

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

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.