

Vision Tech

Wi-Fi, routers & broadband Handbook

25 free step-by-step guides in plain English

Free to print and share.

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Wi-Fi keeps dropping

Wi-Fi that keeps dropping is frustrating, but the cause is usually the router, the distance from it, or something interfering with the signal. Start with the simplest checks.

Quick fixes to try first

- Move closer to the router. Walls, floors and large furniture weaken the signal.
- Check whether the problem affects every device or just one. If it is only one, the fault is probably with that device.
- Keep the router off the floor and away from microwaves, cordless phones and baby monitors.
- Turn the device's Wi-Fi off and on again, or switch Airplane mode on for ten seconds and back off.

Step by step

1. Restart the router. Switch it off at the power, wait 30 seconds, switch it on and give it five minutes to start properly. Do not press the small reset button.
2. Restart the affected device too.
3. Install waiting updates on the device, as they can fix connection problems.
4. If one device keeps dropping, "forget" the network and join again. Make sure you have the Wi-Fi password first, as you will need to type it in. On iPhone, open **Settings**, then **Wi-Fi**, tap the information icon beside the network, then **Forget This Network**. On Windows, open **Settings**, then **Network & internet**, then **Wi-Fi**, then **Manage known networks**.
5. Check your broadband provider's website or app from mobile data to see whether there is a fault in your area.

If that did not work

A Wi-Fi extender or mesh system can help if you have a large home, but this is best chosen with advice.

When to get more help

Stop and ask for help if the drops happen every few minutes, only at certain times, or affect all devices even close to the router. Contact your broadband provider if the router lights show a fault. Tell us what lights the router shows, which devices are affected and when it happens.

Still stuck? Email admin@visiontech336.com and tell us what you can see on the screen. Menus and button names can differ slightly between versions and makes. If something does not match, stop and ask rather than guess. Please never send passwords or card details.

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Connected to Wi-Fi but no internet

If your device says it is connected to Wi-Fi but websites will not load, the problem is usually between your router and the internet, not with your device. A few checks will show where.

Quick fixes to try first

- Test another device on the same Wi-Fi. If it works there, the problem is with the first device. If nothing works, the router or broadband is at fault.
- Check the router lights. A red or orange light, or a missing internet light, usually means the broadband connection is down.
- Switch Airplane mode on for ten seconds, then off again.
- If you are on public Wi-Fi, open a browser. Many cafes and hotels ask you to accept terms or sign in on a page first.

Step by step

1. Restart the router. Switch it off at the power, wait 30 seconds, switch it on and wait five minutes for the lights to settle.
2. Restart your device.
3. Use your phone's mobile data to check your broadband provider's website or app for a reported fault in your area.
4. "Forget" the Wi-Fi network and join again, using the password from the router label. On iPhone, open **Settings**, then **Wi-Fi**, tap the information icon beside the network and choose **Forget This Network**. On Windows, open **Settings**, then **Network & internet**, then **Wi-Fi**, then **Manage known networks**.
5. Windows: right-click the network icon at the bottom right and look for **Troubleshoot problems**. The exact wording may differ between Windows 10 and 11.

If that did not work

Turn off any VPN or proxy that you set up yourself, in case it is blocking the connection. Do not turn off your security software.

When to get more help

Stop and ask for help if all devices are offline after a router restart, the router shows a red light for more than an hour, or the router is damaged or very hot. If your provider confirms a fault, they will need to fix it. Tell us what lights show, which devices are affected, and what you have tried.

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How to restart your router properly

Restarting your router fixes a surprising number of internet problems. Doing it properly means waiting long enough, and avoiding the reset button, which wipes your settings.

Before you start

- Tell others in the house, because everyone will lose the internet for a few minutes.
- Save anything you are working on online.
- If you use the router for a landline or TV service, check with your provider whether that will be affected.

Step by step

1. Find the router. It is the box your broadband cable goes into.
2. Switch it off at the power button, or unplug it from the wall socket.
3. Wait at least 30 seconds. This lets it clear its memory.
4. Switch it on or plug it back in.
5. Wait five minutes. Lights will flash while it starts up. Wait until the broadband or internet light is steady.
6. Check your devices have reconnected, and try a website.

Do not press the reset button

Most routers have a tiny hole labelled **Reset** that you press with a pin. Pressing it for several seconds restores factory settings. You would lose your Wi-Fi name and password and may lose the settings your provider needs. Only do this if your provider tells you to. Switching off and on is different and safe.

Good to know

- Do not restart it several times in a row. Give it the full five minutes first.
- The Wi-Fi name and password are usually printed on a label on the router.
- A router that is restarted once a month or so may stay more reliable.

When to get more help

Stop and ask for help if the lights still show a fault after the restart, the router is very hot or smells of burning, or you pressed the reset button by accident and cannot reconnect. Contact your broadband provider if the broadband light stays red or off. Tell us the colour and pattern of the lights.

Still stuck? Email admin@visiontech336.com and tell us what you can see on the screen. Menus and button names can differ slightly between versions and makes. If something does not match, stop and ask rather than guess. Please never send passwords or card details.

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What to do when your internet is down

When the internet stops working it is frustrating, but the cause is often simple. Work through these steps in order before you call anyone.

1. Check it is really down

Try another device, such as your phone. Turn Wi-Fi off on the phone and try mobile data to see if the problem is the broadband. If only one device is affected, the problem is probably that device, not your connection.

