

# How to Buy a Computer taught by Alan Weaver info@big-pic.net



## Introductory Comments

---

This is a guide to buying a computer, to help you become a "savvier" shopper. (As Sy Syms said, an educated consumer is a better customer.) For the most part, buying a computer is relatively easy now – it comes complete out of the box. This handout has some product reviews and discusses the accessories, software, guarantees etc. which should be of help.

Any companies mentioned herein are based on the teacher's personal experiences and are not meant to be any type of endorsements for anyone mentioned herein.

User experiences among a group of people or computers users can vary vastly. Some people may prefer one computer model to another brand. Comments in here are the teacher's.

Buying a computer is a lot simpler (yet more complex) today. We can buy a bundled package with everything from monitor to printer included but we have to make other decisions.

## Table of Contents

Section 1 - Desktop versus Laptop.....	1
Section 2 - New vs. used .....	2
Section 3 - Choosing the type of dealer .....	2
Section 4 - Operating Systems .....	3
Section 5 - Data Storage .....	4
Section 6 - The Components .....	5
Section 7 - The Accessories .....	6
Section 8 - The Internet .....	8
Section 9 - Software .....	9
Section 10 - Printers .....	10
Section 10 – Warranties/Service .....	11
Section 11 - Miscellaneous (yet helpful information).....	12
Section 12 - Methods of Buying a Computer.....	12
Section 13 - Jargon words used in computer ads .....	14
Section 14 - Product Reviews .....	16
Section 15 - A Shopper's Checklist.....	18

Today's computers often come in packages with everything in it from the processor, to the monitor, speakers, etc. what often predicates the decision is the price. There are many manufacturers out there. What the problem today is deciding what accessories to get with the computer as well as deciding on other issue such as extended warranties, etc.

There are many brands out there, this is not a Consumer Report oriented class - this is an overview with some subjective comments from your instructor. You don't always get the best computer as you spend more money. Like a car, the more spent doesn't guarantee success.

### **Section 1 - Desktop versus Laptop**

<b>Desktop</b>		<b>Laptop</b>	
<b>Advantages</b>	<b>Disadvantages</b>	<b>Advantages</b>	<b>Disadvantages</b>
Easier to use	Not portable	Small foot print, takes up very little room	Higher cost, figure minimum of \$1,000
Lower cost	Takes up a lot of room	A home office can literally be kept in a briefcase	Keyboard can be uncomfortable though some of the better ones have full size keyboards
Larger monitor, easier to view	Need a good sized location in home wherein computer can be <i>comfortably</i> used	Can be used while out of the office, in remote locations (great if you travel a lot)	Lower priced units are "slower" than similarly priced desktop
Often more powerful, faster, more features	If a high end machine, (or any for that matter), make sure there is sufficient home insurance to cover replacement in case of fire or burglary	Weight, easy to move around. The lighter it is, the more expensive.	Uses different technology for "mouse" can be clumsy and awkward to use (that's why it's good to know keyboard shortcuts!). A regular mouse can be installed on the computer.
			Very apt to be stolen, make sure insurance is paid up and that it is covered. Don't let it out of your sight, especially in an airport or any public location.

**Tablet PCs** – these are relatively new and are starting to ship. I have not personally used one but have read a few reviews. They allow you to write on the screen (remember that keyboarding is MUCH faster than hand-writing). They are slower, costlier, but can be very convenient for the business traveler. The jury is still out on them; they are the high-tech gadget for 2003. Major detriment is that the batteries only last a couple of hours.

## Section 2 - New vs. used

New		Used	
Advantages	Disadvantages	Advantages	Disadvantages
Current model	Higher price	Great price (free?)	Not current
Up to date	Not set up, unless willing to pay someone to do it	Can have a guarantee (although a short one) if purchased from store	Obsolete before you bought it
Obsolete the day you buy it, always being "improved"		Good as a "back-up" computer or for use by children or for simple tasks, or for summer home	May be lacking features or power, i.e. no CD ROM, slower speed, less memory or power
Warranty (sometimes 1 year on site which is a nice feature)		Sometimes set-up with the software pre-loaded.	Get one with at least a Pentium 2 in it.

### How many people will be using the pc

- If you have a home-based business, make sure other family members have a separate computer! Also, the children should have their own computer.
- It is recommended that if there are children in the home using computer and the Internet that the computer is in a **public** location. It is safe for them to use computer, but remember a couple of things: a) limit their time b) realize that they can possibly bypass parental controls c) warn them about basic "etiquette" and safety – not to give out last names, ages, where they live, etc.

### The decision process

- Desktop vs. laptop (size vs. portability, will you actually be traveling with it)
- What brand, what size, how much \$\$ to spend.
- What you think will cost \$1,300 ends up costing \$1,800, make sure you determine your needs before you get excited (think of when you last bought a car or booked a vacation, then realized you bought stuff the salesman thought you needed but really didn't)

## Section 3 - Choosing the type of dealer

*You get what you pay for* is a very true adage. Many people are willing to sacrifice an evening or an entire day to save a couple of hundred dollars. For some of us, that is fine, for others it isn't. These are the various ways to purchase one. The first three can provide the best prices with the least amount of service. The last choice can be more expensive but also provide you with essential support.

**Mail order** – good prices, customer really has to know what he or she is buying. In some cases, sales tax is not charged (by law, buyer is to report this on a form to the State when state taxes are filed.)

**Dept. store** – can be one of the worst or best choices. The staff is usually not that well trained on the equipment. However, a good deal on a "close-out" can be made. Stores such as Wal-Mart or BJ's also sell them.

