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## The NETGEAR alternative to the Home Hub

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### About the Netgear DG834G



This is one of the most popular Router/Modems available. It will directly replace a BT Home hub for basic surfing, however you will have problems getting Broadband Talk and BT Vision to work without some changes. Those can be found later in this article.

This model runs "Wireless-g" i.e. 54mbps wifi link speed to your PC. It gives a more reliable wireless signal than the BT Home Hub. I have no idea why but the signal strength seems to be higher than the Home Hub when I work down the garden in my Summer House about 25 yards away, with the signal going through the house from a bedroom and through a brick wall. The Netgear signal seems to be the same strength on my "Wifi-catcher" screen, but the laptop will retain the signal more reliably.

I bought a new Netgear from the BT Shop for £49 (quite a good price) and another from ebay for £29. They are not cheap like BT hubs on ebay, and you need to fight over them!

The DG834N has the draft-n wifi with 270mbps speeds (Home Hub 2 is 130mbps) and DGTeam firmware (see below) is also available on that N model.

### Netgear DG834G Setup for BT Broadband

Note first of all that to get into the Netgear the admin name is "admin" and the password is "password"

Also ensure your PC is set up to acquire IP addresses automatically (this is the usual setting so it should be like that unless you have changed it in the past)

There are two ways to set this router up. The first is to run the supplied CD, and let it auto-detect the ISP.

The second is to avoid the CD (Always a good idea even with a Netgear, there may be a hidden agenda in any manufacturers software).

Before connecting to the phone line, simply connect to your PC by ethernet cable, go to <http://192.168.0.1> and then use the auto-detect in the setup procedure.

The third method which is the one I used is to go into <http://192.168.0.1> and then tick *"No I want to configure the Router Myself"*

Then "Does your Internet Connection require a Login?" put *Yes*

Ensure it's set to *PPPoA (PPP over ATM)*

In the "Login" box type *broadband.user@btbroadband.com*

Leave the Password box Blank.

Leave everything else as default and hit "Apply"

Then check the ADSL Settings

1. From the main menu, select "ADSL Settings".
2. In the Multiplexing Method drop-down list, select *VC-based*.
3. Type *0* for the VPI.
4. Type *38* for the VCI.
5. Click Apply.

Additional recommended settings in the Netgear Menu:

- Go to Wireless Setup and set up the router with *WPA* as first choice and choose a long passphrase up to 63 characters. Unlike Home Hubs there is no encryption by default and you will be vulnerable to people stealing your broadband.
- Go to "Set Password" and change from "password" to something you will remember like "fredblogg99"
- Go to WAN Setup and change the MTU from 1458 to *1500* for most ISPs on PPPoA including BT.

To get onto the internet plug in the modem lead to the ADSL filter and you should get a connection to BT Broadband. Just use your browser and surf

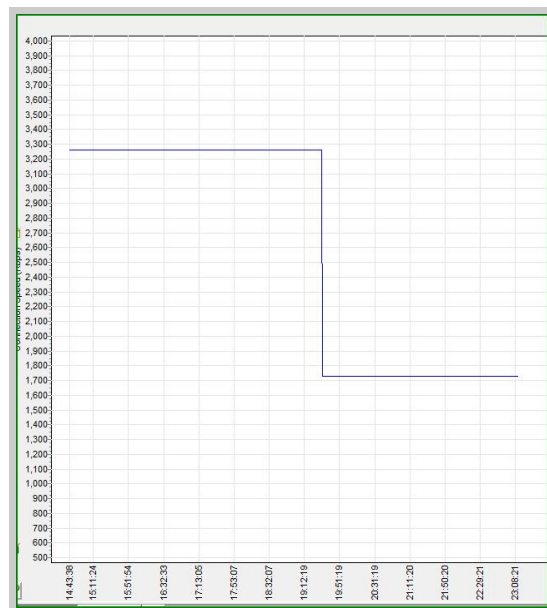
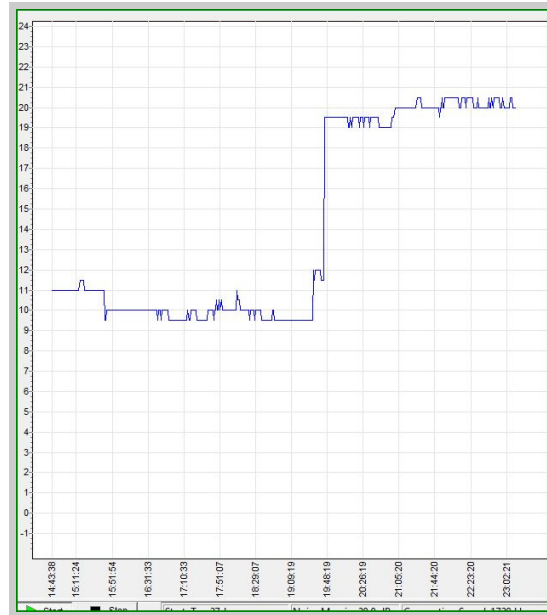
To connect by Wifi, disconnect the ethernet cable, reboot the PC, then use Windows' own Wireless connection method and connect to SSID "NETGEAR" in the list of available networks and type in the WPA passphrase or key that you just created in Wireless Settings.

## Routerstats and Routerstats lite

I had already gone through a process of recording speed and noise with Routerstats Lite on the Home Hub V1, but BT were unable to trace the source of the problem I suspected industrial strength REIN (aka electrical interference).

I then graduated to full strength Routerstats to get some more specific information. It is not self-installing and needs to be set up manually but the rewards are much greater even on Home Hubs.

The Routerstats Lite noise chart on the left and the speed chart on the right show the problem running on a V1 Home Hub.



Now full strength Routerstats also has an alarm feature to trigger a reboot if speed drops below a preset figure. However the Home Hub does not allow automatic rebooting, and the Home Hub 2.0 does not even allow Routerstats to communicate with it at all.

Having used various home hubs, all versions, for some years, I often heard of Netgear, Belkin, D-Link and Linksys being praised as much better router/modems for controlling.

Also many of the alternatives are "Open Source" in that they use Linux based firmware and the suppliers often comply fully with the GNU regulations that say they should publish all code and scripts to allow people to improve the applications, and offer the improved code for free distribution.

That is the international general licence with which all users of Linux must comply. That is the one condition that the owner of the linux kernels, Linus Torvalds, insists upon.

I and others have real doubts about the level to which BT have complied by that GNU licence. Let's just say that I have never seen anyone who was able to use and improve any BT home hub firmware and then offer the improved version for Home Hub users. You can be assured that if that was possible, someone would have done it. It would also have overcome the many bugs that BT seem unable to get around.

Netgear for example do fully comply with the GNU licence and several teams have rewritten firmwares. One that

sticks out a mile is the DGTeam which is discussed below.

### Netgear firmware from DGTeam



The DGteam (Click on the picture for the link) is an Italian based group of programmers who have modified standard Netgear firmwares for the DG834xx based routers, primarily to get them to perform better for high performance applications on a poor ADSL service.

By downloading the latest firmware for your specific Netgear model and using the Netgear's own Upgrade Router link in the menu you can very quickly have their version loaded. The site also includes a link to Netgear's own Rescue application if things go wrong.

It is advised only to use an [XP PC](#) to perform the upgrade. I have found that is also true of upgrading BT Home Hubs V1 and V1.5 so that does not surprise me, however there are not enough user reports to know if Vista will upgrade Netgear routers successfully.

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