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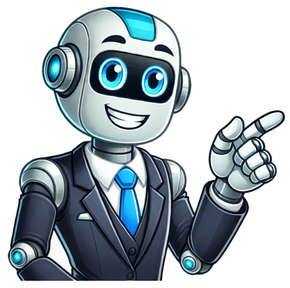

Learn what all those lights on your modem and router actually mean and how you can use them. Sep 9, 2022 Share Equipment Guides Most networking equipment has a row of status lights that represent the essential functions of your home internet network. These functions are similar across most routers, modems, and gateways (modem/router combo)—though they’re often labeled differently based on the manufacturer. Read on to learn what the lights represent, what different colors mean, and how to use this information to diagnose and solve home networking woes. Maybe it’s time for a new internet provider. Enter your zip code to see what’s available in your area. Jump to: Modem, router, and gateway light meanings | Modem/router light colors | Blinking lights on a modem, router, or gateway | Easy fixes for modem, router, and gateway issues | FAQ | Related articles Jump to: Understanding what the lights mean on your router or modem can be key to solving your internet problems. Kayla Fischer | HighSpeedInternet.com Usually the first light in a row or column, the power light signifies that the modem, router, or gateway is turned on and has power. The power light is usually solid but may blink when the equipment is booting up. Labeled with a down arrow or DS, the downstream light indicates a modem or gateway’s ability to receive information from the internet. This light will blink slowly as the equipment boots up and quickly as you download data. Depending on the model of your equipment, the downstream light may also stay solid. If your downstream light is red or off, you may not be connected to the internet. Typically, a rapidly blinking light means your connection is working and transmitting data, but this can vary for different manufacturers. Give your internet connection a quick health check with our speed test. Following the downstream light, the upstream light indicates your modem or gateway is able to send information to the internet. Like the downstream light, the upstream light will blink slowly as your equipment boots up. When operating normally, the upstream light will either blink quickly and sporadically or stay solid. Some networking equipment uses a single light to represent both the upstream and downstream functions. The internet light, also sometimes labeled WAN or with a globe icon, signifies a connection to the internet. The internet light usually appears right after the upstream data light. The internet light should be solid green or white when the equipment is functioning normally. If the light is red or off, there’s a problem with your internet connection. It’s normal for the internet light to be blinking during boot up, but if it never goes solid, your equipment is having trouble connecting to the internet. The Wi-Fi or wireless lights represent your equipment’s wireless broadcasts. Dual-band routers or gateways often have two Wi-Fi lights labeled 2.4 Ghz and 5 Ghz. Each of these lights represents a different Wi-Fi network in your home. The 2.4 Ghz Wi-Fi has more range than the 5 Ghz Wi-Fi, but the 5 Ghz Wi-Fi is faster. Knowing the ins and outs of these two Wi-Fi networks can help you get the most out of your internet service—learn more with our guide on the difference between 2.4 Ghz and 5 Ghz Wi-Fi. The Wi-Fi lights are usually flashing rapidly when your Wi-Fi is in use. If you don’t have any wireless devices connected to your Wi-Fi network, these lights may be off. Some routers or gateways may also show a solid green or white Wi-Fi light, which indicates that the Wi-Fi is functional. A red Wi-Fi light usually indicates a problem. The Ethernet light, which is also often labeled LAN, represents a connection between the equipment and a device connected via Ethernet cable. The Ethernet lights may flash or remain solid when in use. If you have a device connected to your router or gateway via Ethernet and the light is red or off, you have a problem with your Ethernet connection—It could be with the Ethernet port on your router, the Ethernet cable, or the Ethernet port on your device. The link light represents a connection between a standalone modem and router. It’s similar to the Ethernet light, but it represents a connection between two networking devices, not a connection between the networking equipment and a user device like a laptop. Link lights can be found on both modems and routers. A link light may be solid or flashing when in use. If you have a separate modem and router, there’s an issue with the connection between your modem and router if the link light is red or off. It could be a bad Ethernet cable or a problem with an Ethernet port. Colors can vary across different brands and models of modems, routers, and gateways. Sometimes, the different colored lights are used to represent different states of functionality. Green and white lights Green or white colored lights usually indicate things are functioning normally. But some models always maintain green or white colored lights and use blinking to signify different states. Yellow lights Yellow lights represent processes, such as booting up or updating. Red or orange lights Red or orange lights usually indicate a problem or error with your modem, router, or gateway. Most modems, routers, and gateways use blinking lights to indicate processes, data transmissions, and sometimes errors. A light blinking slowly and steadily typically indicates the equipment is attempting to establish a connection. For example, when you power up your networking equipment, it’s common for each light to blink slowly for a while before staying solid. This represents the process of the modem establishing whatever connection is represented by the light. If a light doesn’t stop blinking slowly and steadily after a long time, say 20 minutes, that’s usually a sign there’s an issue with that process. For example, if a modem’s upstream light continues to blink slowly Sporadic, rapid blinking is usually nothing to worry about. It’s often used in Wi-Fi and Ethernet lights to represent the transmission of data. It just means those functions are currently being used. Here are a couple of quick and easy things to try if your modem, router, or gateway isn’t working properly. Also, see our guides on internet troubleshooting and disconnecting internet for more tips to get your Wi-Fi tip-top shape. Restarting your equipment is always the first step to solving internet problems. This fix is capable of solving a wide range of common internet issues, and it’s super easy. How to restart a modem, router, or gateway: Step 1: Unplug the power cable from the back of the modem, router, or gateway. Step 2: Wait 60 seconds. Step 3: Plug the power cable back into the back of the modem, router, or gateway. Step 4: Wait for the equipment to reboot. This can take a while, especially if the equipment needs to download and install updates. It’s easy for loose or damaged cables to go unnoticed until they cause a problem. If your equipment uses a coaxial cable (the same type used for cable TV), make sure it’s screwed on hand-tight to the back of the modem or gateway. Check that the cable is screwed on snug to the wall outlet as well. If you have an Ethernet cable connecting a separate modem and router, make sure it’s pushed all the way into the Ethernet ports and that the spring isn’t broken, which would allow it to fall out. You should hear the cable fitting click as it locks into the Ethernet port. Lastly, check for any damaged cables. Look for tears, cuts, harsh kinks, and even chew marks from pets. You can’t always see if a cable is damaged, so when in doubt, replace. Author - Austin Aguirre Austin worked as a broadband technician installing and troubleshooting countless home internet networks for some of the largest ISPs in the U.S. He became a freelance writer in 2020 specializing in software guides. After graduating with a BS in technical communication from Arizona State University, he joined the team at HighSpeedInternet.com where he focuses on home network improvement and troubleshooting. Editor - Rebecca Lee Armstrong Rebecca Lee Armstrong has more than six years of experience writing about tech and the internet, with a specialty in hands-on testing. She started writing tech product and service reviews while finishing her BFA in creative writing at the University of Evansville and has found her niche writing about home networking, routers, and internet access at HighSpeedInternet.com. Her work has also been featured on Top Ten Reviews, MacSources, Windows Central, Android Central, Best Company, TechnoFAQ, and iMore. Those blinking lights on your modem and router actually mean something important. When your internet suddenly drops, these mysterious indicators are your first clue to what’s wrong. Most of us have experienced the frustration of Wi-Fi cutting out during an important call or while streaming our favorite show. Instead of immediately calling tech support, you can learn to decode these signals yourself. In this guide, I’ll show you exactly what each light on your modem and router signifies—whether it’s blinking, solid, or completely dark. You’ll learn to interpret them like a tech professional. By understanding what these lights are telling you, you can troubleshoot common connection problems and get back online faster. I’ll provide you with a straightforward checklist that helps diagnose and fix basic internet issues without the headache. Let’s get your connection back up and running! Let’s clear up something that confuses a lot of folks: the difference between a modem and a router. Sometimes they’re separate boxes, sometimes they’re combined into one unit. Your Modem: Think of this box as the translator. It takes the internet signal coming into your house (through a cable or phone line) and translates it into a language your computer can understand. It’s the crucial piece that connects you directly to your Internet Service Provider (ISP) – you know, the company you pay for internet access. Your Router: It takes that single internet connection from the modem and shares it with all your different devices – computers, laptops, tablets, phones, smart TVs, you name it. Usually, it does this wirelessly using Wi-Fi, but it also has ports to plug devices in directly with a cable. Combo Units: Many ISPs now provide a single box that does both jobs – it’s a modem and a router combined. No worries! The lights on these combo units usually follow the same basic patterns we’re about to cover. Okay, now that we know what we’re looking at, let’s get to those lights! Let’s crack the code for the most common lights you’ll see on your modem and router. Now, remember: Your specific model might look slightly different or use different colors (some use blue instead of green), but these are the usual suspects and what they generally mean. This light tells you if the device is getting electricity. Simple, right? Solid Green/Blue: All good! The device is powered on and receiving electricity. That’s step one. Off: No power. This is your first check if nothing’s working. Is the power cord plugged securely into the back of the box? Is the other end plugged firmly into the wall outlet or power strip? Is the power strip turned on? Simple, but essential! Blinking: This can sometimes indicate a problem with the power supply itself, or maybe the