

# Using Nexus & ServoCAT with planetarium software under Windows

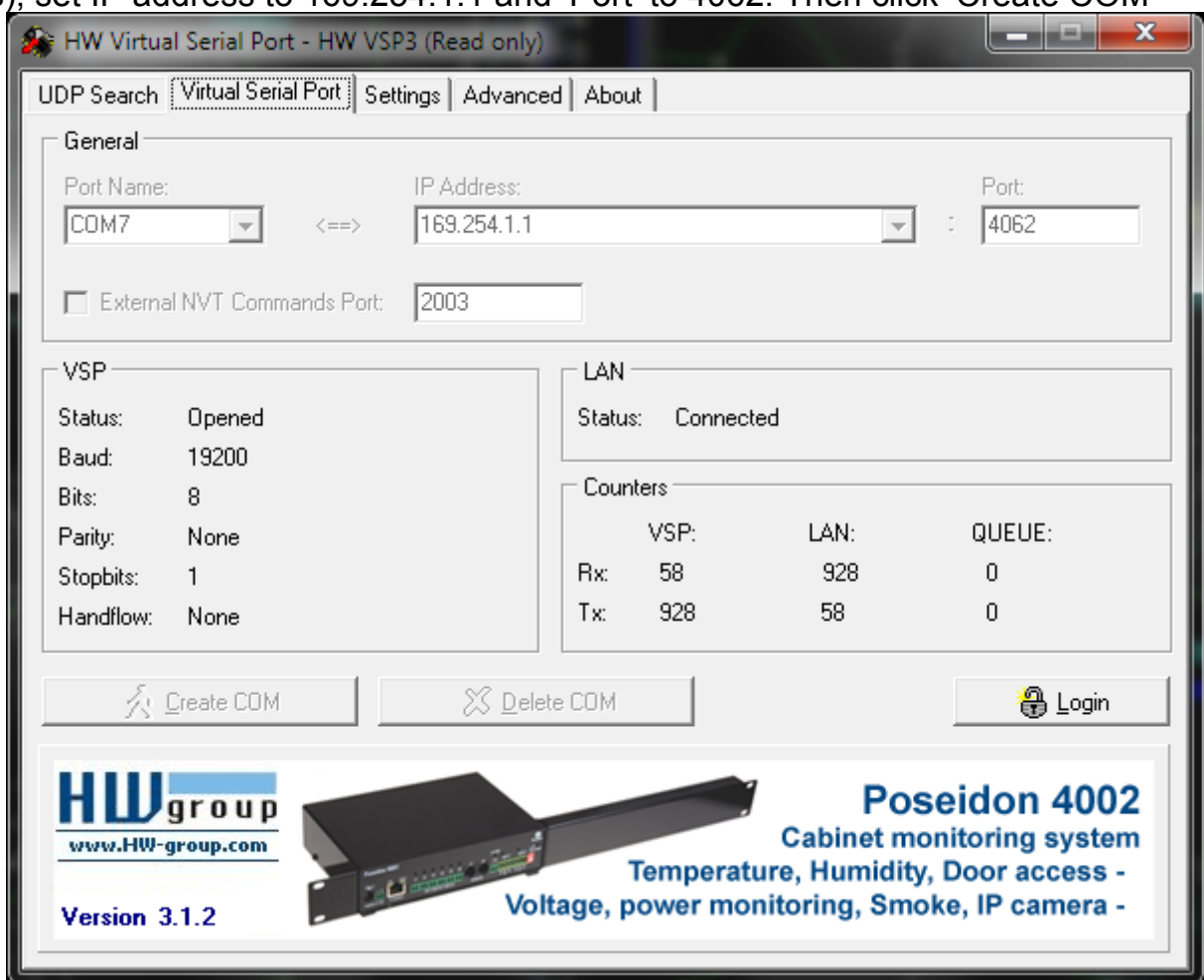
This document describes how to setup your Nexus with a Windows based computer running planetarium software using default factory settings. The planetarium software must have support for ServoCAT.

1. Please connect your Windows based PC/laptop to Nexus's network. It usually takes a couple of minutes until Windows connects and gets the IP address.

