**Calling Issues that can occur with a non-supported router firewall**

Here at Broadgate we have compiled this guide to help should your VoIP telephone be placed behind a router we have not supplied and configured or a combined modem/router, if in some rare circumstances you experience problems with your VoIP service.

Some of these problems can include:

• You cannot make outbound calls or when making outbound calls you hear a busy signal even though the person you are calling hears a ring.
• Incoming calls go directly to voicemail without ringing your VoIP phone.
• You hear a busy signal in the middle of the call.
• Your calls have a maximum duration of exactly 10 minutes.
• You experience quality issues such as choppy conversation or one person can't hear the other.

**Resolution:**

These issues are often due to your router's firewall (also known as NAT) blocking certain operations of the VoIP telephone adapter. Try the following solutions to resolve the issues. Please make changes one at a time and reboot your router and VoIP device each time to see if the problem is solved.

1.) Please check that you have Internet connectivity (try to view a few web sites) and check if your router/firewall settings have changed.

2.) IMPORTANT Upgrade the firmware (firmware is similar to software) on the router. Most VoIP firewall issues are resolved by router firmware upgrade. For detailed instructions consult your router's user guide or the manufacturer's web site.

3.) Some routers alter SIP packets with the default configurations which creates VoIP service problems. From your router's web configuration page (usually under configuration / firewall / advanced settings);

- Disable Stateful Packet Inspection (SPI) if applicable.

- Disable SIP Application Layer Gateway (SIP ALG) if applicable.

4.) Try disabling your firewall (turn it off completely) briefly. Reboot your router and VoIP device and check if you can make/receive calls. If you can do so now then your problem was with your routers firewall configuration. You firewall is not allowing calls to your SIP phone. You can continue using your router as firewall disabled or if you want the firewall enabled on your router try following solutions. For detailed instructions consult your router's user guide, the manufacturer's web site.

**Known problems with BT and virgin routers**

SIP ALG (Application Layer Gateway) modifies VoIP traffic with the aim of solving NAT and Firewall related problems. SIP ALG does this by inspecting SIP packets and modifying SIP Header and SDP datas.
Unfortunately, SIP ALG is often poorly implemented leading to many issues and is, in general, best disabled.

Some routers will re-enable SIP ALG after being powered off and on.
**The SIP ALGs of Virgin SuperHubs , BT HomeHubs and Fritz!Box's can't be disabled.**

Even if there isn't a SIP ALG option in your router's settings, it may still be implemented. TelNet commands must be used to disable SIP ALG on **Technicolor**, **Thomson**, **SpeedTouch**, some **Draytek** and some **ZyXEL** routers.

For this reason should you have a problem with our service we recommend replacing the router with one of the following models, there are many other models that will work, however we are only able to support on products we are trained on and have tested and supply install and maintain. We offer a no fix no fee upgrade at a one off cost to all our models providing you follow our recommendations which may involve installing a separate adsl connection for voice alone, this is usually recommended for non fttc connections above 3 to 4 users and will also depend on the speed and type of adsl service you have

Vigor 2760 ADSL/VDSL Router for soho https://www.draytek.co.uk/products/soho/vigor-2760#1-overview
Vigor 2830/60 Series - Business Class Router/Firewall https://www.draytek.co.uk/products/business/vigor-2830

Technicolor / Thomson TG582n Router recommended for under 4 user in a low usage environments.