device is starting up. If it keeps blinking and never goes solid after a few minutes, especially after a restart, that could signal trouble with the device. This is an important light. It tells you about the connection coming into your home from your ISP. It might be labeled “Internet,” “WAN” (Wide Area Network), or just show a little picture of a globe (). Solid Green/Blue: Success! This means your modem/router is successfully connected to your Internet Service Provider’s network. You should have internet access. Blinking Green/Blue: This usually means the device is trying to establish a connection or it’s actively sending or receiving data (information) over the internet. Blinking is often normal activity, unless it just blinks forever and never turns solid green/blue. If it does that, it’s struggling to connect. Solid Amber/Orange: This often means the device is connected to your modem (if they are separate boxes) or has established a basic link, but it’s not getting a proper internet signal from your ISP. The problem likely lies outside your home, with your provider’s network. Off: No internet signal detected from the modem or the wall connection. This is a big red flag indicating no connection to your ISP. This light tells you if your router is broadcasting the wireless network signal (Wi-Fi) that your devices connect to. It might be labeled “Wi-Fi,” “Wireless,” or show a little antenna symbol ((( ))). Solid Green/Blue: Your Wi-Fi network is broadcasting. Your wireless devices (laptops, phones, etc.) should be able to see and connect to your network name. Blinking: Data is actively being transferred over the Wi-Fi network. This is totally normal when you’re browsing, streaming, or doing anything online wirelessly. Off: The Wi-Fi is turned off. Your router isn’t broadcasting a wireless signal. Sometimes there’s a physical button on the router itself to turn Wi-Fi on/off – check for that! Otherwise, it might be turned off in the router’s settings (which is less common unless you did it yourself). These lights usually correspond to the physical ports (like phone jacks, but wider) on the back of your router, labeled “Ethernet” or “LAN” (Local Area Network). You use these ports to plug devices directly into the router with a network cable. Often, there’s one light per port. Solid Green/Blue: A device (like a desktop computer, printer, or gaming console) is successfully connected via a network cable to that specific port and is turned on. Blinking: Data is actively being transferred through the cable connected to that port. Normal activity. Off: Nothing is plugged into that specific port, or the device plugged into it is turned off or not communicating. WPS stands for Wi-Fi Protected Setup. It’s a feature that lets you connect some devices to Wi-Fi by pushing a button on the router and a button on the device, instead of typing the password. Blinking: WPS mode is active. The router is waiting (usually for just a minute or two) for a device to connect using the push-button method. Solid: This usually indicates the WPS connection attempt either failed or succeeded (it depends on the router model, and the light is often only solid temporarily). Off: WPS is inactive. This is the normal state. Honestly, in my experience, WPS can sometimes be a security risk. I usually recommend disabling it in your router settings for better protection, but that’s a topic for another day! Okay, the dreaded moment arrives – the internet’s out, pages won’t load, videos stop streaming. Don’t panic! Before you even think about calling tech support, run through these steps in order. Seriously, this fixes things probably 90% of the time in my experience. 1. Check the Lights (Now You Know How!): Look at your modem and router. What are the lights telling you? Is the Power light solid on both devices? If not, start there (check plugs!). What’s the Internet/WAN/Globe light doing? Is it solid green/blue (meaning connection is good)? Is it off (no signal from ISP)? Is it blinking endlessly (trying but failing to connect)? Is it amber/orange (connected locally but not to the internet)? This light is your biggest clue to where the problem might be. Is the Wi-Fi light on (if you’re trying to connect wirelessly)? If it’s off, your devices won’t even see the network. 2. The Reboot (Do It RIGHT!): Restarting your equipment is the number one fix, but the order you do it in is critical. Don’t just pull plugs randomly! Step 1: Go to your MODEM. Unplug its power cord from the back of the modem or the wall outlet. Step 2: Wait a full 60 seconds. Don’t rush this! This lets it fully clear its memory. Step 3: Plug the modem’s power cord back in. Now, wait patiently for it to fully restart. This can take 1 to 3 minutes. Watch the lights – you want to see the Power light become solid, and then hopefully the Internet/WAN/Globe light become solid (or start blinking normally if that’s its usual connected state). Wait until the modem lights look stable. Step 4: Only after the modem is fully back online and its lights look good, go to your ROUTER (if it’s a separate box). Unplug its power cord. Step 5: Wait another full 60 seconds. Step 6: Plug the router’s power cord back in. Give it another 1 to 3 minutes to fully restart and stabilize its lights. Why this specific order? It lets the modem establish a clean, fresh connection with your ISP first. Then, the router gets a clean connection from the already-working modem. The order matters! Doing it wrong often means it won’t fix the problem. 3. Check ALL Cable Connections: While things are rebooting, double-check the physical cables. Things can get loose! Make sure the network cable connecting the modem to the router’s Internet/WAN port (this port is often a different color) is plugged in snugly at both ends. You should hear a little click. Ensure the power cords for both the modem and router are fully plugged into the devices and the wall outlet or power strip. Sounds basic, but you’d be surprised how often this is the culprit! If you have devices plugged directly into the router’s Ethernet/LAN ports with cables, make sure those are clicked in securely too. 4. Wi-Fi Specific Issues? If devices connected with a cable are working fine, but wireless devices aren’t: Check that Wi-Fi light on the router again. Is it definitely on? If not, look for a physical button on the router (sometimes with the ((( ))) symbol) that might have been accidentally pressed. Press it to turn Wi-Fi back on. Try restarting the specific device that can’t connect (your laptop, phone, etc.). Sometimes the problem is with the device, not the router. 5. Still No Luck? Time to Call Your ISP: If you’ve done all the above, waited patiently, and that crucial Internet/WAN/Globe light on your modem still isn’t solid green/blue (or it’s off/amber), then the problem is likely outside your home. Now it’s time to call your Internet Service Provider. When you call, tell them the status of your modem and router lights, especially the Power and Internet/WAN lights. Use the knowledge you just gained! (“My power light is solid green, but the internet light is off.”) This helps them diagnose the issue much faster. Also, let them know you’ve already performed a full power cycle (the reboot steps above) in the correct order. This proves you’ve done the basic troubleshooting and saves time on the call. Want fewer headaches? Try these simple things: Router Placement Matters: Don’t shove your router in a closet, behind the TV, or down in a basement corner! For the best Wi-Fi signal, place it in a central, open location in your home, preferably up off the floor. Avoid putting it right next to microwave ovens or inside metal cabinets, which can interfere with the signal. Hands-down the BEST way to improve Wi-Fi. Regular Reboots: Just like restarting your computer can fix weird glitches, rebooting your modem and router (using the correct order above!) maybe once a month or even once a week can keep things running smoothly. Consider Updates (Firmware): This is a little more advanced, so no worries if you skip it, but router manufacturers occasionally release software updates (called “firmware”) to improve performance or fix security issues. You usually check for these through the manufacturer’s website or a phone app if your router has one. Not essential for most users, but good to be aware of. See? Those blinking router lights aren’t so mysterious or scary now, are they? When your internet starts acting up, these can help you pinpoint what’s actually going wrong. You’re now armed with the knowledge to understand what the most common lights mean and, more importantly, how to perform the single most effective troubleshooting step – the proper modem and router reboot! You’re welcome! Next time your connection acts up, take a deep breath, glance at those lights, and run through the checklist. You might just save yourself a lot of time and frustration. Found this guide helpful? Share it with a friend or family member who gets baffled by their blinky internet box! They’ll thank you for it. On many occasions, we do not pay enough attention to our WiFi router, and if we look at it carefully, we will see that it flashes some LEDs. The LED lights on the router indicate information and help us diagnose problems with our connection.If they are on, off, flashing or have one color or another, they tell us what is happening with our WiFi network.In this tutorial, we will understand what each indication means and which lights should be lit or blinking on the router.Each router model has its different characteristics, so not all routers have the same standard regarding the LED blinks.The first thing is that there are many different models of routers on the market so it will depend on the model that we find one arrangement or another. Each manufacturer establishes their pattern in this regard, whether or not the lights flicker and their colors.However, there is a universal system in which all manufacturers use some basic notions, and practically all of them have the same LED lights that can turn green, red or blink to convey the same information visually. The fact that it flashes can be both positive and negative, depending on the case.What lights are there in the WiFi Router?If you’re lucky, your router manufacturer may have labelled each LED with an icon or name to describe what each light means for recognition, even in low-light conditions.For example, there may be a WiFi icon as WLAN or as “Power.” In this case, a constantly lit light may mean that everything is working fine, and a flashing light may mean that there is some connection problem.The power indicator light is usually a circular icon that indicates the router’s power status.Solid green or blue: Indicates that the router is connected to power and operating normally.Solid red: Indicates that the router is connected to power, but there is a problem.Off: Indicates that the router is not connected to a power source or the power switch is not turned on.If the power indicator light fails to turn on, it indicates a lack of access to the electrical grid, as I said. The initial step in such situations is to ensure that it is properly plugged in. Some models may even be connected to the socket but have a button to turn it on, so we must check that it is not simply turned off.When it shows a red light, check if the power adapter is working correctly and try