



TELEPHONE



TELEVISION



INTERNET



CELLULAR



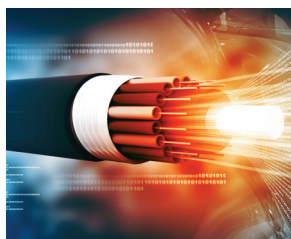
SECURITY



MEDICAL

MANAGER'S MINUTE

Fiber to the Home Update



This is an exciting time for your cooperative. Our crews have started Phase 2 of our multi-year fiber to the home ACAM project. You will see construction crews working in the **Terry's Fork** and **Willis** areas. Phase 1, Topeco and 221, are

complete and our technicians are ready to install service to your home.

If you are ready for amazing fast speeds and live in these areas, call our friendly sales consultants to get on our installation schedule at **540.745.2111**.

If you are not sure that you need a Gig, well friends, let me just say that 8K TV will be making an appearance in 2019 along with many

other broadband dependent devices. The Internet is no longer a nicety, it's a way of life and considered a utility, just like electricity. We don't think about how much electricity that new lamp is going to use, we just know we want it to work. That's what gigabit fiber gives you--enough bandwidth to 'power' or use your devices.

We have resources on our website, citizens.coop, to help you determine how much broadband your home needs and whether your devices are gigabit ready or not. Visit citizens.coop/are-you-gigabit-ready/ to find out.

Welcome to Gig Country!

- Greg Sapp
GM & CEO

Who's Looking At Your Screen?



Although many businesses have computers set up so the screen will automatically lock after a certain amount of inactivity, not all screen savers are password-protected. Without a password, this leaves your computer defenseless.

Here are a few consequences of leaving your workstation unlocked and unattended:

- Files can be downloaded from the Internet and executed on your computer, such as malware, spyware, keyloggers, and other types of malicious software.
- Inappropriate emails can be sent from your email address to coworkers, your boss, or other business contacts.
- If you save passwords in your browser (another thing to avoid), passersby now have access to other online programs, your online banking, social media, and other accounts.

Locking your computer is a simple and easy way to prevent a bad situation. Here are some ways you can lock your workstation:

For Windows:

- Press the Windows key + the L key at the same time on your keyboard.
- Press and hold Ctrl+Alt+Del and then choose Lock This Computer.

For Mac:

- Press control + shift + eject at the same time on your keyboard, or control + shift + power if you don't have the eject button on your keyboard.
- Set up hot corners, which allows you to push your cursor to a certain corner of your screen to lock the computer. This can be set up under System Preferences > Desktop & Screen Saver then choosing Hot Corners.

Get in the habit of locking your screen.

We Care About Your Security

Citizens' offers PC protection, medical alert, automation, security, and surveillance for your home and business because we care about your online and physical privacy and security. We are armed with products and services to keep you safe. Call us to learn more about how we can help secure what matters most to you.

Take password theft seriously and take precautions. Get a random password generator such as **Bitwarden.com**. We hear about security breaches frequently, and when this happens, your passwords are stolen. This can occur when you reuse the same passwords and, hackers can easily access your email, bank, and other important accounts.

Security experts recommend that you use a different, randomly generated password for every online account that you create. **Bitwarden.com** helps you create and manage secure passwords so you can get back to enjoying your life online.

TECH TIPS: TOP 10 Reasons for Slow WiFi

1. The distance between your WiFi router/modem and your devices is too far.

- The further the distance, the weaker the signal, and the slower the WiFi speeds.
- The distance between the router/modem can negatively impact the performance of your devices. The farther your device is from the router, the weaker the signal will become.
- Relocating your router/modem to a more central location where devices are used may help.

Tip: Complete a wired speed test first by going to speedtest.citizens.coop. Ensure that you do not have any programs running in the background. If your wired speed is slow, your WiFi speed won't be any faster. It may be a specific device that is running slow.

2. There are "blockers" that can block or interrupt the WiFi signal. Avoid placing your WiFi router/modem behind obstacles such as in a closet or cabinet since these act as blockers which prevent the WiFi signal from passing through.

The more walls the WiFi signal has to travel through, the weaker your signal will become. This is because construction material such as plaster, ductwork, and electrical lines can act as a "blocker" since the radio waves can have issues passing through these types of materials. It's much like when you are passing through a tunnel while driving and lose your radio signal. The same thing happens with your WiFi signal when it has to pass through walls.

Tip: A higher placed (i.e. on top of a bookshelf) centrally located WiFi router/modem will usually work best. Keep that in mind if you have a weak signal in certain areas of your home.