**Computer store** – again, the staff at these places can be fairly ignorant. Waits in line, especially at a chain or mass merchandiser can be interminable. I had the experience of taking three hours to purchase a computer with a client.

**Non-chain computer store** – can be the most expensive (but they need to be competitive on price), but most efficient way of purchasing computer. Staff is fairly intelligent (usually). They provide personalized service. Some of them allow you to make an appointment; they'll set it up with software, will deliver to your home and set up (at a price of course)

## Getting recommendations/who to ask

- The MIS director where you work. Often he won't say anything, as he doesn't want to get blamed when you buy the wrong item.
- Look at the computer on your co-workers' or friends' (even family members) desks/home offices. What has worked for them, what hasn't?
- Talk to your children - many of you have children work in offices and have home PCs. Listen to their advice and commentary.
- Read consumer oriented publications. (*Consumer Reports*, articles in local papers or general interest magazines)

## CPU - Desktop vs. Tower



An important choice to make when buying the computer is deciding between a desktop (office style) versus a portable laptop. At the left is a tower (the tower goes under or to the side of your workstation or desk.) At the right is a desktop unit with the monitor resting on the processor. Choose whichever is appropriate for your needs.



Desktop CPU		Tower CPU	
Advantages	Disadvantages	Advantages	Disadvantages
Easier to reach the controls. They are right in front of you.	If you don't have the space on your desk, it can be very crowded	Reduces footprint on desk, saves space, you can have a larger monitor in the space	Can be awkward to insert disks inside or to power up (not good if you have a stiff back)
Can be put on side on the floor if you don't have the space (it won't fall apart if you keep it on its side)	May require a smaller monitor to fit in the space	Is easier to expand and add more slots to	If you have the space, you can keep it on the desktop next to the monitor.
	Sometimes, not as expandable as a tower.		Make sure it is not pressed against wall or it can overheat

**Note:** there are other types of computers that have very compact processing units or those with the power drives, etc. located under the keyboard. Advantage is that they take up very little room and can be just as powerful as a regular computer. This is good when space is at a real premium.

## Section 4 - Operating Systems

**Most new purchases come with either XP (professional or home user), or 2000. This is a summary of systems out there.**

- Windows 3.1 - this is a stinking dinosaur system that you'll see on some ancient thing a store is trying to get rid of or something your kids don't want anymore. Steer clear of people selling this to you or disinherit a kid trying to give you that type of computer! It's good for very simple uses such as word processing and that's about it!
- Windows 95 – not in new computers anymore but still a good choice. Will run **most** programs. (Does not run Microsoft XP, their new version of Office)

- Windows 98 – **Although a good operating system, not found on new computers anymore.**
- Windows 2000 **Recommended choice, will run the new XP software**
- Windows Millennium Edition – this is **NOT** recommended. I have not heard anything favorable about this system. This is not found on many new computers any more. If offered in a “deal,” forget it!
- Windows NT (stands for “New Technology”) and is usually used on networked computers. This is very seldom found on home computers.
- Windows XP – introduced Fall 2001, it has received some positive write-ups. I have used it a few times and have not been pleased with it. If you are using some older software, it may not work or require some major technical expertise to install it. Home PCs have the home version, office versions have a more powerful system.

Note: when buying a computer, make sure you get an actual Windows disk with the computer. It may add up to \$100 to the purchase price but if something goes wrong, you will need it to reformat the hard drive. If you use any specialized software, make sure it will be compatible with the operating system of your new computer.

## **Section 5 - Data Storage**

Practically every computer comes with a hard drive (known as the C drive) and a floppy drive ((known as the A drive). Other types of storage (which are used for backup) include:

### **Zip Drive**

---

- A zip disk holds the equivalent of about 100 diskettes, can give unlimited storage on a computer. Can add \$100 - \$200 to cost of unit. Portable ones are available for laptops or office unit (shown at right).
- Two different types, one holds 150 megabytes, the other (older) is 100. Either one is a useful way to have backups done quickly and inexpensively. (If you don't think backing up is important, what would you do if you lost all the data on your computer?) Today, more people use a CD burner (recorder) to store or backup data. What's great about these units is that they can be programmed to do automatic backups at preset times (of course the computer has to be on to do this process).



### **CD-ROMs and DVDs**

---

- The higher the number, the higher the processing (and installation of software/games) time. 32X is a good speed. For the amount of time spent installing software, this can become a moot point. Many of them are now at a speed of 40X. DVDs hold motion pictures and some software are being put on these. (Personally, I'd rather watch a movie on a large screen television)
- Many systems now have two CD drives – one as a player, the other as a recorder (see below). This way if you have to transfer data, or copy disks, this makes life much simpler/convenient.
- DVD recorders – still expensive but price is dropping. Prerecorded DVDs are encoded to prevent illegal copies being made. They can be used to make copies of videotapes as well as record television programs.

### **CD/DVD Recorder**

---

Their popularity continues to grow. It is often a good idea to have two (reader/recorder) for convenience in making duplicates. (they can be built in or portable, built-ins are less expensive) Uses:

- Data backup
- To provide information/data conveniently to clients or co-workers
- To record music on
- Make legal copies of other CD ROMs

## Data Backups

---

It is good to have information backed up in one of the above formats. It is also important to keep it in a separate location from the computer. It's okay to keep it near the computer in case the hard drive goes bad or is infected by a virus. However, there is the chance of fire so a backup copy should be kept in a fireproof box or some other location of the house in case a fire occurs.