replacing it.The Internet/WAN (Wide Area Network) is a global computer network or simply the “Internet” indicator light, which is typically a globe icon that indicates the router’s connection from an external network.Once the device is turned on, it is the most important light since just by seeing it, we can identify if the device has an Internet connection and the state in which it is located.Steady green: Indicates the WAN port is connected to the Internet and operating normally without any problem.Solid yellow: Indicates that the WAN port is connected to the Internet or there is a connection issue.Blinking green: Indicates the WAN port is sending or receiving data.Blinking yellow or not blinking: Indicates there is a data transfer issue, which may be caused by network congestion or connectivity issues.Check whether the network cable is connected properly and whether the cable is damaged.Check if the router’s LAN and WAN port settings are correct, including the IP address, subnet mask, and gateway.Try restarting your router and modem (if available).The wireless signal light is usually an antenna icon that indicates the strength of the Wi-Fi signal also whether the router is transmitting. Steady green: Indicates that the signal is being emitted without problems, and if it flashes, in some routers it means that, just a data exchange is taking place.Off: Indicates that the WiFi is not turned on or no data is being broadcast.When the light of antenna icon if switched off, check if your router’s wireless network settings are correct. Try restarting your router and connected devices.Also, not that some routers both support the 2.4 GHz and 5 GHz Wi-Fi bands and can have 2 LED lights separately.The Ethernet/LAN port indicator light indicates the status of the router’s wired connection. Routers typically have multiple LAN ports along with multiple LAN icons that can be used to connect various devices. In many router models, they incorporate light for each Ethernet port available to connect a cable. Therefore, these will act depending on whether the port is in use or not. These may vary in position, while some models have them on the front of the devices, others have a small LED within the port itself. Steady green: Indicates that the LAN port is connected to a device and is working properly.Solid yellow: Indicates a problem with the LAN port connection. This may be due to a bad Wi-Fi cable cable connection or device malfunction.Solid red: Indicates that the LAN port cannot successfully connect to the device.Blinking green: Indicates that the LAN port is sending or receiving data.Flashing yellow: Indicates a problem with data transfer. This may be due to network congestion or connectivity issues.Blinking red: Indicates there is a problem with your device that needs to be checked and repaired.QSS or WPS (Wi-Fi Protected Setup) – makes it easier for external devices to connect to a Wi-Fi point without having to enter a Wi-Fi password.This is a system that, despite its benefits, can pose security problems, which is why many companies choose not to include it in their devices. This option, although many devices no longer include it, is still present in many others, and in some models, you can proceed to deactivate or activate it as you wish from the router configuration. In the case of the LED indicator, it will turn on when WPS is active on the device; if it flashes, it may mean that someone is trying to connect with this method or off if this function is deactivated.The USB light indicates the status of the USB interface. USB ports are not available on all routers since not all of them incorporate a USB connector to directly install devices, such as hard drives, printers, and pen drives, among others.Different states and their meanings:Solid green: Indicates that the USB port is connected to a device and is working properly.Off: Indicates that the USB port is not connected to a device or there is a connection problem.For troubleshooting, check whether the USB device is connected properly.Also check if the router’s USB settings are correct and restarting your router.However, some models have USB and do not have this type of LED indicator. It is an aspect that you should also take into account.If the router supports GPON technology (connection via a fiber optic patch cord, not Ethernet), two more indications, LOS and PON, are added to it instead of WAN:LOS – responsible for the existence of the connection;PON – is responsible for registering the router in the provider’s network.This indicates that the cable from the provider’s network equipment is either connected but not accessible or damaged. Begin by inspecting the WAN port connector for any looseness; it may have simply become detached.If the connector is securely in place but the Internet icon remains unlit, try restarting the device. Persistent issue? Call your provider’s technical support.Though uncommon, a burnt-out WAN port is a possibility. To test its functionality, use an Ethernet cable connecting the PC to the modem and switch it from the LAN port to the WAN port. If the indicator turns green, the port is operational.How many lights and buttons should be on the router? It all depends on what condition it is in.Let’s simulate the most likely situation.The router is connected to all devices, and they receive data packets. Status of the lights that blink and light on the router:Power – Steady Lit upWLAN (Internet icon) – flashingWAN – flashingLAN – blinking lit upUSB – steady lit up if connected to a device otherwise off After looking at all the icons under the LED on your router and still wondering what the indicators mean, then it’s time to seek help from the device’s manual. You can download a PDF copy of the instructions directly from the manufacturer’s website.For instance, a screenshot from the manual of Tp Link Archer explaining the ‘status’ and ‘indication’ of the icon on the router.In most routers, two LED colors can be found. However, on other devices, there are up to 5 different colors: red, green, blue, orange, and yellow. Therefore, the brand of the device itself comes into play.What is clear is that one of the ways in which we can obtain information about the router’s status is by observing the color of the LEDs. They generally use two colors as we said:Green means that everything is in order and working correctly.Red means that an error has occurred or there is a malfunction. In this case it is a symptom that we have a problem in the connection, in the LAN ports or wherever it indicates.Another aspect we have to observe is whether the router flashes or not. Typically, this is linked to the presence of activity on our local network or Wi-Fi. Therefore, we can conclude that:If the router flashes, it is usually an indication that there is traffic on our network and that we have some equipment connected.If the LED light on the router is solid, it means that there are no devices connected.In summary, understanding the meaning of LED lights on your router can be very useful in troubleshooting any issues you may encounter. By paying attention to their color and behavior, you can get a better understanding of the status of your network and take necessary actions to resolve any problems. [Related] Knowing what the lights on your router mean is key to a strong home internet. These lights tell you if there’s power, an internet connection, and if data is moving. This knowledge is important for troubleshooting and keeping your internet running smoothly. Different router brands like Netgear, Linksys, and TP-Link have similar lights, but they might have different names. This router indicator guide helps you understand what each light means. It makes figuring out what’s wrong with your internet faster and easier. Stay informed to keep your internet working well. Understanding Router Light Indicators Your router’s lights tell you how it’s doing. Knowing what each light means helps with troubleshooting and keeps your internet smooth. Let’s look at the typical lights on routers: Power Light The power light shows if your router is on and working. A solid light means it’s good to go. If it’s blinking, your router is starting up. Make sure this light stays on to know everything’s running right. Downstream Data Light The downstream data light is about getting info from the internet. It might blink slowly when starting or fast when downloading. This means your router is receiving data well. Upstream Data Light The upstream light is for sending data to the internet. It may blink at startup or flash or stay solid when in use. This shows your router is transmitting data correctly. Internet / WAN Light The internet or WAN light tells you about your online connection. A solid green or white light means all is good. But a red or off light shows there’s an internet issue. Wi-Fi Light The Wi-Fi light is about your wireless connection. It blinks fast when data moves over Wi-Fi. If off, no wireless devices are connected. A red light means there’s a Wi-Fi problem. What Lights Should Be on My Router It’s important to know the optimal router lights for a good secure home network. This helps keep your active internet connection going strong. Let’s look at the lights that mean your router is working right: Power Light: A solid green light means your router is on and working. A red or black light is bad news, showing power problems or a broken router. Downstream Data Light: This blinks as it looks for a signal from your internet service. It stays solid green once it’s connected. Upstream Data Light: This one shows the status of uploading data. It flashes when connecting and turns solid green with a good connection. Internet/WAN Light: Solid green shows a good internet connection. Flashing means the router is trying to get an IP address. Wi-Fi Light: It blinks fast when you’re using your Wi-Fi. This shows your internet connection is in use. Link Light: This means devices are connected properly. It flashes with data transfers and stays solid with a quiet but connected network. Ethernet/LAN Light: With routers that have several Ethernet ports, this green light means there’s an active connection. WPS Light: Helps with fast device connections. A yellow or blinking light means it’s trying to connect or has issues. READ:Media Access Control: Key Functions and Importance ExplainedWatching these lights helps you keep a secure home network. Understanding what each light means lets you fix problems fast. This ensures a smooth, active internet connection. Common Colors and Their Meanings It’s important to know what your router’s lights mean. Different colors signal different things about your network’s health. Here’s what you need to know. Green and White Lights Green or white lights on your router are good news. A solid light means the modem is working well. Seeing a solid green light for the internet shows everything is connected. If the light is flashing green, it’s trying to connect. For Wi-Fi, green lights show active bands. And on the ethernet port, green means a solid or transferring connection. Solid shows a successful connection, and flashing means data is moving. Yellow Lights Yellow lights on your router mean pay attention. They come on during startup or when updating. A slow blinking yellow on Nest Wifi Pro talks about a network issue or loss. Fast blinking during setup hints at possible errors. Knowing this