

Bits & Bytes

A Publication of the Kern PC Users Group



Quicken
2001 suite

March Program

Matt M^cCann from Intuit
showing Quicken



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The puzzles are the same, but at the end is a further series of scenes that supposedly link the game closer to Riven. The downside of the new game is some hefty speed requirements on the part of the CPU and graphics card.

Now if I can only remember the old puzzle solutions.

Next month as badge manager I will be removing badges of members that haven't renewed. If you want prizes, send Willy your dollars.

I recently contacted Heather Coldren and enrolled in a New Horizons membership .I will make brief reports to you as I progress. So far I have done a beginning Access course. I did really enjoy it and was able to put some of what I learned to good use. Next up is a course in Photoshop. Eventually I will take a course in Microsoft Publisher(maybe learn how to do a newsletter!).

Ps. The Photoshop course was a blast!

Dave

Continuation of Ken Hopkins article from the Sacramento PC User's Group

Printer Ports

There is normally one parallel printer port on a computer, referred to as LPT1. This is designed to provide a high-speed link to a printer. It uses a 25 pin D-type connector. Be aware that unless the computer includes the printer, the system will not include a cable to connect to the printer. There is an inexpensive parallel cable that is available for inkjet printers and a relatively expensive one used for laser printers. You may end up connecting to the printer via a USB port instead. This port can also be used for connecting devices like scanners, zip drives, and netcams. Some expensive software utilizes a small device (called a dongle) to protect the software from unauthorized use; these connect to this port. There is normally one of these ports built into the motherboard. Additional printer ports normally require an expansion board. Windows supports up to three parallel ports. If you need more parallel ports, you can add more through USB converters.

Serial Ports

There is normally at least one serial port, referred to as COM1. This might

be used for an external modem, to sync your PDA, or to download images from a digital camera. This port uses a 9-pin D-type connector. (There used to be a 25-pin connector version, but I have not seen this connector used in years.) One or two of these ports are usually built into the motherboard. It is becoming common to have a front-mounted serial port for use with digital cameras. Windows supports up to four of these ports. If you need more serial ports, you can add more through USB converters.

USB Ports

USB stands for Universal Serial Bus. Intel created USB in response to user difficulties with adding hardware devices to computers. USB ports started appearing on computers after Windows 95 was released. The support for USB in Windows 95 was spotty at best, but subsequent Windows releases have excellent support. USB devices include scanners, printers, keyboards, mice, cameras, and even PDAs. USB ports are fast, providing a throughput of 12 megabits per second. USB connections use a small flat connector; a symbol that resembles a pitchfork usually identifies it. Most current motherboards will have one or two USB ports on the back of the computer. Many computers will also have an additional

port on the front of the computer. This is useful for devices like cameras, where you only use the device occasionally. There will not be enough USB ports for all of the devices you could end up with. But USB is capable of connecting up to 127 USB devices. You can increase your USB ports through a USB hub, a small box with one cable that connects to an existing port and then a series of ports to connect your devices. You may even have a hub on your monitor or USB keyboard. Be aware that there are powered and unpowered hubs. You may need a powered hub for certain devices. The hub on a keyboard is not powered but one on a monitor probably is. If you plug a device into a hub and it does not work, try connecting directly to the port. If that works, you have an unpowered hub and need a powered one. If you are buying a hub, I recommend buying a powered hub (just in case). I have not experienced this problem but have seen reports of it.

Network

Networks have finally made it to the home computer. Part of that is because people have more than one computer and are linking them together to share files or printers. I think that the biggest reason is because of high-speed con-

nections like DSL and cable. A network allows you to share the high-speed Internet connection. The network connection will be a 10/100 base-T port. This means that the network port can communicate at either 10 MBPS (megabits per seconds) or 100 MBPS depending on the hub being used. There are other network possibilities but I have not seen them offered on new computers, so I will ignore them in this article. I will talk more about networks in a future article.

FireWire

FireWire can be thought of as USB on steroids. It works very similar to USB but it runs at a higher speed. This technology was conceived by Apple Computers (which is probably what slows the implementation). This is useful for talking to a digital video camera. FireWire supports data rates of 100, 200, and 400 Mbps (yes, faster than network speeds). It supports up to 63 devices, with a maximum cable length of 4.5 meters between devices.

