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Shop Carefully When Looking for a New Computer

My computer was nearly 7 years old and wouldn't run Windows 11. My wife's computer was 5 years old, underpowered, wouldn't run Windows 11, and the keyboard was failing. It was time to replace both systems.

Most companies replace computers assigned to employees every three to five years, so the timing was right.

This article is about computers that run Windows. MacOS users have fewer choices for hardware, so Macs aren't included. Nor are Chromebooks and computers that run Linux. Because Microsoft Windows is the dominant operating system for home and office computers, that's the only focus.

This account is highly subjective in exploring how my wife and I selected our computers. Our choices are far less important than the process.

Spoiler: Both of our new computers are from Lenovo. No company is inherently better than any of the others. They all make powerful, high-end computers, and most also manufacture limited, low-end computers so it's important to look beyond the brand.

There are a dozen or so big manufacturers and hundreds of smaller shops that build custom desktop machines. Notebook computers are more common now and if that's what you're looking for, you'll be limited to fewer than a dozen manufacturers such as Acer, Dell, Hewlett-Packard, Lenovo, Microsoft, and Toshiba.

Phyllis now has a Lenovo ThinkPad X1 Extreme Gen 3 and I have a Lenovo ThinkPad P15 Gen 2 Mobile Workstation. Maybe you're wondering why both computers are from Lenovo and why we didn't choose the same model. It comes down to how we use the computers.

When selecting a computer, be sure to match the hardware and the software to your exact requirements.

Why Lenovo? Over the past thirty years, we have owned computers from Toshiba, Dell, Lenovo, and others. We have both had acceptable experiences with Lenovo and the company offers decent support most of the time. I have an antique Toshiba computer that continues to run after nearly 15 years, but Phyllis had a bad experience with a Toshiba computer. I like the idea of using the same vendor for both of our computers, so Lenovo was the choice, and this was totally subjective.

Inside the Boxes

The components that make up the computer should be matched to the user's needs.

Phyllis's computer has an Intel Core i7 CPU and mine has an Intel Core i9 CPU. Her primary uses are email, web browsing, and games. Mine include those uses, but also extend to photo and video editing, website design, and audio production.

The use cases are also reflected in the memory installed on the computers: Mine has 32GB of RAM, half of what my previous computer had, and Phyllis's has 8GB of RAM, the same as her previous computer. If either computer needs additional RAM, more can be installed easily.

CPUs for both computers are substantial upgrades. Phyllis's previous computer had an Intel Core i5 CPU and mine had an Intel Core i7 CPU.

Low-priced processors such as AMD's Athlon and Intel's Celeron are generally best avoided unless you're on a strict budget or have limited needs.

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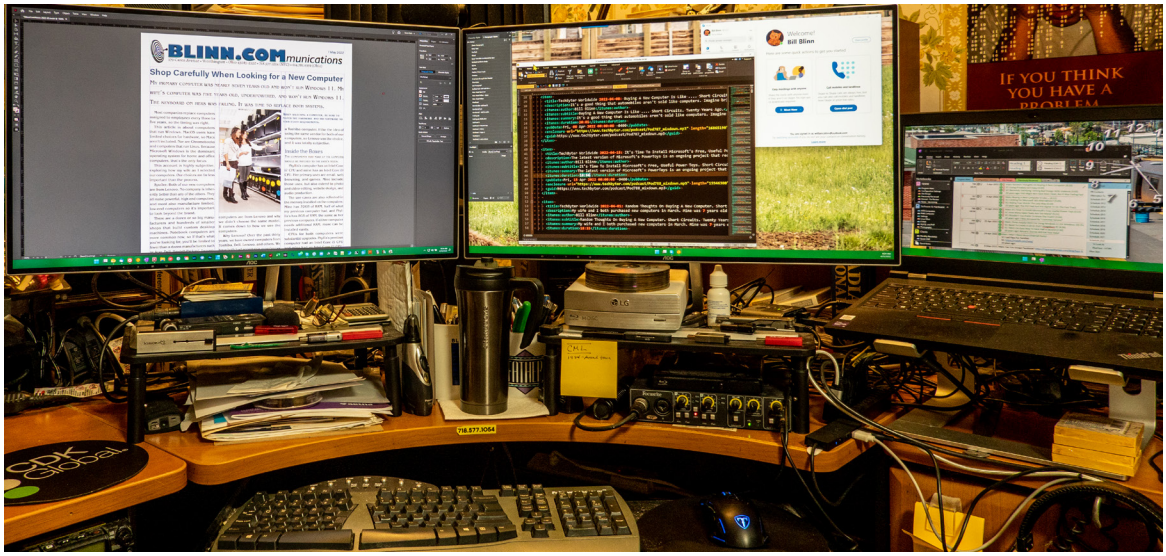

