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CAT SAT Wales, TooWay & SES
Account Information & Important Notes

Dear Client,

As a part of our continued service on behalf of TooWay & SES Satellite Service Provider we have drawn up a document that includes all the information you require when contacting CATalyst with any issues you may have.

Customer Details:-

Name

Customer Number

Monthly Re-Set Date

Warranty:-

Original Activation/Installation Date

All equipment supplied by CATalyst Systems includes 12 months warranty; any equipment that fails after the 12 months period has ended will be treated as chargeable including the Labour.

Any damage to hardware caused by accident, power surge, weather, misuse, virus, spam or spyware attack is outside the scope of the warranty and will be deemed chargeable.

Important notes about satellite broadband:-

When all that is offered is a slow ADSL (phone based) broadband connection Satellite Broadband (SB) is an excellent and extremely popular alternative.

However there are a number of points when using SB that's need explaining here.

For the purpose of these notes we need to distinguish between Speed, Latency and Usage.

Allowing for **Contention**, **Speed** is the expected upload and downloads speed that is quoted by the service provider. **Latency** is the lag in the arriving at a website due to the 88,000 mile round trip the signal has to make. **Bandwidth** is the amount of data subscribed to that is used in the monthly billing cycle.

Speed:-

While speeds of "up to 20 mb" are often quoted and attained, this will fluctuate due to "**Contention**". Contention is defined as being the impact on broadband speed due to the increased number of users all using the service at the same time. Typically this is between 8:00 and 10:00 and between 16:00 and 20:00. Both Satellite and ADSL broadband suffer from contention.

Latency:-

Latency is the slight lag in the connection to a web site due to the 88000 mile round trip the broadband connection takes and is governed by the laws of physics (speed of light) and as a result this is something that the service provider has absolutely no control of.

Latency on an any ADSL connection even on a very slow ½ mb download speed is typically measured between 280 to 320 ms. On satellite due to the distance this is around 750 to 820 ms. The difference is that while a satellite connection to a web page is initially slightly slower the download and streaming speed when connected are always considerably faster.

Eg. If a 1 mb ADSL and a 20mb SB connection were to start watching the same You Tube video at the same time the ADSL would get to the video quicker but constantly freeze due to the 1 mb speed limitation. The SB connection will take slightly longer to start but due to the 20 mb it will run perfectly.

Bandwidth:-

Is the measurement of how much data that is either downloaded or uploaded during the month. Unlike ADSL that has 2 bandwidth settings SB, in order to keep costs competitive, have 4. When subscribing to SB you will have selected a bandwidth package that you think is enough to satisfy your particular broadband usage needs.

Maximising broadband usage:-

When deciding upon which bandwidth package you wish to subscribe to, you need to consider the following:-

1. By far data streaming (video, music etc.) is the greatest user of bandwidth. Standard web surfing (research, shopping on –line, news, holidays, emails etc) by comparison has little impact. To give you an example if you were to download a 2 hour movie this would use 0.75 of a gb. If on a 10gb package than 13 movies later you will have used your entire allowance.
2. Smart TV's if used on the internet contribute to bandwidth usage.

3. Consider that while you may have a laptop or p.c. as your primary web device all smart phones, netbooks, tablets, Xboxes etc if used on the web are also consuming bandwidth.
4. Disable all auto photo/video synchronisation of smart phones and tablets with cloud based services such as iCloud, Google+ , Dropbox etc.
5. Ensure that you have good anti-virus and anti spyware systems in place as we have had instances of PC's acting as spam engines pumping data out without the users knowledge and eroding an entire monthly allowance in a few days.
6. Note, uploading as well as downloading contributes to bandwidth usage.

Considerations on the impact of **Latency**:-

For 95% of SB users latency will not be an issue at all however we need to draw your attention to the impact that latency can have if required for a specific use.

VPN's

If using a VPN connection for remote access to a server consider using straight RDP. Some (not all) remote servers will reject latent connections when using.

Synching databases etc. SQL:-

Latency can often cause locks

On-line Gaming:-

While on-line gaming works the latency will always mean that your opponent is constantly 1 second ahead

If you require further information or clarification of any points, please do not hesitate to contact us.