## Section 6 - The Components

### Pentium Processor

---

They come in different levels. The higher the number, the faster they "process." Remember that all computers are faster than an abacus. We are now at Pentium 4 level that is being introduced in late 2001. Pentium 3s will definitely handle your requirements.

### Hard Drive

---

Memory is very inexpensive. Memory can range from 4 to 60 gigabytes, sometimes more. Unless you are storing images, video, or music, a 10-gigabyte hard drive is more than sufficient.

### RAM

---

Random access memory – this is what you need to process software, run programs, etc. A good size will help. 256 is standard in almost all new computers nowadays. Older computers have 32-128 and are noticeably slower.

### Keyboards

---

They're pretty standard, but there are some ergonomic keyboards. Downside of ergonomic ones is that they can take up more room on the desk. There are also wireless keyboards - they cost more, but are definitely convenient. Make sure you have spare batteries, as this is what powers them!

### Monitors

---

- They come in different sizes and resolutions, costing from \$100 to over \$1,000.
- If you're a casual user, a smaller monitor with a lower resolution is acceptable.
- If a graphics or "power" user (i.e. someone who does heavy duty work on it), get a good monitor such as a 17."This is the most visible part of the system. Make sure it is high resolution! There are also 19 and 21" monitors available now. If you have limited vision, this can be **extremely** helpful!
- Flat monitors take up very little room; have great resolution, and cost more. Prices have dropped substantially. They are much easier on the eye, which is good for those subject to eyestrain or just plain near-sighted. One is pictured above right. Flat monitors are measured horizontally which means a 15" flat monitor is the same size as a 17" diagonally measured with a picture tube.



## Mouse

---

Most mice (mice, meese?) are fairly standard. However, if you are a “power” user, it may be worth spending some extra \$\$ on a good mouse. Microsoft has one with a dial in the middle, which assists in scrolling through web sites (not a big deal, I prefer to use the page down feature).

Alternate technology includes touch pad, trackball, little rubber thing (popular on some laptops which is very slow to use), and stationary devices, which may be good if in a limited space environment. There is also “wireless” technology out there, have heard good things about it, one great advantage – no tangled cords! They can be purchased for as little as \$30. If you get the wireless mouse, make sure you have spare batteries. They are also heavier than a wired mouse.

## Modems

---

- Standard is now 56 K, fastest download for phone hook up (you may need it to fax documents directly from computer). As cable does give out now and then, good to have a “back up” system, which dials up.
- Cable modems – uses cable TV technology, very fast download - cost about \$40/mo, limited to certain areas, however, a 2<sup>nd</sup> dedicated telephone line not required or phone line not tied up when on internet. You cannot fax through this. Installation requires the computer have an Ethernet card.
- If you’re going to fax from your computer, you still need a modem in the computer. The cable modem will not work. The fastest speed that a fax goes at is 14.4 KB so you can use an “older” one without any loss of quality or serviceability.

## Speakers

---

Practically all-new PCs have them. You can also play music or listen to websites with music on them. The sound is ok with the standard speakers, often included with purchase.

## Section 7 - The Accessories

### UPS (Uninterrupted Power System)

### STRONGLY RECOMMENDED

- ? Allows computer to go on working (for only a few minutes) during a power failure, prevents spikes of power from affecting computer. It gives user time to save work and to power down.
- ? Mandatory for an office environment (can purchase a single unit for about \$80, sometimes less), good to have at home if the power in the home is low amperage (i.e. in an older home). A surge protector (about \$10-25) offers some protection.
- ? Keep saving work while working on documents so you avoid losing data.

## Scanners

---

Why own a scanner?

- ? Turn boxes of photos into a computerized photo gallery
- ? Create a family or business web site with photos & graphics
- ? Scan paper documents and use OCR to convert them to files you can edit with a word processor
- ? Make copies of documents without investing in a photocopier (some have a “copy” feature)



Flatbed is the best as they’re the most versatile. There are “one-touch” units that allow you to scan and email straight from the scanner without “intermediate” steps. They look similar to the illustration above, they look like a very small copier with a hinged cover.

*Note:* If you take a lot of pictures with a film camera, consider getting them back on floppy disks or CD ROMs – the cost is worth the savings in having to scan them. Or, if you have a few hundred dollars, get an electronic camera. Prices have dropped significantly the second half of 2001.

**Resolution** The higher the dpi, the better the resolution of the photo. However, if you are planning on using the photos for Internet or email purposes, the higher dpi photos can take significantly longer to download. If you're doing Websites, they all are at 72 dpi (dots per inch)

**Color Depth** Don't settle for less than 30 bit color

**Interface** This is how the scanner is hooked up to the pc. Parallel port is slower than a SCSI board, which has to be hooked up inside computer. New scanners attach via a USB port. Make sure you have the right port on your computer (especially if it is an older one) so that you can hook up the scanner! Newer computers often have a couple of the USB ports as well as the parallel. Older computers only have the parallel port.

**Software** All scanners come with software bundles including scanner control, image editing and OCR software to convert a printed page into a text file. You can either get brand name or proprietary software bundled with the scanner.

**Price** not necessary to spend more than \$200 for a scanner for home use. Storm and Epson also make highly rated scanners, which are not included in this list.

*Some good brands include Canon, Hewlett Packard, and Visioneer. They can be bought for less than \$100, sometimes as low as \$49 (this is figuring in rebates).*

**Antivirus - a MUST if you are exchanging data files!**

**STRONGLY RECOMMENDED**

Have a "name" brand one such as McAfee or Norton. Update once a week! It is not "permanent!" To avoid viruses: don't open up strange attachments in email, don't download stuff from unknown or unreliable websites, and make sure you are getting files and programs from reputable sources. Another good antivirus which hardly anyone has heard of is by Panda, their website is [pandasoftware.com](http://pandasoftware.com).

