you need from the computer vendor.

B. Price of the Computer

How much are you willing to spend on the computer?

More than anything else, this factor will determine what you can choose from when buying a computer. This also is related to what you are going to do with the computer. Higher level computer users will need a faster, more powerful computer, which will dictate a higher price on the computer.

C. Computer Components

After deciding how you are going to use the computer and the amount you are willing to spend, you should have some basic knowledge of the COMPONENTS that comprise a computer system. The following is a list of basic definitions and recommendations for the type of components that will make up your computer system.

1. Processor Types

a. Intel - Celeron, Pentium III, Pentium IV

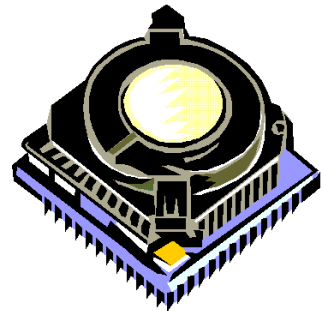
- 500 MHz to 1500 MHz (1.5 GHz)
- These chips are typically faster and pricier than other competitors.

b. AMD - Duron, Athlon

- 400 MHz - 1200 MHz (1.2 GHz)
- This chip is comparable in speed to the Intel processors for applications and graphics.
- AMD processors are typically not as expensive as Intel chips with the exception of the AMD Athlon 1200 MHz processor.

c. Recommendation

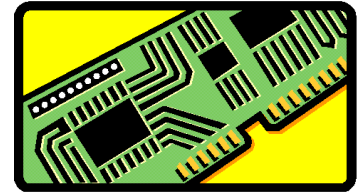
- This will be determined by what you have decided relative to the application and pricing factors of buying a computer.



2. Types of Memory

a. SDRAM

- Synchronous Dynamic Random Access Memory
- This memory comes in PC 66, PC 100, PC 133 and PC 150 varieties



b. RAMBUS (RDRAM)

- This is a newer type of memory that is faster than SDRAM (PC1600, PC2100).
- The price for this memory is generally too expensive for most users at the current time.

c. Recommendation

- To be safe and allow for future growth, 128 MB of PC133 SDRAM should be the minimum amount purchased.

3. Types of Hard drives

a. Ultra ATA/EIDE

- AT attachment / Intelligent Drive Electronics
- 33 MHz, 66 MHz or 100 MHz (for example, an IBM ULTRA ATA-100 drive)
- 5400 RPM, 7200 RPM or 10000 RPM

b. SCSI

- Small Computer System Interface
- These types of hard drives are generally more expensive than their ATA counterparts.
- These drives are typically faster and more reliable (speeds up to 15000 RPM).

c. Recommendation

- 12 GB (Gigabytes) minimum
- Again, this choice will depend on what the computer will be used for in the future.



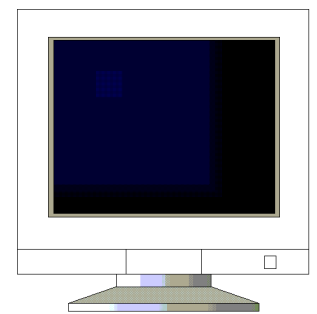
4. Graphical Components

a. Monitor

- The size of monitor will depend on the user's eyesight and dictated by his or her preference of viewing size.
- Quick tip: The lower the dpi, the better the quality (dpi = DOTS PER INCH)
- Recommendation - 17" monitor, .26 dpi

b. Video Card

- AGP video cards are video cards that attach to the AGP port of the computer.
- AGP = Accelerated Graphics Port
- The speeds that AGP cards run are 1X, 2X, and 4X at the current time.
- Recommendation - AGP video card with a minimum of 16 MB of RAM



5. Multimedia Components

a. Sound Card

- Sound Blaster brand or compatible is generally the preferred choice for sound cards.
- RULE OF THUMB = The higher bit soundcard equates generally to better sound quality
- Recommendation - 32-bit soundcard or higher

b. Speakers

- There are many types of speakers available on the market. Most speakers are of decent quality.
- Two speakers are generally sufficient for most computer users.

c. CD-ROM or DVD-ROM

- 32X OR 48X is sufficient for a CD-ROM drive.
- The decision between DVD or CD-ROM will depend on the user.
- DVD-ROM drives allow the user to view movies and read CDs.

d. CD-RW (Compact disc - ReWritable drive)

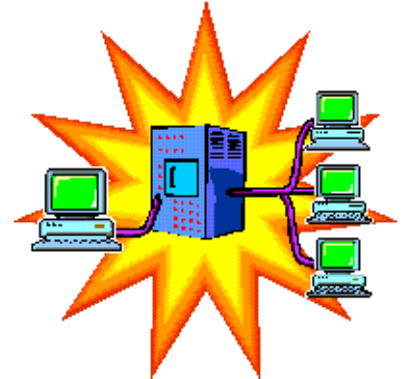
- This is one component that is not a necessity for most individuals.
- Its primary function is to allow a user to backup data to a CD-ROM.
- Other functions of CD-RW drives are duplication and creation of CDs.