3. Cordless phones, baby monitors, microwaves, oh my!

- Cordless phones, microwaves, baby monitors, wireless security cameras, and wireless speakers all operate on the same frequencies and can lower your WiFi speeds. Even electronics such as fluorescent lights, wireless controllers, older Bluetooth devices, and plasma TV's can interfere.
- Devices such as these run on the same frequency as your standard WiFi, 2.4GHz. When you have many things running on the same wavelength this can cause a "traffic jam" of frequencies and contribute to your slow WiFi.

Tip: Sometimes you can identify a specific device that is causing the issue. Unplug any of the above devices one at a time and see if your speed improves. You may find one device is causing your headache.

4. Interference from other WiFi routers/modems.

- Densely populated areas such as apartment complexes and subdivisions are subject to significantly more WiFi congestion.
- When you live in a congested area with people who are using the same WiFi as you, your signal is fighting with all the other signals for speed. Most routers come pre-programmed to be on a specific channel and frequency. Check your router manual or the manufacturer's website online and select a WiFi channel on your router that your neighbors aren't using.
- Use only channels 1, 6 or 11 on the 2.4 GHz band – using any other channel will cause poor performance.
- Make sure you are on your WiFi network and not your neighbor's.
- Some of the more advanced, newer routers and modems have the capability of switching to the 5GHz band which is less congested than the older and more crowded 2.4GHz band. If you are unsure if your modem is capable of this, check the router's specification.

Tip 1: You can download a WiFi analyzer app for your smartphone and see what channels your neighbors are using and if your channel is congested by other users. Use a different channel, if possible, using the channel 1, 6, or 11 rule listed above.

Tip 2: If you have a wireless repeater, try to operate it on a different channel than your router, otherwise it will be competing against it. If two wireless devices are on the same channel, they have to take turns talking. This will cut the speed down drastically if either network is being heavily utilized (Skype, Netflix, etc.)

5. Devices: your device can't handle advanced speeds.

- Not all devices are created equal. Newer smartphones, tablets, and computers will typically be faster than older ones, but they will not be able to reach full wired speeds.
- Most routers/modems will slow down to the speed of your slowest device. This means that if you have other devices with the capability of operating at faster speeds, the slower device will stop them from reaching their full potential. If you need full speeds for a large download or gaming, consider connecting the device directly to the modem using an ethernet cable. The wired speed is almost always faster than the WiFi speed. This is because the internet is connected directly with the device.

Tip: Do speed tests with other WiFi devices and see how they compare at speedtest.citizens.coop

6. Reboot: When was the last time you rebooted your WiFi system?

- We're asking more and more of our home networks, and rebooting gives everything a fresh start, like a short nap.
- Often, rebooting your modem will fix your connectivity issues. The reason for this is most electronics were not designed or built to run all of the time with no breaks. A reboot every now and then is highly recommended to ensure your WiFi performance stays in tip-top shape.

Tip: Reboot your devices in the following order: modem, router (if a separate piece of equipment), computer, then WiFi devices.

7. Connections: check your line cord connection at your modem.

- A loose line cord connection can cause slowdowns in your speed or even no connectivity.
- Sometimes the culprit of slow speed is the cable and connection. Check to see if you have a secure connection to the wall outlet. Inspect for damages to the line such as a bent, chewed, smashed, or broken cord.

8. Devices gone wild.

- You could have one device that is hogging all of the available bandwidth and hindering your speed.
- When a device isn't working properly, it can cause disruption with all the other devices on the network. Since your wireless network is only as fast as your slowest device, having a device that is hogging up all the speed will cause your other electronics to run slow as well.

Tip: Power off one device at a time and then check your speed to see if you can isolate a problem device in your home.

9. Keep it fresh.

- Old firmware or operating systems can cause slow connections. Ensuring your devices are updated to the most recent software will help to keep your device running correctly.
- Ensuring your device's operating system and firmware are up to date will help to ensure better connectivity. This includes your phones, tablets, and computers.

Tip: Access manufacturers' websites for your devices and software to verify you are running the latest drivers, updates, and patches.

10. Super User beware.

- As a Super User, a basic WiFi setup may not provide the "horsepower" you need.
- If you have multiple WiFi devices in your home, and you stream to all 4 corners of your house, you will benefit from an 802.11ac router with more antennae and access to the 5 GHz band. If your devices have AC WiFi and your router supports it, use AC instead of N on as many devices as possible.

Tip: If you have your own WiFi router that is not commercial grade, please inquire about Citizens' Managed WiFi options to provide the quality WiFi you have been looking for. Citizens' Internet modem comes with a commercial-grade WiFi router equipped to handle multiple devices. It's a great value for only **\$4.95 a month** and is backed by our 24/7 technical support should you experience any technical issues.

Welcome New Employees!



Heath Moore
Ft. Chiswell
Broadband Tech



Adam Hunsucker
IT Specialist



Melissa Conner
Finance Administrative
Assistant