Costs: Panda \$60 to purchase disk, \$30 to download from website. McAfee & Norton range from \$20-40, depending on special at the store. Often they have rebates.

## **Digital Camera**

Although these are not computers, they are becoming more and more popular. Prices can range from less than \$50 (Polaroid has a very inexpensive, chintzy camera) to the thousands of dollars. Nowadays you can get a decent from Hewlett Packard, Sony, Kodak, Olympus, etc. with prices starting at \$150 and up. Pictured at right is a Nikon CoolPix 250 which retails for approximately \$350.



They are useful for many purposes:

1. Emailing pictures to your friends/family - an inexpensive one will suffice.
2. For work - if you are in insurance, a realtor, this can prove to be a necessity as well as a time and cost saver as the images are ready for instant use, be they for your website, email, or to print out.
3. Pleasure - you can take pictures on your vacation, and have them printed out when you come back.  
Note, the storage media can be quite expensive, the cards or disks that they can use can cost over \$100 per unit (they can store hundreds of images though)

They can be bought at many stores now, even Wal\*Mart. Norwalk has the D-store located on West Avenue (near Decker's) which specializes in electronic cameras. Phone: 1-888-313-1587.

Kodak has a "docking" system which can be user friendly in working with the computer to transfer images, but it is another piece of equipment to deal with.

Again, these units may require additional accessories, which can add to the cost:

- Extra disks (necessary if you are taking a lot of pictures) (can range from \$20 - \$100, depending on memory capacity)
- Extra batteries - better yet, get a rechargeable unit.
- Carry case - helps to protect everything you're carrying
- Equipment such as a disk reader to upload images to the camera. When you use the cable with the camera, it can really suck down battery power when transferring images. The readers allow for practically instant transfer of images.

When purchasing, make sure you don't get pressured by the sales rep. Some tactics that they can do include stripping contents out of the box so that everything is "extra" or pushing accessories that you may not need. Or they are having a "sale" *only* today! A camera should come with at least ONE storage disk, a strap, and at least one set of batteries. In addition, some stores sell "gray" market which may not be guaranteed in this country. Many retailers such as Wal\*Mart, Circuit City, or the D-Store sell digital cameras now.

### **Section 8 - The Internet**

Many of purchase a computer for this one specific reason now. It allows us, via email to stay in contact with loved ones via email, manage our stock portfolios, plan vacations, and provide research and general entertainment. Practically all computers come with a 56k modem (the fastest now available).



#### *Choosing your ISP:*

AOL - the grand daddy - costs about \$25 a month, but there are some plans with limited access for as low as \$5.

SNET, which offers unlimited for about \$17.95 a month (rates may be contingent if they're your long distance carrier) 800-408-8282. Limited hours can be purchased for about \$7/month

AT&T (800 WORLDNET ext. 174)

Javanet, 800-528-2638

Mindspring 800 719-4332

DiscoverNet 1-888-netnow1

#### **Free Dial-up service**

You get what you pay for. However, for the casual user, this is an ideal way to save \$20/month. It is recommended that you have at least two of these dial-ups as they often have busy signals or go down for no reason. Also, you get advertising banners, which may or may not be annoying to you. (I've learned to tune them out). Often, the user gets busy signals and has to constantly redial to get a connection. Websites to obtain free services include

www.netzero.com (they also have an unlimited use plan for about \$10/month)

#### **Other types of Internet connections**

In addition to connecting to the Internet through telephone lines, there are two other methods, which are considerably faster (however, they also have their "downtimes"):

- Cable access – if you have cable television service available, chances are you can get this service. Since The Wiz sells went out of business, they need to be purchased at the Cablevision office on Cross Street in Norwalk. Sometimes there are special offers without fees or contracts. Fees can be from \$30-\$50 per month depending on type of cable service. Computer requires an Ethernet card for hook-up.
- DSL (Digital Service Lines) – this tacks onto your phone line but you can still use your phone. Service can range from \$40 and up. You must be within 3 miles of a telephone line transmitter for this to work. There are different providers out there. This requires a special modem for the computer.

### ***Free Internet Service with computers***

- Many stores/manufacturers offer limited "free" Internet service with the purchase. It can range from 3-12 months. Prices can be quite competitive on these units. This is for **new** customers. They do this to suck you into becoming a long-term client paying over \$25/month after the introductory service is over with. (There is no free lunch out there!)

### **Section 9 - Software**

What do you wish to do with the computer?

- ? Write text, proposals, resumes (Word or WordPerfect)
- ? Do desktop publishing (newsletters, brochures, menus) (Word, Adobe PageMaker)\*
- ? Number crunching (Excel or Lotus 1-2-3)
- ? Design web sites (FrontPage, DreamWeaver, Adobe Go Live)\*
- ? Do graphic design (Adobe has the best products, PhotoShop, Illustrator, Quark)\*

*\*NOTE: if you have one or more of these selected, you will need more memory and RAM in the machine to run these programs effectively.*

*Integrated Packages:* "bundled" sets of software in a "suite" wherein the applications all work together: Microsoft Office and Corel Office – these packages include word processors, spread sheet, database, and presentation software. If you are planning to use this information professionally, **do not buy Microsoft Works!!** Works is perfectly fine for the casual home user...there are methods to save files so that you can exchange files with others, but you won't be able to open their files. It is substantially less than Office...you can get version 6.0 (they are now up to 6.0) for \$14.95. It includes a basic word processor, a spreadsheet program, and a database program. It utilized templates which can make it easier (or more tedious), depending on your skill level.