can help you catch problems early. Red or Orange Lights Red or orange lights mean there’s a major problem. A blinking orange on the ethernet could be a data issue. Solid red is more serious and might need a reset or support. Fast blinking red on Nest Wifi signals big errors. Red lights often mean you should fix something quickly. This knowledge lets you tackle issues right away. Blinking Lights on Your Router Knowing what the router blinking patterns mean can help you fix problems. Different blinking lights tell us different things. They can show if everything’s working right or if there’s a problem. Slow and Steady Blinking A slow and steady light usually means the router is trying to connect. This is normal when you first turn it on. But if it keeps blinking like that, you might have a connectivity issue. You may need to check your modem or cables. Rapid Blinking If the light blinks fast, it means data is moving back and forth. This is good. It shows that your devices are talking to the internet or each other. Watching these lights can tell you if your network is doing okay. READ:Ping on Speed Test: How It Affects Your Internet PerformanceGetting to know these lights helps you keep your network working well. It makes fixing connectivity issues easier. Troubleshooting Router Light Issues Fixing router light issues may seem tough, but knowing what each LED means makes it easier. The first thing to do is watch these lights closely. They help start the process of fixing internet problems. If the power light is off, make sure your router is plugged in and getting power. It could also mean there’s a bigger power issue. A red power light means the router is doing a hardware test. If it stays red, there might be a problem with hardware or software. An orange or blinking green/orange light indicates a software test is happening. No internet light means your router could be in ‘transparent bridge’ mode or might need a reset. If the internet light blinks red/green, it’s trying to configure itself. You might need to restart it if this continues. A red internet light shows something is wrong with the setup. You’ll likely need a technician for this. No WAN light means there’s no connection between your modem and network. A red WAN light shows a connection issue that requires a technician. If LAN or Ethernet lights are off, it means no device is connected to these ports. A Wi-Fi light off suggests Wi-Fi is turned off, while an orange light indicates it’s set to shut down temporarily. No WPS light means WPS feature is off. A blinking red light shows there’s a connection problem. Some handy network connectivity errors tips include using the right power supply and restarting your modem. Check for overheating and consider a factory reset if needed. Knowing these lights and taking the right actions help in router troubleshooting. They are critical for fixing internet problems. Easy Fixes for Router Light Problems Fixing your router lights can be simple. We’ll look at two easy ways to get your internet running smoothly again. Restart Your Router Restarting your router can solve many internet issues. It refreshes your network and fixes temporary problems. Here’s how to reset your router: Turn off your router and modem by unplugging their power cords. Wait for at least 30 seconds before plugging them back in. Wait a few minutes for everything to restart and the lights to become stable. READ:How IoT Networks Revolutionize Smart TechnologyThis method is fast and often fixes internet troubles. Check for Loose or Damaged Cables Checking your cables is also crucial. Making sure they’re all connected well and not damaged is key. Here’s what to do: Look over all cables connecting your modem, router, and devices. Replace any cables that look worn out or damaged. Check that all connections are tight and in place. Loose or damaged cables are common problems. Checking them can prevent many internet issues and keep your connection stable. Conclusion Learning about your router’s lights is key to keeping your internet running smoothly. These lights tell you right away if something’s wrong. They’re like clues about your network’s health. If you see a red Internet light, it could mean many things, like ISP troubles or a broken router. Knowing what different lights mean helps you fix issues fast. Plus, some problems may fix themselves over time. To solve these issues, try simple steps like resetting your router or checking its power. For bigger problems, you might need to call in experts. By understanding your router’s lights, you keep your internet steady and fast. Learn what all those lights on your modem and router actually mean and how you can use them. Sep 9, 2022 Share Equipment Guides Most networking equipment has a row of status lights that represent the essential functions of your home internet network. These functions are similar across most routers, modems, and gateways (modem/router combo)—though they’re often labeled differently based on the manufacturer. Read on to learn what the lights represent, what different colors mean, and how to use this information to diagnose and solve home networking woes. Maybe it’s time for a new internet provider. Enter your zip code to see what’s available in your area. Jump to: Modem, router, and gateway light meanings | Modem/router light colors | Blinking lights on a modem, router, or gateway | Easy fixes for modem, router, and gateway issues | FAQ | Related articles Jump to: Understanding what the lights mean on your router or modem can be key to solving your internet problems. Kayla Fischer | HighSpeedInternet.com Usually the first light in a row or column, the power light signifies that the modem, router, or gateway is turned on and has power. The power light is usually solid but may blink when the equipment is booting up. Labeled with a down arrow or DS, the downstream light indicates a modem or gateway’s ability to receive information from the internet. This light will blink slowly as the equipment boots up and quickly as you download data. Depending on the model of your equipment, the downstream light may also stay solid. If your downstream light is red or off, you may not be connected to the internet. Typically, a rapidly blinking light means your connection is working and transmitting data, but this can vary for different manufacturers. Give your internet connection a quick health check with our speed test. Following the downstream light, the upstream light indicates your modem or gateway is able to send information to the internet. Like the downstream light, the upstream light will blink slowly as your equipment boots up. When operating normally, the upstream light will either blink quickly and sporadically or stay solid. Some networking equipment uses a single light to represent both the upstream and downstream functions. The internet light, also sometimes labeled WAN or with a globe icon, signifies a connection to the internet. The internet light usually appears right after the upstream data light. The internet light should be solid green or white when the equipment is functioning normally. If the light is red or off, there’s a problem with your internet connection. It’s normal for the internet light to be blinking during boot up, but if it never goes solid, your equipment is having trouble connecting to the internet. The Wi-Fi or wireless lights represent your equipment’s wireless broadcasts. Dual-band routers or gateways often have two Wi-Fi lights labeled 2.4 Ghz and 5 Ghz. Each of these lights represents a different Wi-Fi network in your home. The 2.4 Ghz Wi-Fi has more range than the 5 Ghz Wi-Fi, but the 5 Ghz Wi-Fi is faster. Knowing the ins and outs of these two Wi-Fi networks can help you get the most out of your internet service—learn more with our guide on the difference between 2.4 Ghz and 5 Ghz Wi-Fi. The Wi-Fi lights are usually flashing rapidly when your Wi-Fi is in use. If you don’t have any wireless devices connected to your Wi-Fi network, these lights may be off. Some routers or gateways may also show a solid green or white Wi-Fi light, which indicates that the Wi-Fi is functional. A red Wi-Fi light usually indicates a problem. The Ethernet light, which is also often labeled LAN, represents a connection between the equipment and a device connected via Ethernet cable. The Ethernet lights may flash or remain solid when in use. If you have a device connected to your router or gateway via Ethernet and the light is red or off, you have a problem with your Ethernet connection—It could be with the Ethernet port on your router, the Ethernet cable, or the Ethernet port on your device. The link light represents a connection between a standalone modem and router. It’s similar to the Ethernet light, but it represents a connection between two networking devices, not a connection between the networking equipment and a user device like a laptop. Link lights can be found on both modems and routers. A link light may be solid or flashing when in use. If you have a separate modem and router, there’s an issue with the connection between your modem and router if the link light is red or off. It could be a bad Ethernet cable or a problem with an Ethernet port. Colors can vary across different brands and models of modems, routers, and gateways. Sometimes, the different colored lights are used to represent different states of functionality. Green and white lights Green or white colored lights usually indicate things are functioning normally. But some models always maintain green or white colored lights and use blinking to signify different states. Yellow lights Yellow lights represent processes, such as booting up or updating. Red or orange lights Red or orange lights usually indicate a problem or error with your modem, router, or gateway. Most modems, routers, and gateways use blinking lights to indicate processes, data transmissions, and sometimes errors. A light blinking slowly and steadily typically indicates the equipment is attempting to establish a connection. For example, when you power up your networking equipment, it’s common for each light to blink slowly for a while before staying solid. This represents the process of the modem establishing whatever connection is represented by the light. If a light doesn’t stop blinking slowly and steadily after a long time, say 20 minutes, that’s usually a sign there’s an issue with that process. For example, if a modem’s upstream light continues to blink slowly Sporadic, rapid blinking is usually nothing to worry about. It’s often used in Wi-Fi and Ethernet lights to represent the transmission of data. It just means those functions are currently being used. Here are a couple of quick and easy things to try if your modem, router, or gateway isn’t working properly. Also, see our guides on internet troubleshooting and disconnecting internet for more tips to get your Wi-Fi tip-top shape. Restarting your equipment is always the first step to solving internet problems. This fix is capable of solving a wide range of common internet issues, and it’s super easy. How to restart a modem, router, or gateway: Step 1: Unplug the power cable from the back of the modem, router, or gateway. Step 2: Wait 60 seconds. Step 3: Plug the power cable back into the back of the modem, router, or gateway. Step 4: Wait for the equipment to reboot. This can take a while, especially if the equipment