Telephone

Virtually every computer system I found in my research includes an internal modem (whether you want it or not). Any modem you get will be V.90-compatible, meaning you will be capable of connecting at 56K. There

will be a pair of telephone jacks for connecting to your household telephone system. The performance of these internal modems will be average but not extraordinary. In many cases, these will be processor-less modems (often referred to as Win Modems because the first of this type of modem was called Win Modem) that use your computer to control the modem functions fairly heavily. This should not be a problem unless you want to run something other than Windows for an operating system. I do not like internal modems (even when they are free). I normally rip out these modems and use an external modem (connected to my serial port).

Expandability

Ideally you should get a computer that has all the gadgets you desire already installed and ready to go from the vendor. That may be possible, but new gadgets are popping up all the time. In some cases, the new gadget may require a drive bay and/or an expansion card slot. For that reason, I recommend that you buy a computer that has at least one empty drive bay and one empty expansion slot. The ISA bus, long the standard expansion slot, has all but disappeared. The winning technology is the PCI slot. You will need to match the card and the slot. An

AGP slot is useful even if the computer has video built into the motherboard. This allows you to add a new video technology in the future.

Monitors

There are three types of CRT (cathode-ray tube) monitors currently available, and each has its advantages for various applications. There are also LCD (liquid crystal display) and liquid plasma monitors available if you have a large budget.

Dot Pitch

The dot pitch of a monitor is the distance between adjacent sets of red, green, and blue dots. The smaller the distance, the sharper the image. A sharper image is easier on the eyes. Do not even consider a monitor that has a dot pitch number larger than .27 for a shadow-mask monitor or larger than .25 for an aperture-grille monitor.

Display Sizes

How big a monitor do you need? That depends on your usage and your budget. Just to confuse you, monitor sizes are measured diagonally (just like TV screens). To make things even tougher on you, the measurement is the tube size, not the viewable size. The image skews near the edges and so that area is not usable. When you compare monitor size, compare the viewable size instead of the tube size.

Higher resolutions let you see more information. Running a display at a resolution higher than the ones I describe will result in eyestrain. You can move down a notch or two if you have vision problems.

Monitors Smaller Than 15 inches

Do not buy one of these, they are just too small. I know they look like a good value but you probably not be happy using it. This size will look best at a resolution of 640 x 480 pixels (picture elements, or dots). I have seen some software that will not run at this low resolution

15-inch Monitor

This size is suitable for word processing or spreadsheet applications. The only advantage of this size is the low cost. This will look best at a resolution of 800 x 600 pixels.

17-inch Monitor

This is a good size for web browsing and other Internet applications. It will also work well for word processing and spreadsheet applications. This will look best at a resolution of 800 x 600 pixels and may be okay at 1024 x 768. The price for this size of monitor is just slightly above the 15-inch monitors.

19-inch Monitor

This is the size for the amateur graphics designer or the hardcore gamer.

This will look best at a resolution of 1024 x 768 pixels. These monitors take a lot of desk space. There are now short-length monitors that eliminate that problem. Be sure to measure your desk space before buying one of these.

21-inch Monitor

This is the size of choice for professional graphics designers and people that need a lot of windows visible at one time. I find that this size is great for programming because I can have lots of debug windows open. This size is normally run at a resolution of 1280 X 1024 or even 1600 X 1200.

Refresh Rates

The refresh rate of a monitor tells you how frequently the screen is redrawn by the electron guns within the CRT. This number is measured in hertz (Hz), or cycles per second. A refresh rate of 70 indicates that the screen is redrawn 70 times per second. If the refresh rate is set too low, you may notice some flicker on the screen. This is especially true when working under fluorescent lights (which operate at 60 Hz). You should increase the refresh rate until you find one that does not flicker. The possible refresh rate may vary based upon the resolution, with higher refresh rates available at lower resolutions. You should be able to find a comfortable range between 67Hz

and 85Hz. Do not try to refresh at a rate higher than the monitor manufacturer specifies. You could damage the monitor with a bad setting. Fortunately, the expensive monitors include circuitry to protect them.

Flat or Curved?

Most monitors have a curved front to them but some of the more expensive have a flat screen. Why would you pay more for the flat screen? The flat screen will have much less glare. A flat screen will have more usable screen space than the same size curved screen. There will be less image distortion on a flat screen. When you first look at a flat screen, the image will look funny, as though the screen is bowed out. You will get used to it quickly.