2. Check for a provider problem

Using mobile data, look at your provider's outage checker or app. BT, Sky, Virgin Media, Plusnet, TalkTalk, Vodafone, EE and others all have one. If there is a known fault, waiting is usually your only option, and our guide on outages and compensation explains your rights.

3. Look at the router

Check that it is switched on and that the lights look normal. Our router lights guide explains what they mean. A red or orange light, or no light for the internet, suggests a fault with the line.

4. Check the cables

1. Make sure the power cable is pushed in at both ends.
2. Check that the phone line or fibre cable is firmly in place.
3. Look for chewed, bent or squashed cables.
4. If you use a separate fibre box, check that it has lights on too.

5. Restart the router properly

1. Switch the router off at the wall.
2. Wait 30 seconds.
3. Switch it on and wait up to ten minutes for the lights to settle.

Do not press a small **Reset** button with a pin. That is a factory reset, which erases your settings and Wi-Fi details.

6. Restart your devices

Turn your computer or phone off and on again, then reconnect to Wi-Fi.

Then contact your provider

Have your account details ready and tell them what you have tried and what the lights show. If an engineer visit is needed, note the date and time they promise.

When to get more help

If your provider says the line is fine but you still cannot get online, the problem may be your router or settings, and we can investigate.

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Router lights explained

The little lights on your router can tell you a lot about what is wrong. Every make is a bit different, so treat this as a general guide and check your router's booklet or provider's website for exact meanings.

Power

A steady light means the router is on. No light means no power, so check the plug, socket and any switch on the back. If the plug and socket are fine, the power adapter may have failed.

Broadband, DSL or Link

This shows whether the router has found your line.

- Steady, often white, green or blue: connected to the line.
- Flashing: trying to connect. This is normal for a few minutes after a restart.
- Off, or flashing for a long time: the line may have a fault.

Internet or Online

This shows whether you have actually reached your provider.

- Steady white, green or blue: you are online.
- Red or orange: the router has a connection but cannot get online. This can mean an outage or a login problem.
- Off: no internet connection detected.

Wi-Fi or Wireless

A steady or flashing light means Wi-Fi is on. If it is off, Wi-Fi may be switched off in the settings or by a button on the router.

Ethernet or LAN

These light up when a cable is connected to that socket, and flash when data is moving.

WPS

This light relates to a quick-connect button. Do not press the WPS button unless you know why, as it can make it easier for others to join your network.

What to do with a red or orange light

1. Check the cables are secure.
2. Restart the router properly, then wait ten minutes.
3. Check your provider's outage page on mobile data.
4. If the light stays red or orange, contact your provider and tell them exactly which light and colour you can see.

Take a photo

A quick photo of the lights makes it much easier to explain the problem to your provider or to us.

When to get more help

If the lights do not match anything you can find, or the router keeps restarting, tell us the make and what you can see.

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Broadband outages and compensation: what you can claim

If your broadband stops working, you may be owed money. In the UK, Ofcom's automatic compensation scheme covers many home customers, and you should not normally have to chase it.

First, check for an outage

Use another device on mobile data to look at your provider's outage checker or app. Note the time the problem started. Openreach, which runs much of the national network, may also be dealing with a fault in your area.

What the scheme covers

The scheme applies to the larger providers, including BT, EE, Sky, Virgin Media, Vodafone and others, for home broadband and landline customers. Providers must pay compensation in these situations:

- Your service stops and is not fixed within two full working days.
- An engineer misses an appointment or cancels with less than 24 hours' notice.
- A new service starts late compared with the date you were promised.

The amounts change each year, so check Ofcom's website for the current figures rather than relying on old numbers you may see online.

How it is paid

Compensation is normally credited to your bill, and you should not have to ask. Some providers may offer another form of payment if you prefer.

What to do

1. Report the fault to your provider as soon as it starts, and keep the reference number.
2. Write down dates and times, including the engineer's promised appointment.
3. Take screenshots of any outage messages.
4. Check your next bills for a credit.

If it is not paid

Contact your provider and politely quote the Ofcom scheme and your reference number. If you are unhappy with the reply, you can ask them to put it in writing and take it to the free alternative dispute resolution scheme that your provider belongs to. Your provider's complaints page will say which.

Smaller providers may not be in the scheme, but they may have their own policies.

When to get more help

If you are unsure whether the fault is with the line or your own equipment, we can help work that out before you contact your provider.

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DNS problems explained

DNS is like the internet's phone book. It turns website names such as a shop or bank address into the numbers computers use. If DNS stops working, you may be connected to Wi-Fi but see errors saying a site cannot be found.

Signs of a DNS problem

- Websites will not open, but apps still work.
- Messages such as "server not found" or "DNS probe finished".
- Some sites work and others do not.
- Typing a numeric address works, but a name does not.

Try this first

1. Restart the router properly: off for 30 seconds, then on.
2. Restart the device.
3. Try another device to see whether it is just one.

Trying a different DNS service on one device

Your router normally hands out your provider's DNS. You can test whether it is at fault by using a public one on a single device. Popular choices are 1.1.1.1 and 8.8.8.8. Menus vary by device, so look for the Wi-Fi network settings and a section called **DNS** or **IP settings**.

1. Open the Wi-Fi settings on the device.
2. Choose your network and look for **Advanced**, **Configure DNS** or **IP settings**.
3. Change DNS from **Automatic** to **Manual**.
4. Enter 1.1.1.1 and 8.8.8.8 as the two DNS addresses.
5. Save and try the website again.