needs to download and install updates. It’s easy for loose or damaged cables to go unnoticed until they cause a problem. If your equipment uses a coaxial cable (the same type used for cable TV), make sure it’s screwed on hand-tight to the back of the modem or gateway. Check that the cable is screwed on snug to the wall outlet as well. If you have an Ethernet cable connecting a separate modem and router, make sure it’s pushed all the way into the Ethernet ports and that the spring isn’t broken, which would allow it to fall out. You should hear the cable fitting click as it locks into the Ethernet port. Lastly, check for any damaged cables. Look for tears, cuts, harsh kinks, and even chew marks from pets. You can’t always see if a cable is damaged, so when in doubt, replace. Author - Austin Aguirre Austin worked as a broadband technician installing and troubleshooting countless home internet networks for some of the largest ISPs in the U.S. He became a freelance writer in 2020 specializing in software guides. After graduating with a BS in technical communication from Arizona State University, he joined the team at HighSpeedInternet.com where he focuses on home network improvement and troubleshooting. Editor - Rebecca Lee Armstrong Rebecca Lee Armstrong has more than six years of experience writing about tech and the internet, with a specialty in hands-on testing. She started writing tech product and service reviews while finishing her BFA in creative writing at the University of Evansville and has found her niche writing about home networking, routers, and internet access at HighSpeedInternet.com. Her work has also been featured on Top Ten Reviews, MacSources, Windows Central, Android Central, Best Company, TechnoFAQ, and iMore. The lights and LEDs of your Nest Wifi Pro, Nest Wifi, or Google Wifi devices show the status of your network or Wifi device. Each light color and pattern has a different meaning and represents what your device is doing during setup. They can also indicate network problems. Note: Light colors are different for the Nest Wifi Pro router, Nest Wifi router, Google Nest Wifi points, and Google Wifi points. First, confirm what Wifi device you own. Nest Wifi Pro router Understanding the Status Light on Google Nest Wifi Pro Color What it means What to do No light The router has no power. Check that the power cable is properly connected to your router and a working wall outlet. If your device is already set up and the light appears off, check your light brightness settings in the app. If there's stil no light, contact customer support. The device is online and you've turned off the status light in the Google Home app. You're online. Solid white The device is online. Note: By default, the light is turned on for online Nest Wifi Pro routers, but you can turn it off in the Home app. You're online. Fast pulsing white The device is booting up. Wait for the device to boot up. This takes about a minute. When it's done, it'll slowly pulse blue to let you know it's ready for setup. The device is updating. Wait for the device to complete the update. Slow pulsing blue The device is ready for setup. Use the Home app to set up your router. Fast pulsing blue Pairing is in progress. Wait for the device to complete pairing. Solid yellow Router is factory resetting. Note: A solid yellow light during setup also indicates a network error on your device. This can take up to 10 minutes. When it's done, the device will reset itself Slow blinking yellow There's a network error or WAN connectivity was lost Note: This can also be seen on the Nest Wifi Pro mesh point. Check that the Ethernet cable is connected to both your router and modem, and both devices are turned on. You might need to unplug, then plug in each device again. Learn more about fixing network errors. Fast blinking yellow The device encountered an error during setup. Something went wrong. Wait for the device to slowly pulse blue, then try to pair the device again. You're holding down the reset button and factory resetting the device. If you keep holding down the reset button, after about 12 seconds, the light will turn solid yellow. Once it's solid yellow, let go of the factory reset button. Fast blinking red Something's wrong. Critical failure. Factory reset the router. If the light stays red, contact customer support. Nest Wifi router Color What it means What to do No light Router has no power or the light was dimmed in the app. Check that the power cable is properly connected to your router and to a working wall outlet. If your device is already set up and the light appears off, check your light brightness settings in the app. If there's still no light, contact Wifi customer support. Solid white, no light, solid white Device is booting up. Wait for the device to boot up. This takes about a minute. When it's done, it will slowly pulse white, letting you know it's ready for setup. Slowly pulsing white Device is ready for set up. Use the Home app to set up your router. Solid white Router is online and all is well. You're online. Enjoy! Pulsing yellow There is a network error. Check that the Ethernet cable is connected to both your router and your modem and both devices are turned on. You might need to unplug and plug in each device again. Learn more about fixing network errors. Fast blinking yellow You are holding down the reset button and are factory resetting

experience writing about tech and the internet, with a specialty in hands-on testing. She started writing tech product and service reviews while finishing her BFA in creative writing at the University of Evansville and has found her niche writing about home networking, routers, and internet access at HighSpeedInternet.com. Her work has also been featured on Top Ten Reviews, MacSources, Windows Central, Android Central, Best Company, TechnoFAQ, and iMore. Modems and routers are key to getting the internet in our homes. They have lights that show what's happening with your connection. These lights can blink, stay solid, or change color—and each pattern tells you something important. For example, a blinking light might mean your device is trying to connect, while a red light could mean there's a problem.Even though modems and routers are complex on the inside, these lights make it easier to understand what's going on. Learning what they mean can help you catch problems early and keep your internet working the way it should. This guide will walk you through what each light means and what to do if something looks off.Understanding Modems, Routers, and GatewaysWhile modems, routers, and gateways (combined modems and routers) may feel like the same piece of equipment to many, they serve different, yet complementary purposes. Together, they form the backbone of our online experiences, from streaming our favorite shows to attending virtual meetings or playing online games. By understanding their individual roles, we can better diagnose issues, optimize performance, and make informed decisions about our home networks.Difference between Modems, Routers, and GatewaysPrimary Function: Modems act as entry points for the internet, transforming digital signals from our devices to a format compatible with an ISP's infrastructure, giving you internet access. Meanwhile, routers manage and direct traffic among various devices in a local network, distributing internet connection from the modem. A gateway combines the functions of a modem and router into one device.Connection Types: Modems work directly with ISPs through various channels like DSL, cable, or fiber-optic, while routers connect with devices through wired Ethernet cables or wirelessly via Wi-Fi. A gateway will connect to your ISP and create Wi-Fi networks to connect your devices.IP Addresses: ISPs allocate a public IP address to modems, making them identifiable in the vast internet. Routers, on the other hand, assign private IP addresses to devices within the local network, ensuring accurate data delivery. A gateway will have its own public IP address and still assign private IP addresses to devices on the network.Security Features: While some modems might offer basic security traits, routers are the main defense line. Routers come equipped with built-in firewalls, VPN support, and advanced settings to shield the network against potential threats. Gateways also have these features.Wi-Fi Capability: Most modems are dedicated to data conversion, requiring an external router for Wi-Fi. Routers inherently possess Wi-Fi capabilities, broadcasting signals for wireless device connection. A gateway combines both functions so you only need one device.Ports and Connectivity: Generally, modems feature a single Ethernet port for direct connection to a device (often a router). In contrast, routers provide multiple Ethernet ports for various devices, plus antennas for wireless signal transmission and reception. A gateway comes equipped with multiple ethernet ports and plugins for your devices.Devices In Use: While the modem's primary role is to communicate directly with the ISP and usually one local device (like the router), the router acts as a central hub, connecting with numerous devices simultaneously to the internet. Again, a gateway provides both of these functions.Overview of Modem and Router LightsModems and routers have small LED lights that show how they're working. These lights help you know if the power is on, if you're connected to the internet, how strong the signal is, and if data is being sent or received. In this section, you'll learn what it means when these lights are solid, blinking, or off—so you can quickly check your connection and fix simple problems.Modem Lights and Their MeaningsPowerSolid: The modem is successfully powered on, indicating that it's operational and ready to connect to the network.Blinking: The modem is in the initial stages of booting up, or it might be undergoing a firmware update which can enhance its functionality or fix bugs.Off: No power is being received by the modem, or it could be experiencing technical malfunctions requiring attention.Downstream (or Receive)Solid: Signifies a successful connection to the network and confirms that the modem is actively receiving data, ensuring smooth internet activity.Blinking: The modem is in the process of trying to establish a connection, seeking signals from the service provider, which is a typical phase before a solid connection.Off: There is no connection, possibly due to signal interruptions or hardware issues.Upstream (or Send)Solid: A secure connection. The modem is effectively sending data back to the service provider, essential for two-way communication.Blinking: The modem is attempting to establish an upstream connection, reaching out to communicate back to the network.Off: There's a disruption in sending data to the internet.Online (or Internet)Solid: The modem has established a reliable connection to the Internet. You are online.Blinking: Data transfer is actively taking place, showing that there's ongoing communication between the device and the internet.Off: The modem has lost or hasn't established a connection to the Internet. You are offline.EthernetSolid: A device, perhaps a computer or a router, has established a direct connection to the modem using an Ethernet cable, ensuring faster and more stable connectivity.Blinking: An active data transfer between the modem and the connected device is