Corel's product line is very good and considerably cheaper than Microsoft. If you know the MS series, you can easily adapt to Corel. The downside is that a lot of people do not use this product. IBM also has their version with spreadsheets, word processing, and database management at a very competitive price.

Although there are many software packages out there, the more popular programs have training, customer support, networking available. In addition, it increases your employability as well as making it easier to exchange and share files with co-workers, clients, or friends.

Some computers come "bundled" (that is, the price is included) with software. This can make the deal more attractive. Downside: no books are included, but can be purchased at a bookstore from \$10-\$40, Microsoft publishes its own books. Other good books include the "Dummies" series. IBM often bundles their office suite with their PCs, and Corel Office is bundled with some manufacturers.

## Section 10 - Printers

**Laser** the highest quality available; prices can range from \$250 to well over \$1,000. They are the fastest and most efficient ways of producing paper. On a yield basis, they are the most cost efficient. Toner can be expensive; it comes in “recyclable” cartridges that can cost up to \$100 each. Yield is very high, bringing the cost down to .01 - .03 per page.

### **Inkjet/ Bubblejet**

These are common for color printers, which can be as low as \$100 each. A good one can be purchased for \$200. If you're printing color, a glossy or coated paper stock (costing up to \$.25 per page) is needed to get good results. The higher the DPI (dots per inch), the more the cost but the better the resolution. **Note: archival quality is much lower. If documents get wet, they smear and all printing is lost (this doesn't occur with laser jet printers!)**



Photo quality images from printers can be expensive. Don't think it's cheaper than going to the drugstore, it can cost up to \$1.00 per page. So think twice if you think you can avoid saving on film processing. The costs (initial and continuing) can be very high. However, the convenience is wonderful. If the needs are infrequent, go to Kinko's

If you don't use color often, cartridges may dry out and need replacement before being used up.

**Dot Matrix** these are used in libraries or on special forms, this printer is almost obsolete. Can probably be found at a tag sale for a couple of bucks. It's good for the very casual and infrequent computer user. However, they can be useful for "continuous" forms that are tractor-fed. They use an inked ribbon, which has a long life expectancy. Speed is considerably slower than the above.

When purchasing, make sure you consider the following:

*Speed* (ppm – pages per minute, the higher the speed, the higher the cost)

*Maintenance* – these machines need to be cleaned on occasion or make smeared or unacceptable copies

*Yield from supplies* – sometimes the toner can cost up to \$1.00 per page for an intensely colored document. If color is needed, fine. Otherwise, print in black and white

### **Brands to consider:**

Hewlett-Packard (HP) – wonderful and dependable line of lasers, they also make color

Epson – known for their reasonably priced color

Okidata

*Personal recommendation: stick with the name brands for printers. Many times “no-name” brands are offered with a computer system purchase – they're “obsolete” printers and sometimes do not come with ink, making their usage more expensive than buying a better manufacturer. Make sure you get at least a one-year warranty. On-site service may be available for an additional cost.*

## **Section 10 – Warranties/Service**

### *What they cover*

This means the hard drive, the floppy drive, and the components inside. Most new purchases are for one year, some of them are now for six months. Make sure you ask. Make sure you get something in writing.

### *What they don't cover*

The software, these are the programs such as Word, the Internet, etc. It does not cover your Internet connection or dial up service. If you have a problem with your connection, you have to call your provider. Remember, when you have a problem with the dial-up, the help desk is mostly concerned about getting you back on line and will sometimes have you do things that can alter the Windows system. I have had a cable connection for over two years. I lost my connection once and when I was on the phone with them (for over 30 minutes), they had me doing things that affected how the computer turned on. I had to figure out how to fix this on my own.

### *Costs*

They cost about \$100 a year. Extended ones can be purchased for an additional fee. It is strongly recommended that you get one as the probability of something going wrong is likely. I've had my hard drive go bad twice, luckily I didn't have to pay for their replacements as an out-of-pocket expense.

### *On-site versus off-site*

It sounds like exactly what the statement is. The on-site does cost more but they will come to your home or office and fix the problem. If they cannot fix it on site, they may bring it in and have it fixed. I've had my computer out for up to a week while being repaired. If you depend on a computer for your work, either have a backup computer such as a laptop or request a "loaner" (which probably won't have the software or Internet connection you need). On-site costs more.

### *Tech Support*

Some places offer toll free telephone support. You may have to wait a very long time to get through to a human (unless you call at 3:00 a.m.). Some of them have a long distance number. Although the phone cost may be higher, you often get through in moments instead of hours and the people are better trained. Hewlett Packard has discontinued their toll free number but I've gotten through very quickly to them. If you have an all distance cell phone program, this won't affect you (but make sure the battery is charged as the call could take a long time). Tech support is often offered during the warranty period; you may be able to continue it with the extended warranty. This is a very useful feature as we all tend to have problems and need a kind voice at the help desk!



### *Customer Satisfaction with Service*

Sad to say, but customer satisfaction plunged in 2002. Companies that had high ratings until the recession hit us pretty bad were Dell and Gateway – customer satisfaction is now only poor. PC World had an article in late 2002 about this and it sounded dreadful. The only two companies to get a rating of “good” were IBM and Apple! One area where customers had either very high (or very poor) ratings was with local dealers who service. It depends on who the local dealer was.