If it now works, the DNS from your router or provider is the likely cause. You can leave the device like that or set it back to **Automatic** later.

Be careful

- Only change this on one device while testing, not everywhere.
- Write down the original settings first.
- Public DNS services are run by companies, and your lookups go through them, so choose one you trust.
- Do not change router-wide settings you do not understand.

Clearing the cache

Devices remember old DNS answers. On Windows, restarting usually clears it. Turning a phone's Wi-Fi off and on, or restarting it, does the same.

When to get more help

If changing DNS does not fix it, or a site is blocked on every device, tell us which sites fail and we will investigate.

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IP address conflicts and limited connectivity

Sometimes a device says it is connected to Wi-Fi but shows a message such as Limited connectivity or No internet. One possible cause is a problem with the device's address on your network.

What is an IP address?

Every device on your home network gets an address from the router, a bit like a house number. Two devices should never share one. If they do, one or both can lose connection. That is called an IP conflict.

Common causes

- A device set manually to use an address that the router also gives out.
- A router that has been restarted and handed out addresses in a different order.
- A temporary glitch with the router's address system.
- A second router or extender added without being set up properly.

Simple fixes

1. Turn Wi-Fi off and on again on the affected device.
2. Restart the device.
3. Restart the router properly: off for 30 seconds, then on, and wait ten minutes.
4. Tell the device to forget the Wi-Fi network, then reconnect with the password.

Check the device is set to automatic

Look in the network settings of the device for **IP settings**. It should say **Automatic** or **DHCP**. If someone set it to **Manual** or **Static**, change it back unless you know why it was set that way, and write down the old details first.

If it keeps happening

- Check whether a second device or extender is plugged in and acting as a router.
- Unplug extras one at a time and see which one is causing it.
- Check for a router update, as these can fix bugs.

Windows tip

If you are comfortable, you can ask Windows to refresh its address. Search for **Command Prompt**, open it and type the commands your provider or support person gives you. Do not paste commands you have found on unknown websites.

A word on safety

Do not change settings on the router that you do not recognise.

When to get more help

If the message appears on several devices, or returns every day, the router may need a closer look, so tell us the make and what you have tried.

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Smart devices will not join Wi-Fi

Smart plugs, bulbs, doorbells, cameras and many other gadgets can be fussy about joining Wi-Fi. The most common cause is that they only work on one band, and your phone is connected to another.

Why it happens

Many smart devices only support 2.4GHz Wi-Fi. If your router combines 2.4GHz and 5GHz under one name, your phone may join the 5GHz side while you are trying to set up the gadget, and the setup fails. Our 2.4GHz and 5GHz guide explains the difference.

Things to check first

- Is the device close to the router while you set it up?
- Is the Wi-Fi password typed correctly? It is case sensitive.
- Does the password contain unusual symbols? Some gadgets cope badly with them.
- Is the router near its limit of connected devices? Try disconnecting a few unused ones.

How to get it connected

1. Move your phone close to the router and the device.
2. Put the device into set-up mode, as the instructions describe. This is often a flashing light.
3. Check the router's Wi-Fi settings. If there is a **Smart Connect** or **band steering** option, you may have to switch it off temporarily, if your router allows. Menus differ, so check your provider's help.
4. Alternatively, choose a separate 2.4GHz name if the router offers one.
5. Connect your phone to the 2.4GHz name, open the device's app and follow the steps.
6. Once it works, you can usually switch things back.

Security reminders

- Do not lower your Wi-Fi security to Open or an old standard just to help a gadget join.
- Change any default passwords in the device's app.
- Keep the apps and devices updated.

If it will not stay connected

Some gadgets drop off if the router changes channel or restarts. Moving them closer, or adding a mesh unit nearby, can help. Putting smart gadgets on a guest network can also keep them away from your computers.

When to get more help

If a device still refuses to join, tell us the make and model and what happens on screen, and we can look into it.

Still stuck? Email admin@visiontech336.com and tell us what you can see on the screen. Menus and button names can differ slightly between versions and makes. If something does not match, stop and ask rather than guess. Please never send passwords or card details.

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Why a website works on mobile data but not on Wi-Fi

It can be puzzling when a website or app works on your phone's mobile data but not on your home Wi-Fi. That tells you the website itself is probably fine, and something on the path through your home connection is different.

Common causes

- **DNS trouble.** Your router's address lookup may not be finding the site. Our DNS guide explains this.
- **Provider filters.** Some broadband providers have a content filter on by default, which can block sites by mistake.
- **Router settings.** A parental control or firewall setting on your router may block it.
- **IP address blocks.** Some websites block certain internet addresses. That can happen if someone else sharing that address misused it.
- **Wrong date or time on a device,** which breaks secure connections.
- **Security software or browser add-ons** that block the site.

What to try

1. Try a different device on the same Wi-Fi. If it works, the first device is the problem.
2. Try a different browser, or a private window.
3. Restart the router properly and wait ten minutes.
4. Check your provider's account page for a filter or protection setting. If you turned it on, see whether the site is in a blocked category, and whether you can allow it.
5. Test DNS on one device, using the guide above.
6. Check the device date and time are set automatically.

Be careful

- Do not turn off all security just to make a site open.
- Be cautious if it is a site that has a warning page. It may be blocked for a good reason.
- Do not follow advice that tells you to open ports or switch off your firewall.

