



Any questions?

If you have a PC problem or think you could help out other readers, contact Frank Leonhardt. New this month is Frank's Bargain Basement for computer equipment where he sorts the men from the toys.

Q I own a Compaq Prolinea Net 1/25S which has two ISA expansion slots and no spare drive bays. Expansion slots contain modem and sound cards. I need to be able to add a CD-ROM; speed is not too important. Can I use the parallel port to connect an external CD-ROM and still use my printer on this port? I have been given conflicting views on this subject.

Rob Baker

It is possible to connect an external CD-ROM drive to a parallel printer port and it sounds like a good solution to your problem.

Almost every gadget you plug into a parallel port claims to work with your printer at the same time, but success isn't guaranteed. In particular, parallel port devices and especially software protection "dongles" make use of some of the optional lines on the Centronics interface standard. This is fine as long as your printer doesn't need them.

Parallel port drives often work with your printer by having an output port on the back which appears to the printer to be the same as the port on the computer. The computer can talk to the drive through the printer port using a code on the interface to tell the drive that the data is for its attention.

If the drive doesn't recognise the code it will assume that it is data for the printer and pass it on via its output port. This process is called daisy chaining as it allows (in theory) any number of devices to be connected nose to tail, as long as they each have different recognition codes.

If you find you can't get away with daisy chaining in this way, you can always buy a selector switch. This is a simple box with an input port, two or more output ports and a knob. You plug the computer into the input port and all your parallel devices into the outputs. The knob is used to select which output is currently active and takes the form of a mechanical switch — no chance of incompatibility here! You could, of course, simply swap leads but this tends to result in

annoyance and connector damage after a while.

Unfortunately, using these arrangements, you will have to re-boot the machine to get the CD-ROM drive working if it wasn't selected to begin with.

Another solution would be to connect the printer to a serial port. If your printer doesn't have a serial interface you can buy an adaptor. Serial printer connections are, however, generally slower than parallel ones — whether this has any impact depends on the speed of the printer mechanism and the type of printing you do.

You could consider changing your sound board for one with a CD-ROM, or preferably SCSI, interface. A card like the Creative Labs SoundBlaster-16 SCSI could be just what you need if you're cramped for expansion. It can control up to seven external devices of varying types including CD-ROMs, CD-writers, scanners and fast hard disks. SCSI peripherals tend to cost a little more but they are very flexible.

CD-ROM drive swap

My hard disk is drive C: and my CD-ROM drive is D:. I want to fit a second hard disk as drive D:. How can I change the CD-ROM drive to E:? I have DOS 6.0 and Windows 3.1.

J Dawson, Prestwick

This isn't actually a problem. The CD-ROM system (MSCDEX) assigns the CD-ROM letters to the drives it finds, starting with the next one available. By the time MSCDEX is loaded in your AUTOEXEC.BAT file, the system BIOS will already have allocated the letters to the hard drive partitions it has found — in your case C: and D:. The next drive will

always be E:.

However, if you wanted to keep your CD-ROM at D: and make your second hard drive E: you would be asking a much tougher question. You can use the /L parameter in MSCDEX, and to force it you use a particular drive letter rather than the default, but you can't force it to displace a letter which is already in use.

Changing the subject slightly, it's a good idea to tell MSCDEX to start allocating drive letters, leaving a gap after your last hard disk. This means that if you ever add or remove hard disks your CD-ROM drive will keep the same letter, which should prevent the software which uses it from becoming confused.

System update

As we move into a new era with Windows 95 I read the inevitable in PCW: new software really needs a bigger machine than ever before. The packages that make up suites like Microsoft Office now take up vast amounts of space but if you need compatibility with business systems you need to keep up.

Back in 1991 I bought a Tandon 386SX 20MHz PC with 4Mb of RAM and a 40Mb hard disk. I've since added another 110Mb drive with disk compression and 6Mb of RAM. The result is okay but not exactly fast.

I'm considering swapping the two disks for a single 500Mb drive without compression as a way of improving performance. Is this the most cost-effective improvement I could make?

I could also take the RAM up to 16Mb but is this all going to be a waste of time? It certainly saves a lot of money compared to changing the entire machine at a cost of £2,000.

Philip Sarell, London



Frank's Bargain Basement

I'm frequently asked for my opinion, by various trusting souls, on some item or other seen in a catalogue or advertisement. Sometimes these items are bargains, often they are a nice idea with a disappointing implementation, and occasionally they are complete rubbish.

Each month, I hope to feature one of these items: something to avoid, something fun, something to solve a common problem, or something offering exceptional value such as the Panasonic 562B CD-ROM drive.

This unit, also known as the Creative 563, has been around since 1993. Okay, you guessed it; this means it's only double-speed rather than quad. True, but it's still got a lot going for it.