happening.Off: No device has established a connection via the Ethernet port, which could mean either the port or the connecting cable requires checking.Router Lights and Their MeaningsPowerSolid: The router is receiving power, is operational and ready to transmit data across devices.Blinking: The router could be starting up—going through its boot-up sequence—or it might be updating its firmware to enhance performance or security.Off: Indicates a lack of power supply to the router or possible technical malfunctions, requiring further diagnostics and troubleshooting.Internet (or WAN)Solid: The modem has made successful connection to the internet.Blinking: Data is actively being transferred between the router and the modem, indicating communication with the broader internet.Off: The router hasn't established a connection to the modem, which can affect internet access across the network.Wireless (or WLAN/Wi-Fi)Solid: The router's Wi-Fi is active, broadcasting its signal for devices to connect wirelessly.Blinking: Data is being transferred between the router and a connected device over Wi-Fi, showcasing ongoing wireless communication.Off: The Wi-Fi feature on the router is disabled, making it unavailable for wireless connections.Ethernet (LAN ports)Solid: A device, be it a PC, game console, or smart TV, is wired directly to the router via one of its Ethernet ports, ensuring a steady connection.Blinking: An ongoing data transfer is happening between the router and the device connected to the specific Ethernet port.Off: No device is currently linked to the router through that particular Ethernet port.WPS (Wi-Fi Protected Setup)Solid: The router's WPS feature is active, allowing users to connect devices easily using the WPS button without needing to manually enter the Wi-Fi password.Blinking: A device is currently trying to connect using the WPS feature, or an ongoing pairing process.Off: The WPS function isn't actively being used or has been disabled on the router.Color Light IndicatorsAside from steady, blinking, and off, lights can also let us know the status of our devices based on their colors. Much like traffic signals, you can think that green is good, yellow is caution, and red is stop. But here's a deep dive into what each color means on your modem and router. Light Colors and Their MeaningsGreen and White: These colors generally mean everything is fine. They indicate that the modem or router is powered on, connected, and operating as expected.Yellow: Yellow lights often mean processing, like trying to connect to the internet or synchronize with your ISP. While it doesn't necessarily mean something is wrong, a yellow light can sometimes hint at slower than usual connectivity or transitional states that require a little patience before normal operation resumes.Red or Orange: Red or orange lights usually mean problems or errors with the device. This could range from a loss of connectivity to internal malfunctions. When you see these colors, try restarting the modem/router or contacting your ISP for further assistance.What Blinking Lights MeanSlow and Steady Blinking: If a light is blinking slowly, your modem or router is trying to connect. This often happens when the device is starting up or trying to talk to your internet provider.Rapid Blinking: Fast blinking usually means your device is working and sending or receiving data. You'll see this when you're streaming, gaming, or using the internet a lot—it shows that your network is busy and active.Fixing Common Modem and Router Light ProblemsYour modem and router keep all your devices connected. If their lights look strange or don't turn on, there may be a problem. Knowing what the lights mean can help you fix things faster.Here's a guide to understanding and rectifying common light-related problems.No Power LightIf the power light is off, your device might not be getting power. This is the first thing to check when something's wrong.Internet Light Not Turning on or BlinkingRestart your modem/router by unplugging it, waiting for 30 seconds, and plugging it back in.Verify that all cable connections, including the Ethernet cable from your modem to your router or computer, are secure.Contact your Internet Service Provider (ISP) to ensure there aren't any service outages.If the issue persists after these steps, consider resetting the modem/router to its factory settings (note: this will erase any custom settings).Wi-fi Light is OffAccess the router's web interface through a browser by entering the router's IP address (commonly 192.168.1.1 or 192.168.0.1).Check the wireless settings to ensure that the Wi-Fi is enabled.Consider pressing the physical Wi-Fi button on your router, if it has one. Some models allow you to turn Wi-Fi on/off with a dedicated button.Update the router's firmware, as outdated software might cause Wi-Fi to be disabled.Upstream or Downstream Light Blinking ContinuouslyUnplug the coaxial cable from your modem, check for any visible damages, and then securely reconnect it.Ensure that the coaxial cable is tightly connected to both the wall outlet and the modem.Disconnect any splitters or additional equipment temporarily to rule out potential issues.Contact your ISP, as this might be an issue with the signal from their end.Optimizing Wi-Fi ExperienceA seamless Wi-Fi experience is no longer a luxury today but a necessity. Ensuring the best performance from your Wi-Fi network means fine-tuning a few critical aspects. From strategic router placement to selecting the right frequency band and testing the actual speed you receive, here's a step-by-step guide to help you get the most out of your Wi-Fi.Router PlacementCentralize Your Router: Place your router in a central location in your home to ensure even distribution of the Wi-Fi signal.Elevate the Router: Keep it on a shelf or table rather than the floor to improve signal distribution.Avoid Obstructions: Keep away from thick walls, large metal objects, and appliances that may interfere with the signal.Adjust the Antennas: If your router has external antennas, position them vertically for better upward and downward reach.Choosing the Right Wi-Fi Band2.4 GHz Band:Pros: Longer range, better at penetrating walls and solid objects.Cons: Slower speeds, more interference since many devices use this band.Best for: Larger homes, older devices, basic internet tasks like browsing and email.5 GHz Band:Pros: Faster speeds, less interference from other devices.Cons: Shorter range, less effective at penetrating walls.Best for: Streaming, gaming, and other bandwidth-intensive tasks in close proximity.Running a Speed TestChoose the Right Tool: Use reputable speed test websites like testmyspeed.com.Test Multiple Times: Run the test at different times of the day to get an average speed.Wired vs. Wireless: For more accurate test results of your internet speed, test using a device connected via Ethernet.Compare with Advertised Speeds: If you're consistently getting speeds much lower than what you're paying for, consider reaching out to your ISP for troubleshooting.The BottomlineA strong home network helps us work, stream, and stay in touch every day. One easy way to keep it running smoothly is by checking the lights on your modem and router. These lights show if your connection is healthy or if something's wrong.Since each device is a little different, check the manual or contact your internet provider if you're unsure what the lights mean. Paying attention now can help you avoid bigger problems later and keep your internet running strong.Yes, many old routers can be repurposed as Wi-Fi extenders. By connecting it to your primary router and configuring its settings, you can boost your Wi-Fi signal in areas with weak coverage. However, ensure both routers are compatible and that you follow a reliable guide for setup.Like many electronic devices, modems and routers can get warm during operation due to the electrical components inside. However, excessive heat can be a result of poor ventilation, continuous heavy usage, or being placed in a warm environment. Ensure it's in a well-ventilated area and consider reducing heavy data tasks if it gets too hot.The USB port on routers can serve multiple purposes. It can be used to share a printer across the network, connect an external hard drive for network-attached storage, or even share media and files among connected devices. The exact use can vary based on the router model, so refer to the manufacturer's manual for specifics.Upgrading your router's firmware can enhance its performance and security. Typically, you'd log in to your router's web interface via a web browser, navigate to a section often labeled as 'Firmware Update' or 'System Tools', and follow the prompts. Always ensure you're downloading firmware directly from the manufacturer's official website or a trusted source.WPS stands for Wi-Fi Protected Setup. It's a feature that allows users to connect devices to a Wi-Fi network without entering a password. Instead, they either press a button on the router and device or use a PIN. While it offers convenience, there have been security concerns related to the WPS PIN method. It's recommended to use the button method if needed and to disable WPS if not in use. Learn what all those lights on your modem and router actually mean and how you can use them. Sep 9, 2022 Share Equipment Guides Most networking equipment has a row of status lights that represent the essential functions of your home internet network. These functions are similar across most routers, modems, and gateways (modem/router combo)—though they're often labeled differently based on the manufacturer. Read on to learn what the lights represent, what different colors mean, and how to use this information to diagnose and solve home networking woes. Maybe it's time for a new internet provider. Enter your zip code to see what's available in your area. Jump to: Modem, router, and gateway light meanings | Modem/router light colors | Blinking lights on a modem, router, or gateway | Easy fixes for modem, router, and gateway issues | FAQ | Related articles Jump to: Understanding what the lights mean on your router or modem can be key to solving your internet problems. Kayla Fischer | HighSpeedInternet.com Usually the first light in a row or column, the power light signifies that the modem, router, or gateway is turned on and has power. The power light is usually solid but may blink when the equipment is booting up. Labeled with a down arrow or DS, the downstream light indicates a modem or gateway's ability to receive information from the internet. This light will blink slowly as the equipment boots up and quickly as you download data. Depending on the model of your equipment, the downstream light may also stay solid. If your downstream light is red or off, you may not be connected to the internet. 