Contacting the site

If everything else works and just one site fails, the site's owner may have blocked your address. Look for a contact page, reached over mobile data, and explain what is happening. Your provider can also tell you whether you have a shared address.

A useful note

Take a screenshot of any error message, as it often names the cause.

When to get more help

If a site stays blocked after these steps, send us the address and the error message, and we will look into it.

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Slow internet at home

Slow internet at home can come from your broadband, your router, your Wi-Fi signal or too many devices at once. Work out which first, then fix that part.

Quick fixes to try first

- Check whether it is slow on every device or just one.
- Ask whether anyone is streaming, gaming or downloading large files. Several 4K streams can use up a modest connection.
- Move closer to the router and try again.
- Restart the router: switch it off for 30 seconds, then on, and wait five minutes.

Step by step

1. Run a speed test from a trusted site, ideally on a device plugged into the router with a network cable. This shows what you are really getting.
2. Run it again on Wi-Fi in the room where it is slow. If the cabled result is good but Wi-Fi is poor, the problem is the Wi-Fi signal, not the broadband.
3. Compare the result with the speed in your package. Real speeds are often a little lower, and are usually quoted as a typical range.
4. Restart slow devices and install any waiting updates.
5. Close programs and tabs that are not in use, and pause large downloads and cloud backups.

Improving Wi-Fi

- Keep the router out in the open, off the floor and away from other electrical devices.
- Do not hide it in a cupboard or behind the television.
- In a large house, a mesh system may help, but ask for advice before buying.

When to get more help

Stop and ask for help if speeds are far below what you pay for, even with a cable, or if it is slow at the same times every evening. In that case, contact your broadband provider, who can test your line. Ask us if you are unsure how to read your results. Tell us your package, your test results and when it is slowest.

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Where to put your router for the best Wi-Fi

Where your router sits makes a bigger difference to your Wi-Fi than most people expect. A few minutes moving it can fix weak signal without spending a penny.

Why position matters

Wi-Fi is a radio signal. It spreads out in all directions and gets weaker as it passes through walls, floors and furniture. Thick brick, stone, mirrors, large fish tanks and metal objects block it most.

The best spot

- Somewhere central in the home, so the signal has the shortest route to every room.
- Out in the open, on a shelf or small table, rather than on the floor.
- Upstairs or downstairs? Signal spreads more easily downwards, so a first-floor spot can suit a two-storey house.
- Away from walls and corners where possible.

Places to avoid

- Inside a cupboard, under the stairs or behind the television.
- Next to a microwave, cordless phone base or baby monitor, which can cause interference.
- Right beside a window, where much of the signal escapes outside.
- Tucked behind a sofa or curtains.

How to move it

Your router usually has to stay near the point where the broadband enters your home, such as the first phone socket or fibre box. If that is in an awkward place, ask your provider whether a longer cable is suitable, or consider a mesh system. Do not buy a random long phone extension lead, as poor cables can slow your connection.

1. Switch off and unplug the router before moving it.
2. Plug it into the new socket and wait a few minutes for the lights to settle.
3. Test the signal in the rooms you use most, on your phone.
4. If it is better, leave it there. If not, try another spot.

Keep the aerials in mind

If your router has aerials, point them upright. Most are designed to send signal outwards from a vertical position.

When to get more help

If you cannot get a good signal anywhere sensible, or the router has to stay somewhere awkward, we can advise on mesh Wi-Fi or wired options for your home.

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Wi-Fi extenders, mesh and powerline explained

If your Wi-Fi does not reach every room, there are three common fixes. Each works differently, and the right one depends on your home.

Wi-Fi extenders

An extender picks up your existing Wi-Fi and repeats it. They are cheap and easy to fit, but they usually cut the speed of the repeated signal and often create a second network name. They work best in a small gap where the router signal is still reasonably strong.

Mesh Wi-Fi

A mesh system uses a main unit plus one or more satellites that work together as a single network with one name. Your phone moves between them automatically. Mesh costs more, but it usually gives the most even coverage in larger or awkwardly shaped homes. Some providers, such as BT, Sky and Virgin Media, offer their own add-on units, so check what yours supports.

Powerline adapters

These send the internet signal through your house's electrical wiring. You plug one in beside the router, connect it with a network cable, then plug another into a socket in a distant room. That second adapter can give you a cable socket or its own Wi-Fi. They are handy for outbuildings or thick walls, but results depend on the age and quality of your wiring.

Which should I choose?

- Small gap in coverage: an extender may be enough.
- Large home or several floors: mesh is usually best.
- Thick walls, or a home office far away: powerline, or a long network cable if you can run one.
- Gaming or video calls: a cable to the room beats any wireless option.

Tips for any of them

1. Place extenders or satellites halfway between the router and the weak area, not in the weak area itself.
2. Plug powerline adapters straight into the wall, not into extension leads.
3. Keep their software up to date, as updates fix security problems.

When to get more help

If you are unsure which option suits your home, or a new system will not connect properly, we can help you choose and set it up.

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2.4GHz, 5GHz and 6GHz Wi-Fi explained simply

Modern routers send Wi-Fi on more than one set of frequencies, called bands. Knowing the difference helps you understand why some rooms or devices behave differently.

2.4GHz: the long-range band

This is the older band. Its signal travels further and passes through walls better, but it is slower and is shared with lots of other things, such as neighbours' routers, microwaves and Bluetooth gadgets. Many smart plugs, doorbells and older devices only work on this band.

