

Bonus Report #1

**Top 20 Frequently Asked
Questions About Building Your
Own Computer**

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Table Of Contents

Introduction.....	4
FAQ #1: Do I really save money by building my own computer?	4
FAQ #2: Where do I purchase my computer components?	4
FAQ #3: What do I do when my monitor goes blank after I boot up the system?	5
FAQ #4: I don't like to go through the hassle of building my own computer, but I'd still like to choose my own components. What can I do?.....	5
FAQ #5: I smell something burnt and I think it's coming from the motherboard.	5
FAQ #6: My computer boots up but my memory test fails. What do I do?	6
FAQ #7: My computer reboots by itself – I didn't touch the power on/off switch.....	6
FAQ #8: The computer I built is slow and not up to my expectations. What do I do? .	6
FAQ #9: Where do I learn about the latest computer technologies?	7
FAQ #10: What is the difference between AGP and PCI Express?	7
FAQ #11: What is the difference between IDE and SATA?	7
FAQ #12: What are the most critical components I need? I don't want things I don't need in my PC – I want to save cost.	8
FAQ #13: How do I partition my hard drive?.....	8
FAQ #14: What do I configure in the BIOS settings?	9
FAQ #15: Which components are the best?	9
FAQ #16: What RAM is compatible with my motherboard?.....	9
FAQ #17: What is SLI and Crossfire?.....	10
FAQ #18: What is RAID? Do I really need to run a RAID configuration in my computer?.....	10
FAQ #19: How do I monitor the temperature of my CPU, hard disk and video card?.....	10
FAQ #20: Should I get one or two hard disks?.....	11
Conclusion	11

Introduction

I've received a ton of questions from my readers and visitors to my website regarding building your own computer. Many of these questions relate to choosing the best components, the differences between specific technologies and also the cost of one build versus another. In this report, I seek to list out the top 20 frequently asked questions related to building your own computer. Hopefully, this will help answer some of the questions you might have on this topic. Do feel free to drop me a not if you have any questions which are not listed here.

FAQ #1: Do I really save money by building my own computer?

This is a very common question. If you look at the prices of some of the refurbished PCs and budget Dell desktops out there, you might be tempted to think there is no way you could match those prices.

That's true in a way – but remember that refurbished PCs and budget Dell desktops do not use top-of-the-line components. Their purpose is to get a basic and functional computer out to the mass market. Which means that if you want solid 3D gaming performance, for example, you will need upgrade that basic Dell desktop in one way or another.

In short, you will save money by custom building your own PC – specifically because you choose the exact components you want to cater to your needs and find the best prices. If you buy off-the-shelf, and that desktop does not meet your needs, you'll be looking at extra costs in terms of hardware upgrades.

FAQ #2: Where do I purchase my computer components?

For folks living in the US, the place I'd recommend is NewEgg.com. The customer service is excellent and you simply cannot match the prices of some of their components. Another good place is TigerDirect.com – which I've used to some extent. Yet another alternative is to try your local computer electronics mall. My advice is also not to buy from Amazon.com – they're not really known for sales of PC components.

For those who live outside the US, try to find a good local retailer which sells computer parts – it is not economically justifiable to buy the components from the US and have them shipped over to you. In Singapore where I stay, for example, one of the best places to get computer components is this place called Sim Lim Square.

FAQ #3: What do I do when my monitor goes blank after I boot up the system?

If you have built your own computer, there might be a chance that your monitor might give you a blank screen upon boot up. What do you do? Well, there are a couple of things to check.

First, make sure that the connector between the monitor video input port and your video card is secure. The next thing to check is to ensure that the power cable to your monitor is firm and secure. Also, there are times when some water or fluid might get into the monitor and cause blank screens. Allow the fluid or water in the monitor to evaporate first, before switching it on and testing it again.

FAQ #4: I don't like to go through the hassle of building my own computer, but I'd still like to choose my own components. What can I do?

Well, this has happened to me before. Sometimes I just want to select my own computer parts but don't want to go through the hassle of installing every part into the computer case. Well, the solution is to "outsource" the building. If you check at the local computer store, there might be some services they offer to build computers. I know a shop where I just specify the components I want, but the actual building of the system (excluding software installation) can be done by someone in the shop for \$20. I feel this is a good deal if you want to save time on building the PC.

FAQ #5: I smell something burnt and I think it's coming from the motherboard.

This is one of the "worst case scenarios" when building your own computer. The component that is most susceptible to being damaged when building your own computer is the motherboard. And if your motherboard is indeed fried, then you will almost certainly need to get it replaced, since it is so fundamental to the operation of the system.

The best thing you can do to prevent this from happening is to make sure you discharge static electricity from yourself, install components correctly and make sure there are obvious "short-circuit" points (e.g. motherboard metal node in direct connection with the computer case).

FAQ #6: My computer boots up but my memory test fails. What do I do?

