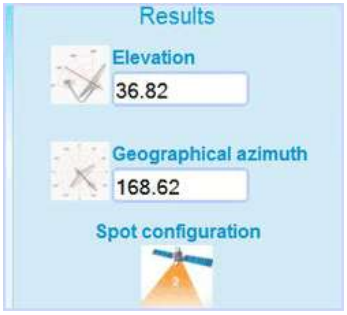
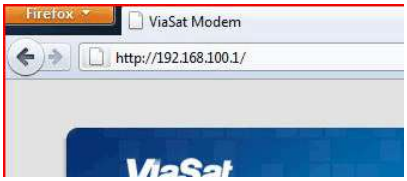
How to install the Tooway Ka-Sat satellite dish (v1; 17/07/11)

You need to know whereabouts in the sky your Tooway Ka-Sat satellite dish has to point. Ka-Sat is positioned at 9° east of south and you can pinpoint the exact position by looking up this website: http://finder.tooway-instal.com You can either add in your address or zoom in on the map. The site will give you the exact elevation and azimuth (compass) for your address.	
Find a suitable spot for your satellite dish … it can be mounted on a wall or on the ground and doesn't need to be very high. We have a very useful site survey tool which is a combined compass and inclinometer (available from our shop) The satellite dish is quite heavy compared to satellite tv dishes, around 15 kg, so the fixings need to be substantial and solid.	
Assemble the satellite dish by following the diagrams in the large chart that's inside the carton and then mount the dish onto the wall bracket or patio mount. Tighten the dish bolts so that the dish can *just* move to the left and to the right. The satellite dish az-el mount should be touching the mounting pole as shown here.	
Set the elevation of the dish to the figure that was calculated for you using the Ka-Sat dishpointer tool in step 1. Make sure that the elevation fixing bolts are loose and turn the elevation adjustment bolt until the correct angle is reached. Note where you measure the angle in the picture ... this one is set to nearly 36°	

The transmitting and receiving device in front of the dish is called the Tria. Connect one end of the cable to the Tx port on the tria … it's the one just next to the earth connection. Connect the other end of the cable to the Viasat modem. You can now connect the modem to the mains power supply and also connect the modem to your computer using the supplied Ethernet cable.

Open up your browser … it will probably try to open up your home page and promptly fail to do so. In your browser, type in http://192.168.100.1 as in the image here.

Just to be clear, you are not on the internet at this stage … this page is coming from inside the modem.



Now start the dish pointing by typing the following into your browser:
http://192.168.100.1/install
Select your spot beam which was calculated for you in step 1. When done, click on the arrow and the Dish Pointing process starts … the Tria will start a beep-bip like a heart beat.

You have already set the calculated elevation angle … now slowly turn the dish towards the satellite position. Use a compass if you wish … the position doesn't have to be exact at this stage.

When the signal from Ka-Sat is captured by the dish, the Tria will change tone similar to a mobile phone. Then, the Tria will start a regular beep-beep. Tighten the 4 nuts holding the dish to the wall or patio mount. At this stage, your satellite dish is probably within 3° of being optimally aligned.

Ensure the azimuth locking nuts are loose, then slowly turn the adjustment bolt in one direction and note what happens to the pitch of the beep-beep … as the dish slowly moves away from the satellite the pitch gets lower, as it moves nearer it gets higher.

As soon as you hear the pitch of the beep-beep drop, stop turning the bolt. Start to turn it the opposite way and you will hear the pitch rise again … keep going until you hear the pitch drop again … stop turning the bolt at that stage.

Now turn the bolt the other way again until the pitch is at its highest and stop. Now you can tighten the azimuth locking bolts.

The process is now repeated for the elevation so make sure the elevation locking nuts are loose and start to turn the elevation adjusting bolt in one direction … as before, wait until the pitch of the beep-beep drops and then stop turning. Start turning the other way listen for the pitch getting higher and then when it starts to drop, stop turning.

Turn the bolt the other way again and the pitch should get higher and then turn into a solid high pitched tone.

When that happens, you can tighten your elevation locking bolts.

As a final test, and with the high pitched solid tone coming from the Tria, very gently flex the dish to the left, right then up and down just by using your fingers. As long as the tone lowers in all 4 directions, your dish is correctly aligned.

At this stage, come back to the computer and look at the Viasat modem status page and it should look like the image above … with the third image outlined and a green tick. This third image represents the solid high pitched tone being generated by the Tria. You can now click on the right arrow and the modem will go through the synchronisation process to connect to the internet.

Once the modem has synchronized, the status page should look like this image.

In your browser, enter any website address and you should be automatically re-directed to the Self-Activation page like this.	
Follow the on-screen prompts … the installation is first tested and, if OK, you will eventually be led to the screen here where you enter your activation code.	
This is the final stage … you'll get a congratulations message, at which point, click on the Reboot link. Wait for 10 minutes or so and you should be on line.