5GHz: the fast band

This band is quicker and less crowded, so it is good for streaming, gaming and video calls. The catch is shorter range. It struggles through thick walls and floors, so you may see it weaken quickly as you move away from the router.

6GHz: the newest band

Newer routers, sometimes labelled Wi-Fi 6E or Wi-Fi 7, also offer 6GHz. It can be very fast with little interference, but it has the shortest range and only works with newer phones and laptops. Do not worry if you do not have it.

Which one is my device using?

Many routers combine the bands under one name and choose for you. Others show separate names, often ending in something like -5G. You can usually tell which is which on the router's settings page. Pages differ between routers, so check the sticker on the router for the address and login details.

Simple rules of thumb

- Near the router and want speed: use 5GHz.
- Far from the router, or through several walls: 2.4GHz may be steadier.
- Smart home gadgets that will not connect: see our guide on smart devices and Wi-Fi.

Should I split them?

Leave the default alone unless you have a reason. Separate names can help if a device is stubborn, but a single name is easier day to day.

When to get more help

If a device keeps choosing the wrong band, or you are not sure what your router offers, we can look at the settings with you.

Still stuck? Email admin@visiontech336.com and tell us what you can see on the screen. Menus and button names can differ slightly between versions and makes. If something does not match, stop and ask rather than guess. Please never send passwords or card details.

Wi-Fi, routers & broadband | Easy | 2 min read

Slow Wi-Fi in one room

When Wi-Fi is fine in most of the house but poor in one room, the cause is almost always distance or something blocking the signal. The good news is there are several simple things to try.

Check it is the Wi-Fi

First, test whether the whole internet is slow or just the Wi-Fi in that room. Stand next to the router and run a speed check on your phone. Then repeat in the poor room. If the figures are very different, the signal is the problem. Our broadband speed test guide explains how.

Things that weaken the signal

- Thick walls, chimney breasts and floors.
- Mirrors, metal furniture and large appliances such as fridges.
- Fish tanks, which are full of water.
- Microwaves and cordless phones nearby.
- Too many neighbouring networks on the same channel.

Quick fixes

1. Move the router to a more central spot, or lift it off the floor.
2. Move your device. Sometimes a different corner of the room works better.
3. Restart the router by switching it off for 30 seconds and back on.
4. Try the other Wi-Fi band. Use 5GHz if you are close, and 2.4GHz if you are far away. Our 2.4GHz and 5GHz guide helps with this.
5. Forget the network on the device and reconnect.

Bigger fixes

- A mesh Wi-Fi system gives much better coverage in larger homes.
- A powerline adapter or a network cable to the room can be very reliable.
- A cheap extender may help if the room is only just out of range.

Check the device itself

An old phone, laptop or tablet may have a weaker Wi-Fi chip than newer ones. If only one device is slow, even next to the router, that device may be the cause. Make sure it has its latest updates installed.

When to get more help

If the room is still poor after moving things around, we can recommend the right kit for your layout and help set it up.

Still stuck? Email admin@visiontech336.com and tell us what you can see on the screen. Menus and button names can differ slightly between versions and makes. If something does not match, stop and ask rather than guess. Please never send passwords or card details.

Wi-Fi, routers & broadband | Easy | 2 min read

How to run a broadband speed test properly

A speed test is a quick way to check what your broadband is delivering. The results only mean something if you run the test properly, so here is how.

Before you test

- Pause downloads, streaming and updates on every device.
- If you can, connect a laptop to the router with a network cable. Wi-Fi adds its own limits.
- Close other tabs and apps on the device.
- Use a well-known test site or the one from your provider or Ofcom.

Running the test

1. Stand near the router if you are testing by Wi-Fi.
2. Open the test and press **Go** or **Start**.
3. Write down the download, upload and ping figures.
4. Repeat two or three times, and at different times of day, such as morning and evening.

What the numbers mean

- **Download** is how fast data arrives. It matters for streaming, browsing and downloading files.
- **Upload** is how fast you can send data. It matters for video calls, backing up photos and working from home.
- **Ping or latency** is the delay, measured in milliseconds. Lower is better, especially for gaming and calls.
- **Jitter** is how much that delay varies. Lots of jitter makes calls choppy.

Is my result good?

Compare it with the speed your provider quoted when you signed up, found in your contract or welcome email. Speeds are often given as typical or minimum figures, and Wi-Fi results will usually be lower than cabled ones. A small difference is normal.

Avoid judging by one test. If results are regularly well below what you pay for, even over a cable, then contact your provider and quote your test results, with dates and times.

Common mistakes

- Testing on a phone with a weak signal.
- Testing while someone is watching a film.
- Using a VPN while testing, which can lower the result.

When to get more help

If your cabled speed is poor or keeps varying, we can check your router and set-up before you call your provider.

Still stuck? Email admin@visiontech336.com and tell us what you can see on the screen. Menus and button names can differ slightly between versions and makes. If something does not match, stop and ask rather than guess. Please never send passwords or card details.

Wi-Fi, routers & broadband | Medium | 2 min read

Slow internet when everyone is home, and bufferbloat

Does your internet crawl in the evening when everyone is online? That is normal to some extent, but there are ways to make it better.

Why it slows down

Your broadband connection is shared between all your devices. If several people are streaming films, gaming, joining calls and downloading updates at once, they all compete for the same capacity. Your neighbourhood can also be busier in the evenings, which can affect some connections.

