

To Build or Not to Build a PC

CHECK LIST:

Must Hav's:

(To get definitions of computer components, go to

http://whatis.techtarget.com/definitionsCategory/0,289915,sid9_tax1667,00.html .

1. **Tower** (computer case). The more "Watts" the better. Preferably over 350 watts (referring to the "power supply" in the tower. The more cooling fans, the better. "Bells and Whistles" in a tower are fun and pretty (i.e., blue led bulbs and see-thru panels).

2. **Mother Board.**

A. The Faster the motherboard, the better. Preferably over 2.0 ghz (giga hertz).

B. Should have built in sound, **5.1** (6 speakers) or better.

C. Built in **USB**, 2.0. Built in **LAN**, preferably 10/100 mhz (mega hertz) speed.

D. Built in **Modem**, preferably 56 baud plus. Built in **Fire wire**.

E. "SLOT" for expansion devices. Preferably 4 or 5 PCI slots on the motherboard.

Note: If the above devices aren't "built in" you'll need additional PCI cards to plug in to the motherboard. For instance, "no sound" built in. You'll need a "Sound Blaster" PCI card, AWE or AUDIGY, or better. Be sure to look for "built-ins" (saves time and money).

F. Installation: Be sure to install ALL grounding screws thru the board to the tower. Follow ALL installation instructions. Don't forget to plug-in ALL cooling fans and USB cables (if necessary).

3. **Video Card**, AGP or better. Preferably **NVidia** G-force 5200 or better. AGP 4X or better, preferably 8X. PCI card or newer technology. Accelerated Graphics Port (AGP) is an [interface](#) specification that enables [3-D](#) graphics to display quickly on ordinary personal computers. There are newer graphics interfaces.

4. **Internet Connection** needs: Modem, LAN, Fire wire LAN, USB Wi-Fi or LAN. Any of these devices could be "built-in" or "add-ons."

A. **SLOWEST**: Built-in or External modems will need a Telephone Line to connect to an AP (Access Provider). Common "modem" connections are "dial-up. SBC/YAHOO, People-PC, AOL and other \$10-20 services use this type of "high-speed" connection.

B. **Faster: DSL** (digital subscriber line). SBC/YAHOO use this type of modified telephone line for Built-in or External modems.

C. **Faster: CABLE**. You'll need an Internal or External LAN and a Cable Modem to connect to this IP (Internet Provider). Comcast uses this method of connecting. Gee, official policy of Comcast: "we don't support routers." That's not good if you want to expand a home network.

D. **Faster still**: Wi-Fi. I'm not sure which providers support this service. (Frontier, or Verizon Wireless?) Wi-Fi could be the cheapest to operate if you share a connection with a friend or relative.

E. There are **Faster** lines for Business connections and needs (Satellite, T-1, others).

5. Expansion **Memory**. At least 512mb RAM (mega bytes, random access memory). Ask for the highest "bus" speed that fits your budget and motherboard speed.

6. **OS** (Operating System). Older OS's are Windows 3.1, Windows 95, Windows 98. Stay away from these. Preferred OS: **Windows XP** (Home edition is O.K., Professional edition is better). Windows 2000 is equal to Win XP, in my opinion. When building your own system, you may need a Win 98 boot disk to format the hard drive to FAT32, before installing Windows XP. The only draw-back? FAT32 is more limited than the NTSC format that the XP sytem prefers to use. The draw-back to NTSC? It is harder to recover information from this HD in case of a system crash. (System Crash? Eeew, what's that?)

7. **Mass Storage Device:** could be a Floppy Drive, Memory Stick, CD-R/W drive, DVD+/-R drive, or Hard Drive. This list is from the “least desirable” to the “most desirable.” Any of these devices could be “internal” or “external.” In the hard drive be sure to compare “head read/write” speeds (in milli seconds, ms) and buffer size. The USB hard drive is great for backing up research, movies and audio files.

A. Hard Drives: use “high-speed” ribbon cable, to connect them.

B. CD ROM, DVD drives, use the same “high-speed” ribbon cable.

Note: these devices usually come with “high-speed” ribbon cable. The “slower, older” cable has thicker, coarser wires in it. The “high-speed” cable has finer, thinner wires in it. Don’t add a “slow” CD drive to a “fast” hard drive ribbon cable. The motherboard will talk to the devices with the “slowest” speed.

8. **Add-ons:** TV, am/fm Radio, Digital Camera support, Printers, Scanners, USB devices (MIDI, HD, WI-FI, VHS to MPEG or DVD converters, etc.)

Home networking:

Useful LINKS:

http://www.geekgirls.com/windowsxp_home_network.htm Setting up a home network.

http://www.practicallynetworked.com/sharing/xp_ics/networksetupwiz.htm Starting and Using the Network Setup Wizard.

<http://roofrabbit.com/xwinnetwork.html> Networking computers.

<http://www.microsoft.com/technet/prodtechnol/winxppro/Plan/topology.mspx> Home and Small Office Topologies.

<http://www.connectedhomemag.com/Networking/Articles/Index.cfm?ArticleID=40666> November Spotlight on Wireless Technology: How to Set Up a Wireless Network.

http://www.makeitsimple.com/how-to/dyi_crossover.htm How-to: Do it yourself Ethernet Crossover Cable.

CONFIGURING ICS (Internet Connection Sharing)

<http://www.homenethelp.com/ics/ics-install-xp.asp>

<http://www.homenethelp.com/ics/ics-install-clientxp.asp>

<http://www.learnthat.com/courses/computer/windowsxp/ics/>

More to follow, as needed. This page typed from memory. Maybe something else will come back. LOL.