## **Section 11 - Miscellaneous (yet helpful information)**

### ***Rebates (in general)***

You can save a lot of money with rebates. Some caveats about them:

- Ask for the rebate form before purchasing the item. Often the stores do not have stock on them.
- Make sure you read the fine print carefully, submitting all necessary enclosures
- Keep copies of everything sent in, both sides.
- If it is for a high-end refund (over \$20), send it registered mail.
- Be patient; however call or email if you don't get it within three months.
- When you don't get the rebate (which happens too often).
  - If the fulfillment house says you made a mistake, chances are they misplaced information that they received. Keep your copies handy and in a special file or envelope named "rebates"
  - Do not take no for an answer! Speak to supervisors; write down dates/times you spoke to them.
  - Contact the manufacturer, write letters. Tell them you will contact the state attorney general's office or the post office for mail fraud as they are not holding up their end of the deal.

### **“Home Office” set-up**

---

It is important your home office be comfortable. This means having a desk, chair, and proper lighting. Place furniture and equipment efficiently and ergonomically so you don't get a sore back or eyestrain. Don't cheap out in this area, a home office is not something just placed on the dining room table. Some of the "older" office furniture from 20+ years ago may be suitable. However, they may not be at the right height for keyboards and monitors. You should have the following:

1. A comfortable chair (one that swivels and has height adjustment is best)
2. A desk or workstation for the computer. It should be able to fit the monitor in comfortably as well have sufficient space above and beneath for the tower, printer, other equipment such as scanners, additional disk drives, supplies, regular desk equipment such as a phone, stapler, etc.
3. Have adequate lighting - also make sure it isn't by the window where you won't get glare on the monitor.
4. Be in a large enough space to work comfortably. (converted closets don't cut it!)

Furniture can either be purchased new at stores such as Staples (requires set up) or from used office furniture stores (check the yellow pages), or check the classifieds in the local newspaper.

## **Section 12 - Methods of Buying a Computer**

### **Mail order/Internet**

#### **Dell Computer**

[www.dell.com](http://www.dell.com)

PO Box 224588 Dallas, TX 75222-4588 1-888-491-3355

*People I know have had excellent success with them, if there's a problem, they pay return ship charges and FedEx overnight to the customer the replacements.*

#### **Gateway**

[www.gateway.com](http://www.gateway.com) )

(They also have a store in Norwalk just east of Stew Leonard's - note, they do not stock computers, you can look at them in the store and they will ship to your home, there are shipping charges involved.

#### **CompaqWorks – refurbished computers**

[www.compaqworks.com](http://www.compaqworks.com) 1-888-202-4352

#### **Microsystems Warehouse**

1720 Oak St., PO Box 3014, Lakewood, NJ 08701-3014

[www.warehouse.com](http://www.warehouse.com) 888-438-1794

#### **Global Computer Supplies**

11 Harbor Park Drive, Dept. TG, Port Washington, NY 11050

<http://www.globalcomputer.com> 1-800-845-6225

#### **OfficeMax**

[www.officemax.com](http://www.officemax.com)

800 788-8080 (mail order or retail)

## **J & R Computer World**

[www.jandr.com](http://www.jandr.com) 800 221-2180

In New York City, service is prompt. Sometimes you can negotiate a better price off the catalog. I've always gotten my shipments "standard UPS" and have them delivered within one or two business days.

## **Retail**

**CompUSA** – Post Road, Norwalk 852-7005 (good luck getting a human to answer the phone)

**Sears** – White Plains or Danbury

**Radio Shack** – all over. They sell Compaq. When serviced, they send it back for repair and you can pick it up in a few days. There are some local stores that do honor the Compaq warranty.

**StrataTech**, Wall St., Norwalk, CT 299-0222 [www.stratatech.com](http://www.stratatech.com)

Fior Lostumbo (Alan Weaver knows him), Al Bocanfuso

They sell and service private brand computers. They are Compaq, Gateway, IBM, and HP authorized service agents. Note: teacher has had one of theirs for over three years without any problems, no I don't get a commission for a referral.

**Computer SuperCenter of Greenwich** 103 Mason St. Greenwich, CT 661-3700

**Computerland** - 1700 Post Rd., Fairfield 256-8480 - small store, services (Compaq authorized)

**Southport Computer** – 376 Pequot Avenue, Southport, CT 06490 (203) 254-3526 - they mostly provide service and sell parts – they can do upgrades on your system. Author has never used them, but they are a local service that may be of help.

## **Useful Publications (subscription prices are approximate)**

---

*PC Magazine* \$34.97 for one year (22 issues) PO Box 51524, Boulder, CO 80323-1524

<http://www.pcmag.com>

For the more technically oriented, there is good information on their website.

An additional source about computers is in the Thursday New York Times, Circuits Section. They have a lot of information about technology as well as advertisements.

## **Section 13 - Jargon words used in computer ads**

### **80/100 Base-T Ethernet**

Important jargon, it means there is a built-in connector to allow this computer to connect to another computer in a network or to a high-speed Internet connection like Cablevision or SNET DSL.

### **AMD**

Competitive computer chip maker. Completely compatible with Intel chips. Usually cheaper than Intel.

### **AOL**

The “granddaddy” of Internet service providers. Their disks are ubiquitous – can be found almost anywhere. They give you the first 45 days free and then charge over \$25 month thereafter. Sometimes you can get a few months free with a purchase of a computer. However, you must be a “new” user to get this deal.

### **Athlon**

AMD’s name of their newest line of chips. Marketing jazz like Celeron.

### **CD-ROM**

A CD drive is standard and essential on any new computer sold today. Some will be called CD-RW meaning that the device can both read and write CDs; some will also be called CD-DVD meaning they can read both CDs and DVDs. There are drives available that can read and write CD as well as read DVDs.