What is bufferbloat?

Imagine a motorway slip road with a long queue. When your connection is busy, data waits in a queue inside your router. That wait causes delay, so web pages hang, video calls freeze and games lag, even though your speed test looks fine. This is bufferbloat. It is most obvious when someone is uploading a big file or backing up photos.

Simple ways to ease it

1. Pause large downloads, game updates and cloud backups while you need a good connection.
2. Schedule updates for overnight, where the device allows.
3. Lower the video quality on streaming apps if the connection is struggling.
4. Use a network cable for the devices that matter most, such as a work laptop.
5. Restart the router properly if it has been on for months.

Look at the router

Some routers have a setting called **QoS**, **Smart Queue** or **Traffic prioritisation**. It can help share the connection more fairly. Settings differ between routers, so only change them if you understand them or have guidance from your provider. Check the sticker for the router address and login.

Check your Wi-Fi

Crowded Wi-Fi can look like a slow connection. Our guides on speed tests and Wi-Fi bands can help you tell the difference.

When to think about a change

If the problem is there all day, even with only one person online, then capacity may not be the cause. If you often hit the limit, ask your provider what faster options are available at your address. Do not rely on an advertised figure you read some time ago.

When to get more help

If your calls and games lag even though speed tests look fine, we can help narrow down the cause.

Still stuck? Email admin@visiontech336.com and tell us what you can see on the screen. Menus and button names can differ slightly between versions and makes. If something does not match, stop and ask rather than guess. Please never send passwords or card details.

Wi-Fi, routers & broadband | Easy | 2 min read

How to connect a device to Wi-Fi

Joining a device to Wi-Fi takes a Wi-Fi name and a password. Both are usually printed on a label on your router, so have it to hand.

Before you start

- Find the router label. Look for **Wi-Fi name** (also called SSID) and **Password** or **Wireless key**.
- Passwords are case sensitive, and similar-looking letters and numbers, such as 0 and O, are easily mixed up.
- Many routers offer two networks, one ending in "5G". Either works, but 5G is faster at short range and weaker through walls.

Step by step

1. **iPhone or iPad:** open **Settings**, then **Wi-Fi**, make sure it is on, tap your network, type the password and tap **Join**.
2. **Android:** open **Settings** and look for **Wi-Fi**. It may be under **Network & internet** or **Connections**, depending on the make. Tap your network and enter the password.
3. **Windows:** click the network icon at the bottom right, pick your network, choose **Connect**, then enter the password.
4. **Mac:** click the Wi-Fi icon in the menu bar at the top, choose your network and enter the password.
5. **Smart TVs and consoles:** open their settings menu, look for **Network** or **Wi-Fi**, and follow the same steps.

If it will not connect

- Check you typed the password exactly. Many devices have a small eye icon to show what you typed.
- Move closer to the router.
- Restart the router and your device.
- If a device refuses a known network, choose **Forget** for that network and try again.

Do not join networks you do not know, and avoid doing banking on public Wi-Fi.

When to get more help

Stop and ask for help if you have lost the password and cannot find the label, the router has been replaced, or a device will not find any network at all. Please do not press the router reset button. Tell us the device, the network name, and what message you see.

Still stuck? Email admin@visiontech336.com and tell us what you can see on the screen. Menus and button names can differ slightly between versions and makes. If something does not match, stop and ask rather than guess. Please never send passwords or card details.

Wi-Fi, routers & broadband | Medium | 2 min read

How to change your Wi-Fi name and password safely

Changing your Wi-Fi name and password is a good idea if you have shared it widely or it is still the original one from the router. Do it carefully, because every device will need the new password afterwards.

Before you start

- Be near the router, ideally connected by cable or by Wi-Fi.
- Have the router sticker handy. It usually shows the admin address and login details.
- Write down the new password somewhere safe, such as a notebook kept at home.

Choosing a good name and password

- Do not put your surname, address or router make in the name.
- For the password, use three or four unrelated words with a number or two. It is long, easy to remember and hard to guess.
- Avoid birthdays, pet names and simple patterns.

How to change them

Router menus differ between BT, Sky, Virgin Media, Plusnet, TalkTalk and others, so the words on your screen may not match these steps exactly. Some providers also let you do this in their app.

1. Open a web browser and type the router address from the sticker, often something like 192.168.x.x. Some providers use a name instead.
2. Sign in with the admin password on the sticker, or the one you set earlier.
3. Look for a section called **Wireless**, **Wi-Fi** or **Wi-Fi settings**.
4. Change the network name, then the password. If there is a security option, choose **WPA3** or **WPA2/WPA3**. If neither is offered, choose **WPA2**.
5. Choose **Save** or **Apply**. Your connection will drop.

Afterwards

Reconnect each device with the new details. Phones, laptops, TVs, games consoles and smart speakers will all need it. If a device will not reconnect, tell it to forget the network first and then join again.

Never choose an option labelled **Open** or **None** for security, as anyone could use your connection.

When to get more help

If you are locked out of the router, do not factory reset it unless you must, because that wipes all your settings and may need your provider's details to set up again. We can talk you through it first.

Still stuck? Email admin@visiontech336.com and tell us what you can see on the screen. Menus and button names can differ slightly between versions and makes. If something does not match, stop and ask rather than guess. Please never send passwords or card details.

