Getting to know you, getting to know all about you - a beginner's tale

By Lee Russell

At this time of year I'm sure that some of us will have either received their first telescope as a Christmas gift or made a resolution to invest in one in the new year. I've owned mine for nearly four years and thought it might be an apt time to share some of my experiences. I hope the tale will in some small way both reassure new owners that complete novices can learn how to successfully operate a telescope and remind more experienced observers of the problems that "newbies" face.

My interest in astronomy was not encouraged as a child. It lay dormant until, as an adult, I started studying for a degree with the Open University. In 1996, as part of their "Science Foundation Course", I calculated the distance between the Earth and the Moon. This inspired me to want to learn more and I haven't looked back since.

I began by simply trying to spot the constellations with the naked eye. I soon wanted to see more and started using binoculars. My notes reveal that at the start of 1998 I was having trouble deciding if I had seen some of the Galilean moons. I had been told this was not possible with binoculars but careful observing notes revealed that I was seeing the moons and not background stars. By March I had decided to upgrade to a telescope. After some deliberation I settled on a 6" Newtonian reflector advertised by a reputable company; this is when the 'fun' started.

I must have been through all the agonies that new telescope owners face and more. Not having used one before, my initial problems were in assembling and learning how to use it. With the passage of time these steps seem quite trivial, but they were major events then. The supplied instructions were brief and assumed a level of knowledge that I did not possess. However, the problems were overcome by being methodical. Things were not helped by some of the instructions being wrong and some of the components being inappropriate. For example, the bolt supplied to raise the equatorial mount to the correct latitude was too short and hence I could not achieve a polar alignment. I queried this with the supplier who sent a replacement, which was also too short ! I sorted this out by buying a suitable one from a DIY store. Another problem was that I could not get the mount to track in Right Ascension. After some frustrating nights I finally realised that the instructions were wrong and I needed to press the other button on the hand controller. When I queried this with the supplier I was told that the drive was designed for use in the southern hemisphere !

I progressed on to realising that it was alright to turn the tube in its cradle to move the eyepiece to a more comfortable viewing position (saving much wear and tear on my back). I also got brave enough to drill into the tube and add a right-angled finder to make using the instrument more comfortable. I found a reasonable dark site at Sandwich Bay and spent some enjoyable nights explaining what I was doing to sundry fishermen, passers-by and suspicious policemen.

Moving house in 2000 resulted in the telescope needing to be collimated. I had been lucky that it had been delivered with reasonable collimation and up until then I hadn't needed to learn how to do it. It is often said that poor collimation is one of the main

reasons that reflectors fall into disuse, but I was determined not to waste the money I had invested in it. The manual gave a method which involved simply looking down the empty focus mount. Beware ! This lacks sufficient precision and I struggled for a couple of months to get it to work. I am sure it will not surprise many people to learn that it was wholly unsuccessful. After a lot of reading (mostly on the internet, the URLs I found useful are listed at the end), I decided to jump in at the deep end, add a centre spot to the primary mirror and buy a collimation tool. I was very unhappy at having to remove the mirror cell in order to add the centre spot but I can reassure any nervous readers that it was not a difficult task to complete. I purchased an "Orion Collimating Eyepiece" from SCS-Astro (whose service was extremely good) and the optics were collimated inside half an hour. Now I have gained some experience with the tool, the process only takes minutes to complete.

To an extent I believe that our consumer society leads us to expect that an 'off-the-shelf' telescope will perform flawlessly, with minimal "user servicing". We are discouraged from modifying it in case we invalidate any guarantees or rights under consumer protection legislation. I have found that in order to get the best results, I need to trust my own judgement and take the responsibility for maintaining or modifying it as required. I am once again getting a lot of pleasure from it and expect to use it for many years to come.

The URLs I found useful to learn about collimation are :

http://perso.club-internet.fr/legault/collim.html
http://www.amateurastronomy.com/collimate.html
http://www.efn.org/~mbartels/tm/collimat.html
http://zebu.uoregon.edu/~mbartels/kolli/kolli.html
http://www.weertman.com/bruce/atm/collimate/
http://www.google.com

I would like to thank Paul Andrew for his help in steering me towards these sites.