Telephone and Broadband faults self help.

A Telephone or Broadband fault is one of the most annoying things you will ever have to deal with, and if you don’t check your internal wiring and equipment first it may become very expensive too!! So, you have pressed all the options on your providers help line and been round the world for more hours than you care to remember. STOP!! Check your side of the line. You may be saying I’ve done this a thousand times? However in your frustration with the advisor have you missed something or sat watching the TV and just said I’ve done that when you haven’t!!

Hopefully all you need to know is below and this guide will put an end to your nightmare.

Firstly let’s clear up a bit of confusion:

Your telephone and broadband service can be provided by many different companies (called providers) i.e. BT, Sky, TalkTalk, Plusnet etc. However they can’t fix your external line or the equipment in the exchange, only BT Openreach are authorised to repair your external line and any equipment it connects to externally. So when you call your provider and say send me an engineer it’s not that simple for your provider (some providers can send you an internal engineer costing from £50 upwards) BT Openreach cannot attend every phone fault in the country as they don’t have the manpower or resources, so your provider has to run through a series of checks before Openreach will accept that the fault as potentially being on their network.

That’s why your providers 1\textsuperscript{st} line, 2\textsuperscript{nd} line and 3\textsuperscript{rd} line advisors will attempt to check and double check the fault is not in your property and minimise the risk of sending you a chargeable by BT Openreach. (BT Openreach can charge your provider over £240 for a non fault call out!! Some or all of this cost can be passed on to you the consumer!!). So before you lose the will to live and pull or your hair out follow the steps below and then hopefully once all the basics checks are ticked you will know if your fault is internal or external.

As mentioned earlier internal faults are your responsibility to repair and you will need to source an independent telephone engineer like BTfix supporting Merseyside and a 50 mile service area from the L35 postcode or search Google Maps for you local engineer.
Firstly you need to find your Master Socket.

**What's a master socket?**
A master socket is a square, white socket that's fixed to one of the walls (or window ledge) in your property. It represents the point where the telephone line enters your property and where BT and your provider are responsible to*. All other sockets and extensions within your property are connected to it. *If you have Star wiring (mentioned further on) or a none NTE5 socket (also mentioned further on) with multiple extensions running from it then these as from April 2007 are your responsibility. If you have only one socket in your property then BT Openreach are responsible for it. *If you have a none NTE5 socket follow all the troubleshooting steps from Step 4 at this socket (Also follow Step 1 just to ensure that you only have the 1 socket)

**Step 1: Locating your master socket**

**Common places to find the master socket?**
- Your hallway near the front door
- Around or underneath the front or back windows
- Your attic
- Your basement

  a) Identify your line from the telegraph pole or does it come out of the ground?

  ![Image](image1)

  b) Follow your line to the property

  ![Image](image2)

Locate the entry point on the other side of the wall should be your master socket (if you line come out of the ground your entry point will be behind the junction box).
Some properties will have a junction box first, where the external wiring changes into internal wiring. If a single internal wire leaves the junction box then the first socket it reaches is your master socket if multiple wires leaving your junction box this is classed as Star Wiring and BT Openreach no longer support this type of wiring and their call out will be chargeable. Ideally you need a Master Socket upgrade.

Found the first socket?
Measure the width of your socket

If your socket is around 68mm wide it is an old style socket called a LIU. If your socket is around 85mm wide it is a newer style socket and may be an NTE5 socket. Proceed to the next step.

Step 2: Identify if your faceplate is a 'split' type (NTE5)

A 'split' type master socket, known as an NTE5, has a horizontal groove in the phone socket and the screws and socket are located in the lower half of the socket. A non-split socket will have the sockets and screws in the middle. You can also identify a split socket looking at the side as bottom half comes out separately.
If you have a split type socket, remove the bottom half to reveal your test socket. (Be careful when doing so as your internal wiring if you have any, will be attached to the rear of this plate).

If you have a faceplate which sticks out, then it's likely to be an ADSL filter faceplate. These allow you to filter all your telephone extensions in the master socket, which means you don't need individual micro-filters on each phone extension socket. If you have one of these then remove it to reveal your test socket (Be careful when doing so as your internal wiring if you have any, will be attached to the rear of this plate)...

**Step 3. What's a test socket?**

It's a socket located between the wiring outside and the wiring used to connect internal wiring and extensions to your telephone line.

You'll only have a test socket if you have an NTE5 master socket installed in your property.

**Step 4. What should you connect to the test socket or an LJU?**

If you have jumped steps a you have a LJU socket then check to see if you have any additional wires coming out of it as these will run to extensions. Ensure all equipment including filters and splitters are disconnected from these sockets.

Exposing the test socket disconnects your internal wiring, making it the only active telephone point in your property.