Wi-Fi, routers & broadband | Easy | 2 min read

How to find your Wi-Fi password on a phone or PC

If you have forgotten your Wi-Fi password, you may not need to reset anything. A device that is already connected can often show it to you.

The easiest way: the router sticker

Most routers have a sticker on the back or underneath with the Wi-Fi name and password. This works only if nobody has changed the password since the router was set up.

On an iPhone

1. Open **Settings** and tap **Wi-Fi**.
2. Tap the small **i** next to your network.
3. Tap **Password** and unlock with Face ID, Touch ID or your passcode.

On an Android phone

Menus vary by make, but usually:

1. Open **Settings**, then **Network and internet** or **Connections**, then **Wi-Fi**.
2. Tap the cog next to your network.
3. Tap **Share** or **QR code** and confirm your identity. The password often shows under the code.

On a Windows PC

1. Open **Settings**, then **Network and internet**, then **Wi-Fi**.
2. Choose **Hardware properties** or **Manage known networks**, depending on your version.
3. Look for **View Wi-Fi security key** and you may need to confirm that you are an administrator.

On older versions, open **Control Panel**, then **Network and Sharing Centre**, click your Wi-Fi name, then **Wireless Properties**, then **Security** and tick **Show characters**.

On a Mac

Open **Keychain Access**, search for your Wi-Fi name, double-click it, tick **Show password** and enter your Mac password.

Staying safe

Only reveal the password on your own devices. Do not send it by text or email to people you do not know, and do not give it to anyone who phones you out of the blue.

If you want to share it with a visitor, our guide on guest Wi-Fi is a safer option.

When to get more help

If none of these work, the router may have been changed from the default and the password forgotten. We can help you get back in without losing your settings where possible.

Still stuck? Email admin@visiontech336.com and tell us what you can see on the screen. Menus and button names can differ slightly between versions and makes. If something does not match, stop and ask rather than guess. Please never send passwords or card details.

Wi-Fi, routers & broadband | Medium | 2 min read

New router or new provider: day checklist

A little preparation makes switching provider or setting up a new router much smoother. Use this checklist so you are not left without internet at the wrong moment.

Before the day

- Check your switch date with the new provider. Most switches in the UK are handled for you, so you do not need to cancel the old one yourself unless told to.
- Make a note of your current Wi-Fi name and password.
- List devices that will need reconnecting: phones, laptops, TVs, consoles, printers, smart speakers and doorbells.
- Make sure any important work is done or saved, in case you are offline for a while.
- Keep your old router. You may have to return it to avoid a charge.

On the day

1. Unpack the new router and read the quick-start guide.
2. Find the right socket. It may be the main phone socket, or an Openreach fibre box.
3. Connect the cables as shown. Do not force them.
4. Plug in the power and wait up to ten minutes for the lights to settle.
5. Connect to the Wi-Fi using the details on the router sticker.
6. Open a web page to confirm you are online.

After you are online

- Change the Wi-Fi password to one of your own choosing. Our guide on changing your Wi-Fi name and password safely covers this.
- Change the router's admin password if it uses a default.
- Install any available updates.
- Reconnect your other devices one by one, and update printers and smart devices.
- Run a speed test and keep the result.

Returning the old router

Follow your provider's instructions and use the pre-paid label if one was sent. Take a photo of the parcel and keep the receipt.

If you have no service on the day

Wait until the end of the day the provider gave you, as switching can take time. If it is still not working, contact the new provider, not the old one.

When to get more help

If you would like someone to set up the router and move your devices over, we can help.

Still stuck? Email admin@visiontech336.com and tell us what you can see on the screen. Menus and button names can differ slightly between versions and makes. If something does not match, stop and ask rather than guess. Please never send passwords or card details.

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How to set up guest Wi-Fi

A guest network gives visitors internet access without giving them your main Wi-Fi password or letting them see your computers, printers and other devices. It is also useful for smart gadgets you do not fully trust.

Why use one?

- Visitors cannot see your files or shared printers.
- If a guest's phone has a problem, it is kept away from your own devices.
- You can change or switch off the guest password without disturbing your family.

Setting it up

Most modern routers have a guest option, but where it lives differs between providers and models. Some use an app. Check the router sticker for the address and login, or your provider's help pages.

1. Sign in to the router's settings page or app.
2. Look for **Guest network**, **Guest Wi-Fi** or something similar, often under **Wireless** or **Wi-Fi**.
3. Turn it on.
4. Give it a name that is clearly different, such as Home-Guest.
5. Set a password of your own. Do not leave the network open, and use **WPA2** or **WPA3** security if asked.
6. If there is an option to stop guests seeing other devices, or to isolate them, make sure it is on.
7. Choose **Save** or **Apply**.

Sharing it with visitors

Many phones can show a QR code for the network, which visitors scan with their camera. That saves reading out long passwords.

Good habits

- Change the guest password every so often.
- Switch the guest network off when you do not need it.
- Do not use the guest network for your own work devices, as it may limit access to printers.

Smart devices

Putting smart plugs, cameras and TVs on the guest network is a neat way to keep them apart from your computers, but some need to be on the same network as your phone to be controlled. If something stops working, move it back.

When to get more help

If your router has no guest option, we can suggest ways to get the same result.

Still stuck? Email admin@visiontech336.com and tell us what you can see on the screen. Menus and button names can differ slightly between versions and makes. If something does not match, stop and ask rather than guess. Please never send passwords or card details.