Dot-Trio Shadow-Mask CRT

The most common type of monitor tube uses a thin sheet of perforated metal in front of the CRT to create discrete phosphor dots. Look for a dot pitch—the shortest distance between phosphor dots of the same color—of 0.27 mm or less. This CRT style is well suited for text.

Aperture-Grille CRT

Sony invented aperture-grille CRTs, sold by Sony as Trinitron and by Mitsubishi as DiamondTron. Aperture-grille uses an array of stretched wires

(instead of the hole filled metal plate) to create images using phosphor lines. Look for a stripe pitch of 0.25 mm or less. Aperture-grille designs boast improved brightness and contrast over shadow-mask tubes, without a loss of focus. This style CRT is best for image editing and is not as sharp for text work.

Slot-Mask CRT

NEC invented this combination of shadow-mask and aperture-grille designs called ChromaClear. It uses a 0.25-mm mask with elliptically shaped phosphors. They claim that it provides good images for both text and graphics.

LCD Panel

It is a pity that LCD panels are so expensive because everyone should be using them. LCD panels consist of a thin panel of liquid crystal shutters that open and close to let the appropriate color of light through them. There is no cathode ray gun firing at you, so they do not emit much in the way of radiation. As a bonus, they take up very little desk space. They provide a rock-solid display that is easy on the eyes. This style is suitable for text work and general graphics but may not have enough color depth for photo work. This display technology is not quite as fast as CRT technology and so

may not be suitable for some games. There are two styles of LCD monitors, digital and analog. The digital model requires a special video card that outputs the appropriate digital signal. A normal video card creates a digital signal and converts that signal to an analog one that is sent to the monitor. An analog LCD converts this analog back into the digital signal required to drive the screen. The digital-only version will provide a sharper screen since it avoids an unnecessary translation.

LCD monitors are available in various sizes with each larger size being significantly expensive. The reason is that the display is really a large integrated circuit. There is a lot of surface area where problems can occur during manufacturing. If more than a couple of dots are bad, they have to scrap the display. We end up paying for the cost of the scrapped displays. If you can afford the price, buy a digital LCD panel; you will love it.

Liquid Plasma

Liquid plasma screens are large and expensive, but beautiful. I do not know anyone who has one on his or her desktop. They are normally used for conference rooms or tradeshow booths.

Bottom Line on Monitors

This is an important component of

your system. You spend a lot of time staring at it and it will have a lot to do with your satisfaction with your system. You should sit in front of the potential monitor and use the computer for a while to determine if you really like it. It is possible to spend more on the monitor than the computer. If that is what it takes to be comfortable, do it. I use an expensive 21-inch ViewSonic that is very comfortable to work with. I have used cheap monitors (that normally came with the computer they were hooked to) and could not wait to get away from them. Do not be afraid to buy a system that does not include a monitor so that you get a good monitor separately. If you bought a good monitor last time and want to use it on your new computer, that is okay too, unless it is wearing out. Compare the quality of your old monitor with the latest models and be sure your monitor is still worth using.

Recommendation

The tough part about recommending a system is that no two companies offer the same options. In addition, the recommendation system would be different, based upon the intended application. This recommendation is for typical home use (word processing, spreadsheets, Quicken, e-mail, and Web browsing). It will work fine for

most games but it will not be the fastest on the block. It will work fine for Webcams but it is not necessarily a good video editing system. It could serve as a workstation but would not make a good server.

500 MHz to 1 GHz processor (Intel or AMD)

10 GB Ultra DMA hard drive

64 MB SDRAM memory

CD-RW drive

1 floppy drive

10/100 Base-T network card

1 USB port,

1 serial port,

1 printer port

V.90 K56/flex modem

AGP graphics card

Keyboard

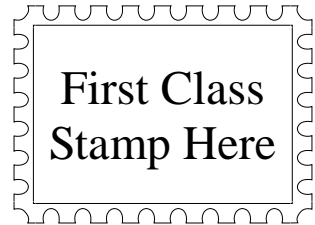
Mouse

Sound card and speakers

17-inch Monitor

The Last part of this article will appear in the April Issue. It involves pricing. At that time I will ask around to add current pricing. This article is a few months old and prices change FAST!

Ed.



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Meetings are held on the second Thursday of the month
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