If this sort of thing happens, it is very likely that one or more of your RAM modules is faulty. The first thing to do is to check that the RAM modules are inserted and secured properly on the motherboard.

The other thing to check is to ensure that your RAM module insertion follows the requirements of the motherboard. Some motherboards prefer RAM modules to be inserted in a certain order (especially if you're using different sizes of RAM modules, e.g. 512 MB RAM, 1 GB RAM, 2 GB RAM). If you check these and the RAM test still fails, you might have to get replacement RAM modules – check the warranty policy on those RAM units.

FAQ #7: My computer reboots by itself – I didn't touch the power on/off switch.

This kind of thing usually happens when there's a problem with the power supply. If your power supply is not supplying enough power to the various components in your system, you might get the PC rebooting by itself. So make sure you get a good power supply unit to prevent this from happening. These days, to power those powerful Intel processors, fast video cards and other components, you should get a power supply of 500W or more. A 700W to 800W power supply unit is ideal.

FAQ #8: The computer I built is slow and not up to my expectations. What do I do?

Well, if this has happened – it probably means that you have not got the proper components in the system. The culprits are usually the CPU, RAM or graphics card. Consider upgrading one of these three components to a better configuration. Since the components are still new, you might be able to recoup some of your investment back by selling them off in auction sites. However, based on personal experience, as long as you don't choose components that are too far off the mark (in terms of performance) when building your own PC, you should be fine.

FAQ #9: Where do I learn about the latest computer technologies?

I'm confused by the jargon like Intel Dual Core, SATA, PCI Express, etc. – this is natural – when you're first starting out building your own computer, there will be terms that you're not familiar with. My advice to you is to get a good basic reference book that gives you the basic insights into the technologies. A good one is [Building The Perfect PC](#) which you can get from Amazon.com. From there, try to keep up with the technology as it progresses – I like to participate in online forums to learn more about building computers and keep my knowledge up-to-date. Of course, you can also visit [my computer building site](#) which I update on a regular basis.

FAQ #10: What is the difference between AGP and PCI Express?

AGP is an older graphics interconnection technology which connects your graphics card to the motherboard. AGP comes in two flavors – AGP 4x and AGP 8x – 8x obviously being the faster of the two. If your motherboard is an AGP motherboard, you are limited to purchasing AGP video cards. PCI Express is a newer technology and boasts improved speeds over AGP. PCI Express has also got two flavors – the traditional PCI Express and PCI Express x16 – you'd want to go with PCI Express x16 for better performance. The latest and fastest video cards from nVidia and ATI are PCI Express x16 cards.

FAQ #11: What is the difference between IDE and SATA?

IDE is an older interconnection technology that connects hard disk drives or other storage devices to the motherboard. SATA stands for "Serial ATA" and is a much improved interconnection technology compared to IDE. If you're looking for a new hard drive, try to go for a SATA hard drive and equivalently, a SATA enabled motherboard. A pure IDE motherboard will not be able to take SATA hard drives, so do specify that you want a SATA enabled motherboard – these boards are also usually backwards compatible with IDE – meaning they can also accommodate IDE devices.

FAQ #12: What are the most critical components I need? I don't want things I don't need in my PC – I want to save cost.

Fair enough. It helps to know exactly which components you need in your computer to help you save cost. Typically, the components you really need in a computer include:

- The CPU
- The Motherboard
- The RAM
- The Video Card
- The Hard Drive
- The Optical Drive *
- The Computer Case
- The Display Monitor *
- The Sound Card *
- The Keyboard / Mouse*

The items marked with an * are optional in a new computer build. If you have existing versions of components, then these items might not be necessary. In particular, the sound card is not needed if you're using integrated onboard audio (available in almost all motherboards these days). The monitor, optical drive, keyboard and mouse are typically also reusable in new computer builds – so you can save money on those. The components that I would not save money on include the CPU, motherboard, RAM, video card and hard drive.

FAQ #13: How do I partition my hard drive?

Hard drive partitioning is a complex topic. I'll give you a brief overview here. There are two main ways to partition a hard drive – I will call them the easy way and the hard way.

The easy way is to use your Windows XP or Vista install discs. Simply pop these into the DVD drive and follow the onscreen instructions to partition, format and install Windows into your hard disk in one go.

The hard way? The hard way involves using a MS-DOS program like FDISK. What you need to do is create a bootable CD (or floppy disk – but no one uses floppy disk drives these days) and make sure the MS-DOS operating system is on it. Boot up the MS-DOS system from that bootable CD, then run FDISK to partition the hard disk. Then run FORMAT to format the hard disk.

Finally, insert those Windows install discs to install Windows. This method is "hard" simply because you have to go through MS-DOS and then go to Windows – there are just many more steps involved.

Where possible, go with the easy method of using Windows install discs instead.

FAQ #14: What do I configure in the BIOS settings?