### **Celeron**

An Intel chip made to compete with AMD. Less expensive than the Pentium line and a bit slower.

### **Compuserve**

A struggling second tier Internet Service Provider now owned by AOL. Requires a dial connection to the Internet. A credit card is required for billing after the first year is up and canceling can be quite difficult to accomplish. See **Free**.

### **DDR**

Double Data Rate as in DDR SDRAM.

### **DSL**

Digital Subscriber Line. A high-speed, or broadband, connection to the Internet. Offered by SNET. There are technical limitations that may limit the availability of DSL in some towns and locales. You need to be within 3 miles of a telephone transmission line for this to work. This does not tie up the telephone so calls can still be made while on-line.

### **Free**

Anything bundled in with a computer is usually worth just what you paid for it. Remember, there is no such thing as a free lunch.

**GHz**

An abbreviation for GigaHertz, a measure of the speed of the computer chip; usually used when the chip is an Intel chip. Fuggedaboutit – the slowest, least expensive chip available today is often fast enough.

**Gigabytes**

Usually shown with a number in front, such as a 20GB hard drive. A measure of the size of the hard disk drive where programs and information are stored permanently. The smallest computers sold today are big enough for the person just starting out.

**Intel**

Manufacturer of the original computer chip that powers most PCs. Used in Windows machines; not in Macintosh computers.

**MSN**

Microsoft Network. An Internet Service Provider and a popular Internet portal or home page. Requires a dial connection and can be difficult to cancel when the free period is up. Often is included as a one year freebie when a new computer is purchased. See **Free**.

**RAM**

Random Access Memory is the temporary memory used when programs are running on your computer. It has nothing at all to do with how much information you can store on your computer. 128MB is the minimum amount you should consider on any new computer. You will not likely find less being sold today. 256 MB enables your computer to run a bit faster.

**Pentium**

Intel's name for its latest series of computer processor chips. The current model is now the Pentium 4; you may see Pentium III (or II) on some older computers.

**SDRAM**

Synchronous Dynamic Random Access Memory – a new fast, type of temporary memory used in new computers. Slightly faster than DRAM. Not important to the new user.

**SXGA**

A measure of screen resolution. The more dots that can be displayed on the screen, the clearer the image. Most of us can be quite happy with XBA and SXGA can be an unnecessary expense.

Here are the usual screen resolutions, in dots across the screen-by-dots from top to bottom.

XGA = 1024 x 768

SXGA = 1400 x 1050

UXGA = 1600 x 1200

## Section 14 - Product Reviews

A great source to get information is on the web – go to the PC Magazine website: [www.pcmag.com](http://www.pcmag.com)  
They have many reviews online.

Below is a link to a site which lists product reviews from **users** about their desktop units:

<http://common.ziffdavisinternet.com/download/0/1581/desktops.pdf>

Units with the overall highest score included Dale, Gateway, and those built and sold by local dealers. Acer, Emachines, Compaq, Hewlett Packard, and IBM received the lowest grades. In the middle were Micron and Sony.

Summary of their value priced desktop units

Name	Price	Phone	Website
<b>Four Star Rating</b>			
ABS Bravado 2230 - <i>Rated as best of 2002</i>	\$1,000	877-202-3878	<a href="http://www.abspc.com">www.abspc.com</a>
Micro Express MicroFlex 20A	\$949	800-989-9900	<a href="http://www.microexpress.net">www.microexpress.net</a>
Polywell Poly 833VA-2000	\$1,000	800-999-1278	<a href="http://www.polywell.net">www.polywell.net</a>
<b>Three Star Rating</b>			
Dell Dimension 4550	\$1,000	800-388-8542	<a href="http://www.dell.com">www.dell.com</a>
Systemax Venture MU20R	\$999	800-326-3917	<a href="http://www.systemaxpc.com">www.systemaxpc.com</a>

### *Value PCs By Jennifer M. DeFeo (PC Magazine, 12/3/2)*

If you're a bargain hunter, look no further. Though not as flashy as their high-end brethren, many of the PCs in our value category offer great power and features at low prices. And remember, systems with configurations similar to these were considered high-end not so long ago.

So what, exactly, can \$1,000 buy you? That depends on what's important to you. But before you decide what you can and can't live without, consider a few key points.

First, never skimp on the screen. Most of our systems came with 17-inch CRTs, which is just fine; we also saw a 15-inch LCD—just as good—and a 19-inch CRT—outstanding. And it's not all size; resolution (up to 1,600-by-1,200) is just as important. Also, make sure you have all the connectivity you need—especially with today's abundance of gadgets. Your system should have a minimum of six ports, preferably four to six USB 2.0 and one or two FireWire. (USB 2.0 ports are backward-compatible with USB 1.1 devices.) If you want to burn CDs, don't buy a system that has only a DVD-ROM drive; more than half the systems in our roundup have both DVD-ROM and CD-RW drives

Last but obviously not least, consider performance. Make sure you choose a PC that can handle everyday tasks such as word processing, spreadsheet building, and Web browsing with great ease. For \$1,000, you have plenty of PCs to choose from that can handle this, with Intel Celeron or entry-level Pentium 4 or AMD Athlon XP processors. But if you do any gaming or digital editing, or you just need more horsepower, choose a faster Pentium 4 or Athlon XP and pair it with a solid graphics processor like the nVidia GeForce4 Ti 4200.