Regardless where you have a telephone fault or broadband fault connect a standard analog phone (Wireless and mains powered phones can pick up external interference which may be the cause of the fault, this needs to be eliminated to correctly test the line. (If you have a broadband fault check your line to ensure that you don’t have an underlining voice fault which could be the cause of your fault) Is the voice fault still there? Yes: The fault is external and on the BT network or your providers equipment at the exchange. (If the analog phone you are testing with is you normal day to day phone then I advise you test with an alternative phone just to rule out yours is not faulty, you could always test your phone in a friend or neighbours line, if no fault your phone is ok. If there is an issue you definitely need to test with an alternative phone.)

No: The fault is internal and with your wiring or equipment.
If you have a Broadband fault connect you filter and router only (Do not plug in your phone as this may be causing the fault) is the fault still there? Yes: At this point you will need to test with an alternative filter Fault resolved? Yes: Plug in your phone if all ok refit your face plate and plug into the phone jack with the working filter. Fault resolved? Yes the issue was with the filter. No:** the issue may be internal i.e. a voltage on the internal wiring which has damaged the first filter and causing your broadband fault (You will need an Independent engineer like BTfix. ** If the fault still persist with the new filter you will have to test with an alternative router, this ensures your router is not causing the fault.

Fault resolved No: The fault is external and on the BT network or your provider’s equipment at the exchange. Yes: Plug in your phone if all ok refit your face plate and plug into the phone jack with the working router. Fault resolved? Yes the issue was with the old router. No: the issue may be internal i.e. a voltage on the internal wiring which has damaged the first filter and router causing your broadband fault. You will need an Independent engineer like BTfix to check you internal wiring.

**Final note towards having a BT Openreach engineer attending a potential internal fault.

If a BT Openreach engineer finds that your fault is caused by something internal, they will disconnect all of your internal wiring from the master socket so it works correctly. JOB DONE For the engineer!!, and they will charge you £144 via your provider for the privilege. They also will not fault find or repair any internal wiring or sockets as they are not insured to do so. Also if they did it would mean BT Openreach would then be responsible for the repair. So the engineer will say sorry I can’t help you, you need to speak to an independent engineer. Also do you want to pay them £72 per extra hour after a £144 callout to find your issue do you?
Fault Tree

1. **NTES Socket**
   - Carefully remove the face plate as your internal wiring is connected if you have any extensions.

2. **Master Socket**
   - Disconnect Ensure all equipment including filters and splitters are disconnected from this socket and any attachable extension sockets.

3. **LIU Socket**
   - Plug in a standard analog phone and test your line, are there any voice issues? Crackling, humming, interference?

4. **Voice Fault**
   - If your phone is normal day to day phone then I advise you test with an alternative phone just to rule out yours is not faulty. Otherwise your fault is external. Call your provider; leave everything the way it is.

5. **Broadband Issue**
   - Plug in a standard analog phone and test your line, are there any voice issues? Crackling, humming, interference?

6. **Fault Resolved?**
   - **Yes**
     - Follow the voice fault diagnostic path.
     - **Fault on the Voice side?**
       - **Yes**
         - Connect your filter and router only to the test socket.
         - Did you have any extensions?
           - **Yes**
             - **Fault Resolved?**
               - **Yes**
               - **No**
             - **Fault Resolved?**
               - **Yes**
               - **No**
           - **Fault Resolved?**
             - **Yes**
             - **No**
         - **Fault Resolved?**
           - **Yes**
           - **No**
       - **Fault on the Voice side?**
         - **No**
         - **Fault Resolved?**
           - **Yes**
           - **No**
     - **Fault Resolved?**
       - **Yes**
       - **No**
   - **Fault Resolved?**
     - **Yes**
     - **No**

7. **Something internal is causing your fault.**
   - Did you have any extensions?
     - **Yes**
       - **Fault Resolved?**
         - **Yes**
         - **No**
     - **Fault Resolved?**
       - **Yes**
       - **No**

8. **What's not connected? Your telephone or Sky wiring?**
   - Add your items one at a time until you find the cause.

9. **Your internal wiring or your faceplate is causing the fault.**
   - Remove all equipment from your extensions and retest; if that fails you need an independent telephone.

10. **Fault Resolved?**
    - **Yes**
    - **No**

11. **Your filter/router were at fault, replace your face plate and retest. If all ok add your equipment to your extensions one by one ensure a microfilter is the first piece of equipment used.**
    - **Fault Resolved?**
      - **Yes**
      - **No**

12. **What is not networked? Your telephone or Sky wiring?**
    - Add your items one at a time until you find the cause.

13. **The fault is external and on the BT network or your provider's equipment at the exchange. Call your provider; leave everything the way it is until Fault Resolved.**
    - **Fault Resolved?**
      - **Yes**
      - **No**

If you have downloaded this document from an alternative source and it has helped you resolve your fault then please go to [http://www.btfix.co.uk/self_help/self_help.htm](http://www.btfix.co.uk/self_help/self_help.htm) and DONATE!! towards the knowledge, time and effort that went into creating it.