Wi-Fi, routers & broadband | Medium | 2 min read

Parental controls basics

Parental controls help keep children away from content that is not suitable for them and let you set limits on screen time. No tool is perfect, so they work best alongside talking to your children about what they see online.

Three places to set controls

1. **Your broadband provider.** Most large UK providers, such as BT, Sky, Virgin Media, TalkTalk and Plusnet, offer a free filter you can turn on for your whole home network. It is usually set up in your online account or provider app.
2. **The device.** Phones, tablets, games consoles and computers have their own family settings, which let you set age limits and app permissions.
3. **Apps and services.** Streaming services, YouTube and games have child profiles or restricted modes.

Setting up the provider filter

Menus differ between providers, so look in your account or app for something like **Parental controls**, **Safeguarding** or **Web protection**.

1. Sign in to your provider's account page or app.
2. Find the parental controls option and switch it on.
3. Choose a level that matches your child's age.
4. Save, then test it on a child's device.

Setting up the device

On Apple devices, look for **Screen Time** in **Settings**. On Android, the **Family Link** app is Google's tool. On Windows, use **Microsoft Family Safety**. Games consoles have their own family settings in their menus.

Good practice

- Keep your own admin passwords private from children.
- Switch on time limits for bedtime.
- Check settings after major updates, as they can reset.
- Be aware the filters apply only to your home Wi-Fi, not mobile data, so use device settings as well.

Do not rely on it alone

A determined young person may find ways around filters, and no filter catches everything. Keep chatting regularly, and make sure children know they can come to you if they see something upsetting.

When to get more help

If you want help choosing and setting up controls across several devices, we are happy to do that with you.

Still stuck? Email admin@visiontech336.com and tell us what you can see on the screen. Menus and button names can differ slightly between versions and makes. If something does not match, stop and ask rather than guess. Please never send passwords or card details.

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How to secure your router

Your router is the front door to your home network. A few simple steps will make it much harder for anyone to misuse your connection or see your devices.

1. Change the admin password

The router has two passwords: one for Wi-Fi and one for its settings page. Many people change only the Wi-Fi one. Check the sticker for the default admin login, then change it to something long and unique that you do not use elsewhere. Menus differ between routers, so look for **Administration**, **Password** or **System** in the settings.

2. Use strong Wi-Fi security

Choose **WPA3** if your router and devices support it. If not, **WPA2** is fine. Avoid options called WEP, WPA or Open, as they are weak or offer no protection.

3. Use a long Wi-Fi password

Use three or four unrelated words with a number. Do not use the same password as anywhere else.

4. Keep it updated

Updates fix security flaws. Many provider routers update themselves, but check whether yours does. If your router is very old, ask your provider about a replacement.

5. Switch off what you do not need

- Turn off remote management or remote access, unless you really need it.
- Turn off WPS if you do not use it.
- Do not open ports or forward them to devices unless a professional has explained the risks.

6. Use a guest network

Give visitors and smart gadgets a separate network. Our guest Wi-Fi guide shows how.

7. Check who is connected

Many routers list connected devices. If you see a name you do not recognise, change the Wi-Fi password.

A warning about resets

A factory reset returns the router to its original settings and erases your Wi-Fi name, password and any changes. Only use it as a last resort, and have your provider details to hand in case you need to set it up again.

Beware of scams

Your provider will not phone you and ask for your router password or ask you to install software. If someone does, hang up and call the number on your bill.

When to get more help

If you are not sure whether your router is up to date or safe, we can check it with you.

Still stuck? Email admin@visiontech336.com and tell us what you can see on the screen. Menus and button names can differ slightly between versions and makes. If something does not match, stop and ask rather than guess. Please never send passwords or card details.

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What is a VPN and do you need one?

A VPN, or virtual private network, creates a protected tunnel for your internet traffic. You will see them advertised everywhere, so it is worth knowing what they do and do not do.

What a VPN does

When you use a VPN, your traffic travels through the VPN company's servers before reaching the website. This has two main effects:

- People on the same network, such as in a cafe or hotel, cannot easily read what you send.
- Websites see the VPN company's address instead of your own, which hides your rough location.

What it does not do

- It does not stop viruses or scams.
- It does not make you anonymous. The VPN company can still see some information.
- It does not make you safe if you type your password into a fake website.
- It usually will not make your internet faster. It can slow it down.

When a VPN is useful

- Using public Wi-Fi in cafes, airports or hotels.
- Connecting to your workplace securely, if your employer provides one.
- Wanting extra privacy from your internet provider.

When you probably do not need one

At home, on a secured network, with updated devices and strong passwords, a VPN adds little for everyday use. Most websites already protect your connection, which you can see from the padlock in the browser.

Choosing carefully

1. Avoid free VPNs, as they may collect and sell your data.
2. Choose a well-known paid service with a clear privacy policy and good reviews from independent sources.
3. Download apps only from official app stores or the company's own website.
4. Be wary of adverts or pop-ups that claim your device is at risk and push a VPN.

Problems a VPN can cause

Some banks, streaming services and websites block VPN traffic. If a site will not work, turn the VPN off and try again.

When to get more help

If you are unsure which VPN is trustworthy, or your work VPN will not connect, we can guide you.

Still stuck? Email admin@visiontech336.com and tell us what you can see on the screen. Menus and button names can differ slightly between versions and makes. If something does not match, stop and ask rather than guess. Please never send passwords or card details.