The computer in my office needs to support two monitors in addition to the built-in screen and be capable of handling video and audio processing, website design and coding, and publication management.

Virtually all computers include integrated graphics on the motherboard, but many also include a dedicated graphics processing unit (GPU). If you do a lot of photo editing or video editing, the GPU is important. These are typically made either by Nvidia or AMD.

Phyllis's computer came with an Nvidia GeForce GTX 1650 Max-Q GPU with 4GB of RAM, which more than sufficient for games and basic photo editing.

The GPU in my computer is an Nvidia RTX A3000 device with 6GB of RAM intended for more demanding photo and video editing.

Do You Want My Computer?

Is either of these options right for you? Maybe, but the decision must depend on your needs.

Neither of our computers has a touch screen. Neither has a fold-back keyboard that converts the notebook computer to a tablet. Both have fingerprint readers that make logging on easy.

Phyllis's computer has a 512GB disk drive and mine has a 1TB disk drive. If her computer needs more storage, adding a second M.2 drive is relatively easy. Mine already has five external drives.

Both of our computers have Thunderbolt connectors, which is something I'd recommend for any computer because they provide fast data transfer rates and can also be used with a dock to power multiple monitors and connect to other devices.

Phyllis's previous computer had an optical drive, but her new computer had no option to add one. We added an external USB optical drive even though optical disks are becoming passé. Because I work with video files, my computer has an external Blu-ray writer that can also handle standard DVDs and CDs.

Choose the Right Screen

Pay attention to the computer's built-in monitor specifications if you plan to use the computer without a separate monitor.

A computer with a 15-inch monitor will be lighter and more portable, but the extra weight of a computer with a 17-inch monitor may be an acceptable trade-off for improved legibility.

The screen resolution is also important. Higher resolution will produce sharper images but smaller text. If you plan to use one or more external monitors, the built-in screen is less important.

The way I use a computer differs considerably from how Phyllis uses a computer: She holds the computer in her lap and uses the built-in monitor; I attach two 27-inch monitors and use the computer as I would a desktop system.

Any notebook computer will have a Wi-Fi adapter and may have an Ethernet connector. The Wi-Fi adapter should support both 2.4GHz and 5GHz bands and comply with at least Institute of Electrical and Electronics Engineers (IEEE) 802.11n specifications. For best possible performance, look for a Wi-Fi adapter that complies with IEEE 802.11ax specifications, which as also known as Wi-Fi 6.

What About Windows?

The final consideration is Windows. Even if you prefer to stick with Windows 10 for now, make sure that the new computer will be able to run Windows 11.

Microsoft will support Windows 10 only until mid-October 2025. The computer will continue to work after that date and probably will receive security updates, but maintaining a fully up-to-date system is wise.

There's no shortage of options. Desktop systems are still being made for those who need the most power and no portability. Notebook systems have screens ranging in size from less than 12 inches to nearly 20 inches. There's a wide choice of CPUs and GPUs. Memory ranges from 4 to 128 gigabytes and storage from as little at 32GB to 2TB.

Happy shopping! Ω