6. Internet / Network Components

a. Modem

- Choose one of the major vendors of modems
- For desktops, choosing a NON-WINMODEM model typically ensures higher compatibility and reliability when connecting to an Internet Service Provider (ISP).
- Recommendation - 56K, V.90 modem



b. Network Card

- A network card is needed if your computer will be connected to a local or wide area network.
- 10/100MB combo cards are the most versatile for utilizing the full potential of all networks that the user will access with that computer.
- Check with the Information Technology Services of your company or institution to get suggestions.
- Choose one of the major vendors of network cards.

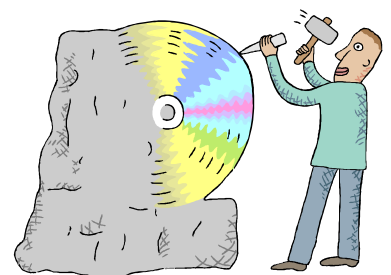
7. Additional Storage Options

a. Zip Drive

- These drives are manufactured by Iomega and Panasonic.
- These drives can be Internal (ATA) drives or External (Parallel or USB) drives.
- Zip drives allow users to store either 100 MB or 250 MB of data on 1 disk depending on the model of the Zip drive purchased by the user.
- A standard 3 1/2" floppy drive allows only 1.44 MB per disk.
- Zip-100 disks cost approximately \$10 each.

b. LS -120

- This drive allows a user to store 120 MB of data on 1 disk.
- A standard 3 1/2" floppy drive allows only 1.44 MB per disk.
- You can also use a floppy in this drive unlike the ZIP drive.
- LS -120 disks cost approximately \$12 each.



8. Software Considerations

a. Operating Systems

- Windows 98, Windows NT, Windows ME, Windows 2000
- Macintosh Operating System (latest version is OS X)
- Linux (Many versions are available of this OS.)

b. Office Suite Packages

(Word Processor, spreadsheets, presentations)

- Microsoft Office
- Corel WordPerfect Office
- Lotus SmartSuite
- Sun Star Office (freely distributed at www.sun.com)



Note: For educational institutions, site licenses can be purchased off of the State licensing agreement.

9. Warranty and Service Plans

a. This decision should be dictated by two factors:

- a. your computer comfort level
- b. the amount “downtime” can you afford if your computer needs repairs

b. Types of Warranties and Service Plans typically offered by major computer vendors

- a. 3 Year Warranty, 1 Year Next Business Day
- b. 3 Year Warranty, 3 Year Next Business Day

Note: Plan B usually costs an extra \$100.00 on the total price.

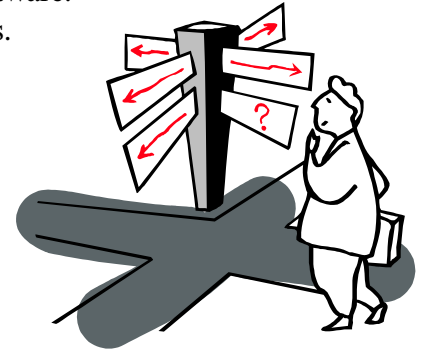


Where do I go from here?

1. First, determine what you need for you and/or your family.
2. Next, determine how much you can spend for the computer and other software.
3. Then, go to the World Wide Web and price computers at the online stores.

Some of the major computer vendors:

- a. Apple (<http://www.apple.com>)
- b. Compaq (<http://www.compaq.com>)
- c. Dell (<http://www.dell.com>)
- d. Gateway (<http://www.gateway.com>)
- e. IBM (<http://www.ibm.com>)
- e. Micron (<http://www.micronpc.com>)



If you are still unfamiliar with the computer terminology or hardware you should choose, research the definitions and hardware reviews at some of these sites:

1. Webopedia - Online Computer Dictionary
<http://www.webopedia.com>
2. Computer Shopper - Online Computer Classifieds and Reviews
<http://www.zdnet.com/computershopper/>
3. CNET Computers.Com - Online Hardware and Computer Reviews
<http://www.computers.com>
4. ZDNET Hardware Reviews
<http://www.zdnet.com/reviews/>
5. Pricewatch - Online Computer Component Price Comparison Search Engine
<http://www.pricewatch.com>

Contact Information:

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