For a start it has a Panasonic interface of the type commonly found on SoundBlaster boards, including the original SoundBlaster Pro, 16, 16-Pro, AWE and loads of compatibles. This makes the interfaces cheap and plentiful.

"Ah," you may say, "most CD-ROM drives are IDE interfaced now and I've got an IDE on my machine." This may well be the case but unless it's a new machine with E-IDE, getting an IDE CD-ROM connected tends to involve incompatibilities, aggravation and cash. The SoundBlaster/562 combination was designed to work with machines built in the early 1990s, so it does work. It has also been around for a long time in large numbers — everything from OS/2 to Windows 95 knows about it. Will everything recognise this month's state-of-the-art combination?

So what about double-speed against quad-speed? Actually, most of the time spent accessing a CD-ROM is in finding the right place on the disk. The doublevs quad-speed refers only to the transfer rate once the information has been found. With many applications you will hardly notice the difference and double-speed is the MPC2 standard for video.

The last few 562/3 drives are being sold off at around £50 now. You could pay £100 for a cheap IDE, but I think a tried and trusted, compatible double-speed at this price is a bargain.

● I intend to make Frank's Bargain Basement a regular feature of this column. This will deal with items (average price of around £75) of the type which readers often ask me about. For example: expansion cards (all types), driver software, end-of-line bargains and useful tools and gadgets. Next month I hope to cover the fun and games in the low-cost modem market and/or supply problems with 15in monitors.



The old Panasonic 562 drive is well matched to older PCs

upgrade. I have seen the triple bus motherboard but I am not sure whether they will continue to be popular.

Phil Garner, Harpenden

You can easily end up spending silly money on fancy graphics boards with greased-whippet acceleration modes. In my experience it just isn't worth it for most applications. Nevertheless, a graphics board with something extra in the speed department can make a cost-effective difference to overall performance.

The big problem with high-end graphics boards is the software drivers: it may well come with a driver disk for your current needs, but what about Windows 96? Even if the drivers are there, a disproportionate number of mysterious Windows crashes can be eliminated by using the standard Microsoft VGA driver instead of the accelerated item supplied.

Personally, I'd prefer anything with a good price/performance ratio and industry-wide acceptance over those costing twice as much with a 20 percent speed-up.

My favourite VESA card has a Cirrus Logic 5428/9 chipset and costs around £60. It outperforms rivals costing three times as much and has been around for two years now. This means that most operating systems and games ship with drivers for it, as standard — and they work! The Tseng ET4000 and the S3 chipsets are well supported too, and are good performers.

Apart from the implications of switching from VESA to PCI in the future, there is another good reason for not spending vast sums of cash on a graphics card at present: a new standard is coming — VMC (VESA Media Channel). This is a bus system which allows sound cards, M-PEG decoders, video boards and suchlike to talk to each other without having to route through the processor. Technically it looks good, although it might put Intel's nose out of joint as a better alternative to motherboard-bound PCI.

I hesitate to jump on the bandwagon of old computer systems being updated for the sake of it. After all, if something worked when it installed, why risk changing it for something which might not. This applies to big systems as well as PCs. However, as you say, a need to be compatible with other people's software means you don't always have a choice in the matter.

It's a common misconception that the latest processor with the highest number of MHz as a suffix will be the best performer — a 386 machine with plenty of RAM can easily outperform a Pentium with 4Mb when running RAM-hungry software like OS/2 or Windows 95.

With 10Mb of RAM your system is probably not deficient in this area but a faster hard disk wouldn't hurt at all. You could use the new hard disk in a future replacement machine so the money wouldn't be wasted.

To keep up with the march of progress, if it can be called progress, you'll need to consider a Pentium-75 motherboard with 16Mb of RAM when you change to Windows 95. A P75 may

not be strictly necessary from a speed point of view but the enhanced input-output facilities of a modern motherboard are. Enhanced-IDE (with accompanying BIOS), PCI expansion slots, buffered serial ports and efficient memory cache systems count for a lot.

Personally I'm sticking with my 486SX-25 VESA bus machine with 8Mb of RAM for as long as I can get away with it. In effect this means: as long as I can get away without Windows 95.

Graphics speed-up

While playing a demo from a free cover disk CD I realised that I had to make my PC faster in the graphics department.

I have an Oak 77 1Mb card on my 486DX2/66. Anything runs fine in VGA but if I try SVGA the card is either incompatible or terribly slow. I would like to know whether a new 2Mb card would significantly improve the performance of my PC. If so, could you suggest a good VESA one for less than £140?

The trouble is that if I buy a new VESA video card it will not be compatible with a Pentium PCI motherboard when I

PCW Contacts

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