Well, my answer to this – if you're building a "stock" computer with no special tweaks or settings, then there's nothing to configure in the BIOS. If you're looking at exotic stuff like overclocking your CPU, booting from a USB device to run Linux, disabling your floppy drive or otherwise playing with RAM parameters – then you need to touch those BIOS settings. But watch out though – fooling around with BIOS settings is dangerous stuff – you must know what you're doing beforehand. You have been warned!

FAQ #15: Which components are the best?

That's a question that could get outdated as soon as I answer it. The thing is, the rate at which computer technology moves is so great, new components and technologies are being manufactured every 3 to 6 months. To keep up with these, the best way is to go to a technical site and read up. My website, <http://www.build-your-own-computers.com> would be a good place to go, because I post updates about computer technologies on a regular basis. Online forums are also a great place to look for updated information. You can also check online hardware vendors like NewEgg.com and TigerDirect.com and see their latest deals and components on offer.

FAQ #16: What RAM is compatible with my motherboard?

This is best answered by your motherboard's manual. The thing is, when you're building your own PC, very often you need to use Taiwanese motherboards like those from ASUS, MSI and Gigabyte. And the documentation in the websites and manuals of these manufacturers can be atrocious (although they are improving).

The next best thing you can do is to go to a popular online forum and check the compatibility of RAM modules with your peers. Also, do take note that some motherboards have a limit in terms of the sizes of RAM used. For example, some motherboards can accommodate 4 sticks of 1 GB RAM but may not be able to take 2 sticks of 2 GB RAM. So always do your research beforehand before shelling out cash.

FAQ #17: What is SLI and Crossfire?

SLI is the term used to describe nVidia's technology for running two video cards together in your system. This is supposed to give great boosts to your 3D graphics performance. nVidia's competitor, ATI – has a similar technology in place called CrossFire.

The key thing I'd like to stress about SLI and CrossFire is this – their performance gains are not linear. This means that two graphics cards DO NOT give you twice the graphics performance. It'll probably be something like 1.5 to 1.8 times the graphics performance of a single card. Also, having two video cards running the latest 3D game in your system will cause tremendous heat build up – which can be dangerous.

Typically, unless you are a super duper hardcore (and rich) gamer, I'd recommend you stay away from SLI and CrossFire.

FAQ #18: What is RAID? Do I really need to run a RAID configuration in my computer?

RAID stands for "Redundant Array of Integrated Disks". It is a technology for combining two or more hard disks to ensure they operate with increased speeds or data reliability. There are many RAID configurations – RAID 0, RAID 1, RAID 5, etc.

In RAID 0, for example, striped disks are used to distribute data across several disks in a way that gives improved speed and full capacity. However, all data on all disks will be lost if any one disk fails. RAID 1, on the other hand, has mirrored disks which act as a real-time backup solution. Two (or more) disks each store exactly the same data, at the same time, and at all times. Data will not be lost as long as one disk survives. Total capacity of the array is simply the capacity of one disk. For more details, [check out this article](#) about RAID technology.

FAQ #19: How do I monitor the temperature of my CPU, hard disk and video card?

This is a very popular question, especially amongst gamers who tend to have very powerful CPUs and video cards. The best tool I've found for monitoring system temperatures is SpeedFan. It's a fantastic tool and very easy to use. Try it out –you'll never want to use another temperature monitoring tool again.

FAQ #20: Should I get one or two hard disks?

Typically, I would recommend that you just get one hard disk for your initial computer builds. This makes things a lot simpler to install and configure. As you get more knowledgeable about building computers, you might want to consider buying two hard disks.

There are a few reasons for this. First, having two hard disks allows you to organize your data better. For myself, I like to keep my operating system and application files (e.g. Microsoft Office) on one hard disk, while other files (e.g. Word documents, pictures, videos) on another hard disk.

This way, you can wipe out the operating system and applications without affect your data files. Of course, you might argue that you can do this by partitioning one hard drive. That's true, but by having two drives you save yourself the headache of partitioning (which is a complex issue in and of itself).

The second reason for having two hard drives is the possibility of running a RAID configuration. Most motherboards these days allow you to run RAID – so having two hard disks opens up the possibility of increased speed and data reliability via RAID.

The third reason is portability. If you imagine that you don't have a large enough USB device or external hard drive – and you have 100 GB worth of photos and videos to copy to another PC, then you will appreciate why you need a second hard drive. But storing those photos and videos on a second hard drive, I can just plug out the hard drive from the first PC and connect it as a slave drive in a second PC. Then simply copy over my data with minimal issues.

Conclusion

I hope this report has shown you the answers to some of the most common questions about building your own computer. If you're new to building computers, you'll definitely have thought of questions like these. If you have any additional questions or doubts, do feel free to [drop me a note](#) – I'd love to hear from you.

Until next time, here's wishing you good luck and happy computing!

Gary Hendricks runs a hobby site on building computers. Visit his website at <http://www.build-your-own-computers.com> for tips and tricks on assembling a PC, as well as buying good computer components.
