

Procedure to achieve a quick and precise alignment of the NexStar GT telescope:

One of the most valuable features of the NexStar-Goto-telescopes from Celestron is the quick and simple setup and alignment of the telescope. To achieve optimum performance with respect to pointing accuracy (Goto) and tracking a couple of points should be followed. Please see the excellent document „NexStar Alignment Guides“ from John Carlyle et al. You can download it from Mike Swanson’s valuable NexStar resource site at <http://www.nexstarsite.com/download/NexStarAlignmentFAQ.zip>

Please note that especially the orthogonal initial alignment between optical tube assembly and mount is important because the algorithms used in the hand-controller are based on a Cartesian coordinate system. Below please find some pictures illustrating the alignment based on the above alignment guide.

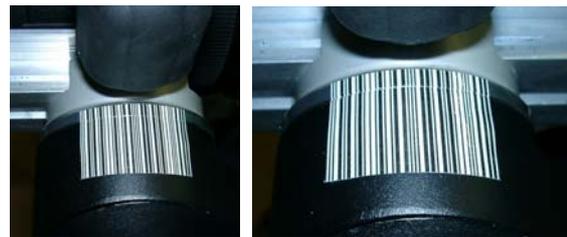
Initially please level the tripod in all directions:



Next you need to attach a marking to the fixed and the movable part of the mount. I used a self adhesive barcode label as can be found on the German postal labels. I made it weather proof by covering it by a transparent foil on top of it.



Please attach this label as shown below to the mount and make sure you do not move the mount to keep it orthogonally aligned. Now you cut the label using a sharp knife at the line, where the fixed and the movable part of the mount meet so that the mount can now freely turn.



Next please attach the mount to the tripod and level the optical tube. I am using the convenient quick release brackets from Baader-Planetarium in my setup. If you made sure, that the bracket is properly aligned to the optical axis of the telescope, the bracket can be used as the reference for your level.



In subsequent alignments you can now easily perform the orthogonal alignment within seconds without the need to use a level.



Aligning the telescope at locations, where Polaris is hidden behind obstacles a compass is very helpful. I inserted a compass in the mount as you can see in the next picture:



You should now be able to setup the telescope and align it within a few seconds.

Finally please find some pictures of my C-90 OTA attached to the mount of the N80GT with the help of the brackets from Baader-Planetarium:



If you dislike the small tray in the tripod if the GT telescope you easily enlarge it by adding an additional sheet underneath. I cut holes into the black plastic sheet and can now securely store my 1 1/4" eyepieces while not in use.



I hope you have a lot of fun with your NexStar telescope and always appreciate feedback including hints how to improve this documentation.

Best regards

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