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The Ethernet light, which is also often labeled LAN, represents a connection between the equipment and a device connected via Ethernet cable. The Ethernet lights may flash or remain solid when in use. If you have a device connected to your router or gateway via Ethernet and the light is red or off, you have a problem with your Ethernet connection—It could be with the Ethernet port on your router, the Ethernet cable, or the Ethernet port on your device. The link light represents a connection between a standalone modem and router. It's similar to the Ethernet light, but it represents a connection between two networking devices, not a connection between the networking equipment and a user device like a laptop. Link lights can be found on both modems and routers. A link light may be solid or flashing when in use. If you have a separate modem and router, there's an issue with the connection between your modem and router if the link light is red or off. It could be a bad Ethernet cable or a problem with an Ethernet port. Colors can vary across different brands and models of modems, routers, and gateways. Sometimes, the different colored lights are used to represent different states of functionality. Green and white lights Green or white colored lights usually indicate things are functioning normally. But some models always maintain green or white colored lights and use blinking to signify different states. Yellow lights Yellow lights represent processes, such as booting up or updating. Red or orange lights Red or orange lights usually indicate a problem or error with your modem, router, or gateway. Most modems, routers, and gateways use blinking lights to indicate processes, data transmissions, and sometimes errors. A light blinking slowly and steadily typically indicates the equipment is attempting to establish a connection. For example, when you power up your networking equipment, it's common for each light to blink slowly for a while before staying solid. This represents the process of the modem establishing whatever connection is represented by the light. If a light doesn't stop blinking slowly and steadily after a long time, say 20 minutes, that's usually a sign there's an issue with that process. For example, if a modem's upstream light continues to blink slowly Sporadic, rapid blinking is usually nothing to worry about. It's often used in Wi-Fi and Ethernet lights to represent the transmission of data. It just means those functions are currently being used. Here are a couple of quick and easy things to try if your modem, router, or gateway isn't working properly. Also, see our guides on internet troubleshooting and disconnecting internet for more tips to get your Wi-Fi tip-top shape. Restarting your equipment is always the first step to solving internet problems. This fix is capable of solving a wide range of common internet issues, and it's super easy. How to restart a modem, router, or gateway: Step 1: Unplug the power cable from the back of the modem, router, or gateway. Step 2: Wait 60 seconds. Step 3: Plug the power cable back into the back of the modem, router, or gateway. Step 4: Wait for the equipment to reboot. This can take a while, especially if the equipment needs to download and install updates. It's easy for loose or damaged cables to go unnoticed until they cause a problem. If your equipment uses a coaxial cable (the same type used for cable TV), make sure it's screwed on hand-tight to the back of the modem or gateway. Check that the cable is screwed on snug to the wall outlet as well. If you have an Ethernet cable connecting a separate modem and router, make sure it's pushed all the way into the Ethernet ports and that the spring isn't broken, which would allow it to fall out. You should hear the cable fitting click as it locks into the Ethernet port. Lastly, check for any damaged cables. Look for tears, cuts, harsh kinks, and even chew marks from pets. You can't always see if a cable is damaged, so when in doubt, replace. Author - Austin Aguirre Austin worked as a broadband technician installing and troubleshooting countless home internet networks for some of the largest ISPs in the U.S. He became a freelance writer in 2020 specializing in software guides. After graduating with a BS in technical communication from Arizona State University, he joined the team at HighSpeedInternet.com where he focuses on home network improvement and troubleshooting. Editor - Rebecca Lee Armstrong Rebecca Lee Armstrong has more than six years of experience writing about tech and the internet, with a specialty in hands-on testing. She started writing tech product and service reviews while finishing her BFA in creative writing at the University of Evansville and has found her niche writing about home networking, routers, and internet access at HighSpeedInternet.com. Her work has also been featured on Top Ten Reviews, MacSources, Windows Central, Android Central, Best Company, TechnoFAQ, and iMore. You'll most likely need a router when connecting any device to the internet. It's given by your ISP as a free accessory and is used for wired and wireless connections. All routers have LED indicator lights that can sometimes mean differently. However, some users have wondered why their modem light is blinking. Although flashing modem lights is normal for other modems, they sometimes indicate an internet problem. This guide will show you what blinking lights on your router mean and what to do when experiencing modem lights blinking no internet. Read this guide to learn more. What Do the Lights on My Router Mean? Whether your router or modem is in good condition or has a problem, it will first show it through different LED indicator light colors and blinking patterns. Although this can vary from router to router, below are some common router light indicators and their meanings: LAN – a blinking green light on the Local Area Network or LAN indicator light is normal. It indicates that your router uses traffic via the local network. ADSL – the ADSL indicator light should be solid green when you have a stable internet connection. Otherwise, your router has trouble connecting to the internet when it's blinking. POWER – a solid green light on the Power LED light indicates that it's receiving adequate power. If it's showing a blinking or a solid red light, your router is experiencing a power failure. WLAN – a blinking green light on the WLAN indicator light means that the WLAN interface of your router is active and someone is connected to it. There's currently no internet connection if it shows a red or yellow light. INTERNET – a steady green light on the Internet LED light indicates a stable internet connection. However, some older modems won't have this indicator light on when connected to the internet. If it shows a blinking or solid yellow light, your router or modem is not receiving an internet connection. if you have 2 modems in the one house, then they may be interfering with each other. FIRMWARE – A blinking white light can indicate that the firmware needs updating. This is specific to the brand of router – eg we have an article on how to fix your Orbi Router Flashing White Light and also Verzon Fios router white light. We have articles for individual brands – such as what to do if your Spectrum modem is flashing blue and white and what Motorola modem lights mean. How to Fix Blinking Internet Light on Router If the Internet LED indicator is currently blinking on your router, it's not connected to a stable internet connection. However, this can be fixed by following the common troubleshooting steps below. Remember to review each fix individually and check which is the most effective for your router. We have a guide specifically on how to fix Verizon router blinking yellow light. Fix #1: Check All Cable Connections When experiencing any issues with your router, check if all cable connections are securely connected. See if the LAN or DSL cables have no damage, especially near the connectors. If you see tears or loose wires, try contacting your ISP and requesting a repair. Also, check if the power cable is connected and see if the power adapter is in good condition. If it still shows a solid red indicator light, contact your ISP to get it replaced. If you're using an Ethernet or a wired connection between your computer and router, ensure that the Ethernet cable is securely connected to the router. Fix #2: Power Cycle Your Router Power cycling your router is a common fix to its problems, including the blinking internet light issue. It's also an effective solution to bugs and glitches in case your router is experiencing it. To power cycle your router, follow these steps: Turn off your router and unplug its power adapter from the socket. Also, disconnect all cable connections on its ports. Wait for one minute to drain most of its power. Next, connect all the cables back to their ports and plug the power adapter back in. Switch on your router and wait for it to initialize in a few minutes. Check if the Internet indicator light now shows a solid green light. Fix #3: Update Your Router's Firmware When your router acts up and experiences issues more often than usual, you'll need to update its firmware. Most routers need to run the latest firmware version to run normally and to provide a stable internet connection. To update your router's firmware, follow the steps below: With your router switched on, connect it to your computer using an Ethernet cable. Download the firmware update from the router manufacturer's website. If required, you may need to take note of the router's model number first. Once it's downloaded, log in to your router's web management page. Update the router's firmware using the update file you've just downloaded. Restart your router to finish the update. Check if it now runs normally. Fix #4: Perform a Hard Reset on Your Router Your last option to resolve the blinking internet light on the router issue is to perform a hard reset. This effectively resets your router's configurations to its factory defaults, including settings you may have changed. To perform a hard reset on your router, proceed to these steps: With your router turned on, locate the Reset button at the back of your router. It can sometimes be located near the Power port. Use the pointed end of a paperclip or any similar object to press and hold the button for fifteen seconds. Once it starts to reboot, release the button. Connect to your router using its original Wi-Fi login details and set it up. Check if the blinking internet light on the router issue is solved. Final Thoughts A router is necessary to stay connected to the internet, especially when you have various devices in your home. It's easy to use and has LED indicator lights to help you understand the status of the router and its services. Hopefully, this guide helps you to understand the meaning of each router LED light and what it means when they blink. If your router experiences a power failure or persistent internet issues, contact your ISP to get it repaired or replaced. Learn what all those lights on your modem and router actually mean and how you can use them. Sep 9, 2022 Share Equipment Guides Most networking equipment has a row of status lights that represent the essential functions of your home internet network. These functions are similar across most routers, modems, and gateways (modem/router combo)—though they're often labeled differently based on the manufacturer. Read on to learn what the lights represent, what different colors mean, and how to use this information to diagnose and solve home networking woes. Maybe it's time for a new internet provider. Enter your zip code to see what's available in your area. Jump to: Modem, router, and gateway light meanings | Modem/router light colors | Blinking lights on a modem, router, or gateway | Easy fixes for modem, router, and gateway issues | FAQ | Related