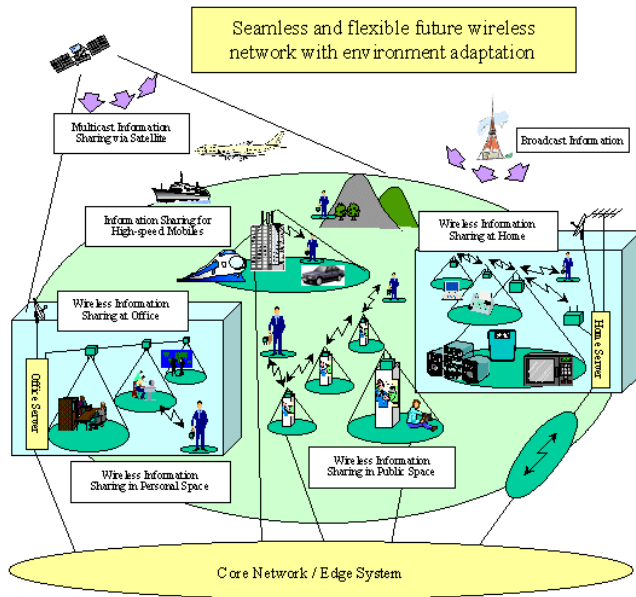


BROADBAND INTERNET AND ROUTERS



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Don't panic! – it doesn't have to be this complicated!

The diagram below is more typical of a normal home network.

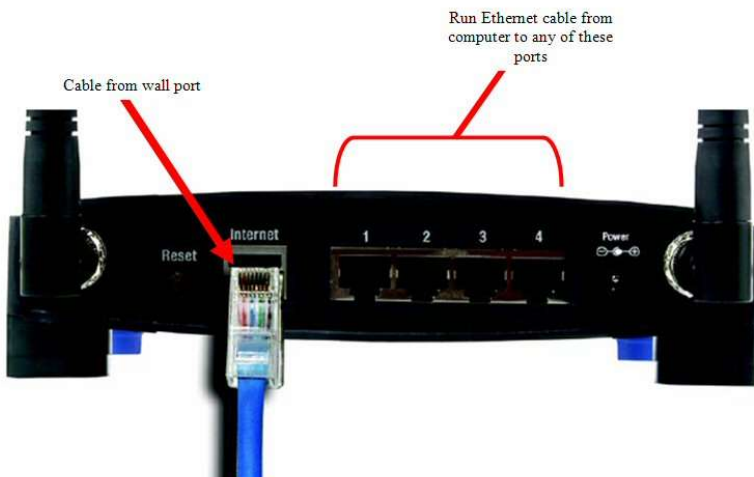
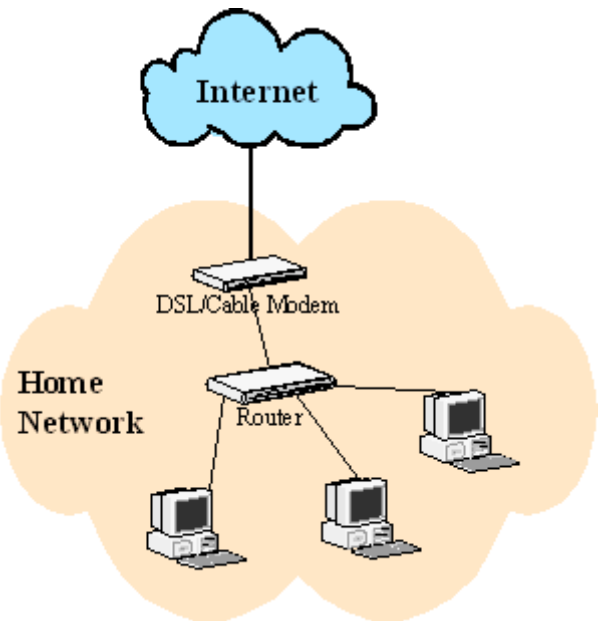
Firstly, think of a Router as a computer in its own right – but it only has two jobs to do:

- 1. It connects to the Internet**
- 2. It controls a network that allows the computers connected to it to access the Internet and share files.**

The diagram on the right is a typical home network system based on an NTL/Telewest broadband connection.

The difference between this and a system based on a BT phone line is that the BT (ADSL) router has the modem built in. Thus, if you already have an ADSL modem, then this becomes redundant.

All routers (including wireless) sold by Xgates Computers are 4 port i.e. you can hard wire connect up to 4 computers. (see below). The wireless capability is in addition to the 4 port hardwire.



This is the back of a cable (NTL) router – the “Cable from wall port” (RJ45) goes to your cable modem or set-top box. (see above).

The BT line version has a smaller connection (RJ11) the cable for which plugs into your phone line via a filter. The filter is necessary so that you can use the phone at the same time.

If it is inconvenient to hard-wire the computers into the router (e.g. a bedroom computer, or a laptop computer used in a variety of locations) then the normal method is to use a wireless router. You can then use a combination of hard-wire and wireless, or go completely wireless. Remember, you will need a wireless adaptor for each computer you wish to connect to the internet.

Note: most modern laptops have a wireless network card built in.

When you have your network set up, you can use useful features like printer sharing. This means that you can print to a printer connected to one machine, from any of the other machines connected to the network (note: the machine with the printer attached must be turned on). Or you could invest in a network printer – one that plugs directly into the router via an Ethernet cable – very useful if you print from a number of different machines.

Another useful feature would be a network hard drive. A lot of people have external usb hard drives to store data – a network drive is a similar device, but plugs straight into the router via an Ethernet cable and can provide external storage to all the machines on the network, as if that hard drive was installed in the machine that is using it. There are security features built in – using the software provided, and installed onto each machine that is allowed to access the drive (no software, no access), it can be seen as a read/write drive, or as a read only drive. The drive cannot be “seen” from outside (by hackers) as it has no IP address.

If you have poor wireless reception (as we have in the shop), then you can use “homeplugs”. This is a way of hard wiring the computers, but uses the house electrical mains as the network cable. A single homeplug is plugged into an electric mains socket next to the router, and connected to the router with an Ethernet cable (RJ45). Another homeplug is used next to the computer to be connected, thus completing the network. Each remote computer will require a homeplug. Although useful for getting over wireless reception problems, this method is not cheap.

Another way of increasing the wireless signal and coverage would be to use a range expander. We have heard very good reports of these, and are currently experimenting with them to see just how good they are. Although not a cheap option at around £75, it could still be cheaper than the home plugs at around £30 each.

We at [Xgates Computers](#) pride ourselves on being able to solve connection and networking problems – if you have a particular scenario, why not drop in and discuss it with us.