Never underestimate the power of software. It costs money to preinstall, and many vendors skate around it to meet value price points. At least make sure your system comes with Microsoft Works 2002, which includes the full version of Microsoft Word, and the user-friendly digital photo-editing software Microsoft PictureIt! Otherwise, today's ultracheap machine may wind up costing you a pretty penny if you have to buy these programs yourself.

Make sure you shop around the value PC market, because there's quite a range in quality. Some of these systems give you an amazing bang for your buck, while others just fizzle.

### **Additional Reviews (from 2/03 PC World)**

**(you may wish to check newer issues at your local library)**

#### **Their top five PCs under \$900**

	<b>Rating</b>	<b>Price</b>
ABS Sensation 1300	82	\$899
Compaq EVO D310 Microtower	75	874
Freeway/Tech Innovation A7000	74	769
Gateway 300x	74	859
Dell Dimension 2350	73	879

#### **Their top five inexpensive laptops**

	<b>Rating</b>	<b>Price</b>
Dell Inspiron	82	\$1,647
Gateway 450X	81	1,599
IBM ThinkPad R32	80	1,699
Toshiba Satellite 1905-5301	80	1,799
Micro Express NP1020A	78	1,499

#### **Top Printers - Laser**

Minolta QMS PagePro 1250W	91	\$199
Brother HO-1850	75	499
Lexmark E320	72	299
Minolta-QMS PagePro 1250E	71	299
HP Laserjet 1200	70	399

#### **Digital Cameras**

Olympus C-4000 Zoom	82	\$475
Fujifilm FinePix 3800 Zoom	81	380
Nikon Coolpix 3500	80	335
Olympus D-550 Zoom	79	299
HP Photosmart 720	78	299

## **Section 15 - A Shopper's Checklist**

What type of computer do I want:

- \_\_\_\_\_ A used one would be fine, all I need is basic elements in the machine like a word processor, spreadsheet, and Internet access
- \_\_\_\_\_ I want an office-quality one that will take me to the next millenium. Graphics needs aren't a major consideration, but I do want to be able to see images fairly quickly on the Internet
- \_\_\_\_\_ I plan to do a lot of graphics work. This means I need a good-sized monitor with a good resolution. I also need a state-of-the-art processor and a lot of memory as I'll be creating a lot of documents requiring maximum power and speed.
- \_\_\_\_\_ I want something for the whole family, a little bit of the above would be fine, but I have to watch the budget

### **Monitor**

- \_\_\_\_\_ 14 or 15" is fine
- \_\_\_\_\_ 17" is ideal (yes, I have enough space for it) These are the easiest to view.
- \_\_\_\_\_ 19" is my desire
- \_\_\_\_\_ I want a flat monitor (remember they are measured differently, a 15" flat monitor is the same size screen as a 17" CRT)

### **CPU Memory (the central processing unit)**

- \_\_\_\_\_ 2 -6 gigabyte or less will suffice (little or no graphics needed)
- \_\_\_\_\_ 20+, standard for most new ones now, up to 80 gigs readily available

### **Printer Desired**

- \_\_\_\_\_ Will be printing infrequently, an ink jet or bubble jet will suffice. Some color would be nice  
Cost: (\$100 - \$200)
- \_\_\_\_\_ Want a high end color laser printer, will be printing a lot of color  
(willing to spend up to \$1,000, possibly more)  
(I also realize it will cost more to generate a color print of a "snapshot" than it would at the drugstore)
- \_\_\_\_\_ Laser printer, need a production printer which will churn out lots of printed pages relatively quickly  
Cost: \$200-1,500 and up, depending on the ppm (pages per minute) and quality

### **CD-ROM/Recorder**

- \_\_\_\_\_ Single recording drive is acceptable
- \_\_\_\_\_ Recorder and Reader to make quicker copies of disks
- \_\_\_\_\_ Only need a reader (ROM – read only memory)

### **DVD-ROM/Recorder**

- \_\_\_\_\_ Want the whole 9 yards – want a DVD to watch movies as well as one that records to store data

### **Location in house/office**

- \_\_\_\_\_ Have determined it is ergonomically feasible and have measured the space so I know what will or will not fit in this space
- \_\_\_\_\_ Good office chair
- \_\_\_\_\_ Desk that will fit the system and have space for printer, tower, scanner, other equipment being purchased. Make sure that the space is sufficient!

### **“Goodies”**

- \_\_\_\_\_ Zip drive – want “unlimited” storage
- \_\_\_\_\_ Scanner, I want to scan my photo album, do some design/internet work
- \_\_\_\_\_ Video connection – I’m already hi-tech and want to put streaming video on my website
- \_\_\_\_\_ Cable or DSL access for the Internet – want really fast downloads! Cable requires an Ethernet card in the computer.
- \_\_\_\_\_ Electronic camera - although not part of a PC system, is good if you plan to do a lot of digital photography or wish to share with others via email or website.

### **Services required**

- \_\_\_\_\_ Having the computer loaded with software, etc. I can figure out how to set it up
- \_\_\_\_\_ Having someone come to the house and completely install it
- \_\_\_\_\_ I can do it all by myself and don’t need any help
- \_\_\_\_\_ Extended warranty, that would be a good idea to have as I might mess up (I did not check the above box and need some "insurance")  
*Note: warranties apply to the computer and not the software!*
- \_\_\_\_\_ Some training, need a few computer classes, maybe a technical class.
- \_\_\_\_\_ Just a few reference books or magazines will suffice, I’m a fast learner
- \_\_\_\_\_ Help! I’m totally confused now. I need someone to help me buy the computer!
- \_\_\_\_\_ I changed my mind. I don’t need a computer. I’ll hire someone to do all my dirty work. I’ll get out the quill pen and abacus.