articles Jump to: Understanding what the lights mean on your router or modem can be key to solving your internet problems. Kayla Fischer | HighSpeedInternet.com Usually the first light in a row or column, the power light signifies that the modem, router, or gateway is turned on and has power. The power light is usually solid but may blink when the equipment is booting up. Labeled with a down arrow or DS, the downstream light indicates a modem or gateway's ability to receive information from the internet. This light will blink slowly as the equipment boots up and quickly as you download data. Depending on the model of your equipment, the downstream light may also stay solid. If your downstream light is red or off, you may not be connected to the internet. Typically, a rapidly blinking light means your connection is working and transmitting data, but this can vary for different manufacturers. Give your internet connection a quick health check with our speed test. Following the downstream light, the upstream light indicates your modem or gateway is able to send information to the internet. Like the downstream light, the upstream light will blink slowly as your equipment boots up. When operating normally, the upstream light will either blink quickly and sporadically or stay solid. Some networking equipment uses a single light to represent both the upstream and downstream functions. The internet light, also sometimes labeled WAN or with a globe icon, signifies a connection to the internet. The internet light usually appears right after the upstream data light. The internet light should be solid green or white when the equipment is functioning normally. If the light is red or off, there's a problem with your internet connection. It's normal for the internet light to be blinking during boot up, but if it never goes solid, your equipment is having trouble connecting to the internet. The Wi-Fi or wireless lights represent your equipment's wireless broadcasts. Dual-band routers or gateways often have two Wi-Fi lights labeled 2.4 Ghz and 5 Ghz. Each of these lights represents a different Wi-Fi network in your home. The 2.4 Ghz Wi-Fi has more range than the 5 Ghz Wi-Fi, but the 5 Ghz Wi-Fi is faster. Knowing the ins and outs of these two Wi-Fi networks can help you get the most out of your internet service—learn more with our guide on the difference between 2.4 Ghz and 5 Ghz Wi-Fi. The Wi-Fi lights are usually flashing rapidly when your Wi-Fi is in use. If you don't have any wireless devices connected to your Wi-Fi network, these lights may be off. Some routers or gateways may also show a solid green or white Wi-Fi light, which indicates that the Wi-Fi is functional. A red Wi-Fi light usually indicates a problem. The Ethernet light, which is also often labeled LAN, represents a connection between the equipment and a device connected via Ethernet cable. The Ethernet lights may flash or remain solid when in use. If you have a device connected to your router or gateway via Ethernet and the light is red or off, you have a problem with your Ethernet connection—It could be with the Ethernet port on your router, the Ethernet cable, or the Ethernet port on your device. The link light represents a connection between a standalone modem and router. It's similar to the Ethernet light, but it represents a connection between two networking devices, not a connection between the networking equipment and a user device like a laptop. Link lights can be found on both modems and routers. A link light may be solid or flashing when in use. If you have a separate modem and router, there's an issue with the connection between your modem and router if the link light is red or off. It could be a bad Ethernet cable or a problem with an Ethernet port. Colors can vary across different brands and models of modems, routers, and gateways. 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Step 3: Plug the power cable back into the back of the modem, router, or gateway. Step 4: Wait for the equipment to reboot. This can take a while, especially if the equipment needs to download and install updates. It's easy for loose or damaged cables to go unnoticed until they cause a problem. If your equipment uses a coaxial cable (the same type used for cable TV), make sure it's screwed on hand-tight to the back of the modem or gateway. Check that the cable is screwed on snug to the wall outlet as well. If you have an Ethernet cable connecting a separate modem and router, make sure it's pushed all the way into the Ethernet ports and that the spring isn't broken, which would allow it to fall out. You should hear the cable fitting click as it locks into the Ethernet port. Lastly, check for any damaged cables. Look for tears, cuts, harsh kinks, and even chew marks from pets. You can't always see if a cable is damaged, so when in doubt, replace. 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To find the model/version number, check the bottom or back panel of your NETGEAR device. Select a product or category below for specific instructions. Internet modems feature a wide variety of symbols and LED lights whose meanings can change depending on their color and activity. For example, modem lights blinking fast can mean something completely different than a light that's stable or not on at all. This article will break down what modem light colors mean, how to read the symbols on a modem and provide additional resource links to popular internet provider modem manuals and support documents. The LED lights on modems communicate the functionality and activity on the internet device. Specific colors can show which aspects of the device or internet service work, if there's an error or if something is broken or offline. The meaning of modem light colors varies greatly depending on the specific modem model and the internet service provider used. The list below is a guide for basic understanding only. Here are some of the more common modem light colors and what they can mean. Green: A green modem light usually indicates modem power, an active internet connection, a confirmed pairing with another device, an active phone line, or a strong internet signal. Blue: Blue modem lights can show a firmware update is in progress, the modem is connecting to another device for pairing, a provider has been detected, and the connection process has begun, the connection process has been completed, and a phone call is in progress. Orange: An orange modem light sometimes indicates a good (but not great) internet connection, the early stages of the connection process after turning a modem on, when phone service is disconnected, but emergency calls are still possible, and the pairing process has begun. Red: Red modem light meanings can mean an overheated modem, there being a service error, a weak internet connection, no internet connection, PPP authentication failed, setup failure, and phone service being completely disconnected. A red light is usually easy to fix. White: A white LED light is typically used on modems to indicate power, the pairing process has begun, the modem trying to detect a service provider and connect to the internet, and a firmware upgrade being in progress. As with the LED colors, modem lights blinking rapidly or shining a stable light can also have different meanings. Stable Modem Lights: Usually, a steady modem light that isn't blinking means its associated function is working correctly or has finished. However, a steady red or orange modem light, as mentioned above, could indicate something is wrong or needs fixing. Modem Lights Blinking: A blinking or flickering modem light, depending on its color, could indicate functioning internet activity, a connecting or pairing activity in progress, or a phone handset that's picked up or off the hook. Sometimes moderate modem light blinking can mean the beginning of a process, while faster blinking can indicate the end phase of a process. Off/No Light: If a modem's LED light is completely off, this usually means a lack of power, complete disconnection from a provider or one of its services, or a feature has been disabled. While it sounds counterintuitive, no lights sometimes indicate the modem is working correctly. An off modem light isn't always a bad thing, though. For example, if you don't need to use an Ethernet cable and don't have one connected, it would make sense for the Ethernet light to be off. Similarly, if you don't have a landline phone service through your internet provider, you don't need to worry about the phone line indicator light. Some modems and modem-router hybrids feature text labels above lights and icons to make understanding their meanings easier. Many, however, don't, which can make them ambiguous and confusing. AndreyDeryabin/iStock/GettyImagesPlus Modem and router symbols will vary from device to device though they usually resemble those shown in the image above. Here's what each modem symbol means from left to right. Power. This symbol is pretty universal and is on most modems and a variety of other products. Wi-Fi and Internet: The meaning of the second and third symbols can vary depending on your modem model. If you have just one of these types of symbols, it's usually for your internet signal or connection. Two slightly different versions can refer to your internet signal and its Wi-Fi connection to other devices or separate 2.5 and 5 GHz Wi-Fi signals. Internet: The fourth symbol, which looks like a planet with a ring around it, typically refers to internet connectivity. Sometimes this symbol is used to represent the WAN connection as well. The @ symbol is also commonly used for this purpose. Ethernet: This fifth symbol represents a wired connection to the modem or router. Usually, an empty square refers to a WAN connection, while a box with a line striking through its bottom side, as shown above, refers to a LAN connection. A symbol of three squares connected by a line can also represent a LAN connection. USB: The sixth symbol, a trident-like icon with the middle line ending in a point, represents a USB connection. There are various versions of the USB icon, but they usually resemble this format. WPS: Often, two arrows forming a circle represent WPS (Wi-Fi Protected Setup). WAP is a way to quickly connect devices to your Wi-Fi by pushing a button at the rear of your router. The LED light will turn on briefly during this process. Modem models vary greatly, and most manufacturers use their own custom icons and symbols. If you've been stuck trying to understand your Spectrum modem lights or don't understand the Arris modem lights' meaning, this is probably why. Here are the links to the official modem light guides for several of the most popular internet providers to help you further understand your modem lights. CenturyLink Spectrum Arris Xfinity AT&T Verizon Cox Internet FAQ The first step is to turn off and unplug your modem. Then, wait 15 minutes before hooking everything back up. If all the lights turn green again, troubleshoot your device's settings. Modem indicators vary by manufacturer, but typically, a router with a good internet and Wi-Fi connection will show solid green or blue lights near the power, internet, and Wi-Fi symbols. Your modem might show additional lights, depending on its connections and functions. Thanks for letting us know! Get the Latest Tech News Delivered Every Day Subscribe Tell us why!