2. In order to use Nexus with planetarium software it is necessary to setup a Virtual Serial Port to TCP/IP redirection utility. HW VSP3 is used in this guide. It is free for personal use and can be downloaded from:

[http://www.hw-group.com/products/hw\\_vsp/index\\_en.html](http://www.hw-group.com/products/hw_vsp/index_en.html)

Install and run the utility and select 'Virtual Serial Port' tab. Click on the 'Login' button and then select a 'Port Name' (use COM3-COM8 for software that cannot access other ports), set IP address to 169.254.1.1 and 'Port' to 4062. Then click 'Create COM'



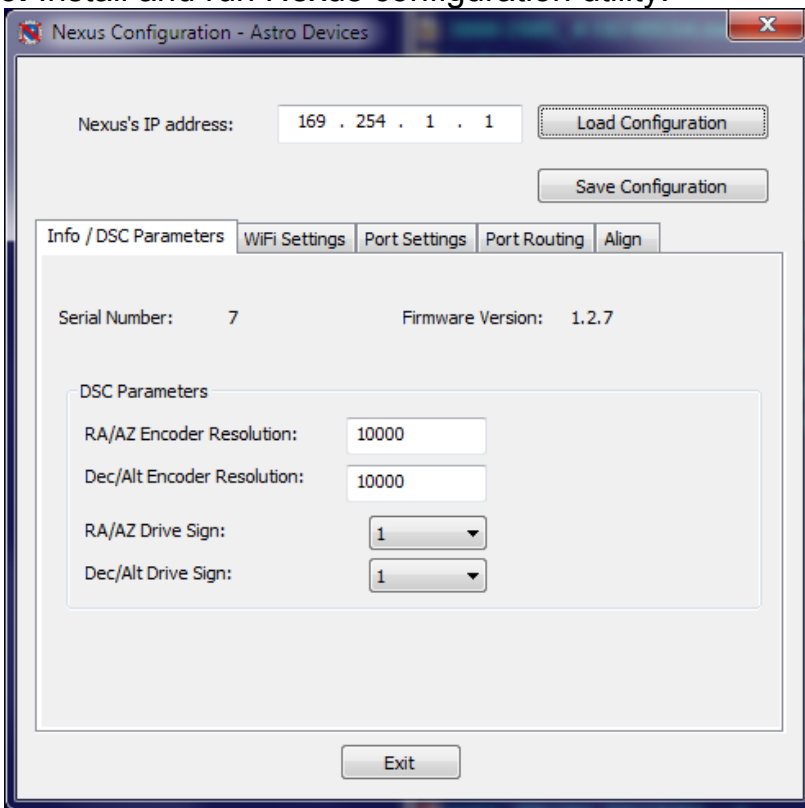
Please make sure that 'Status' says 'Created'. In case of an error just click 'Delete COM' then select another 'Port Name' and try again.

Please take a note of the name of the 'Port Name' as it is necessary to use that name later on.

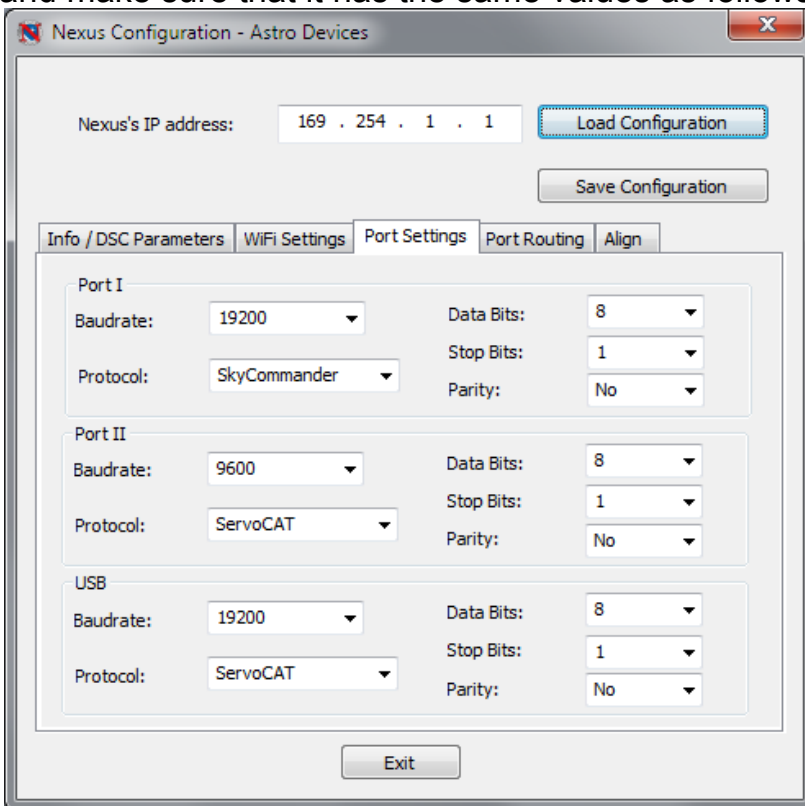
You can also use another utility from:

<http://www.astrogeeks.com/AstroGeeks/COM2TCP/index.html>

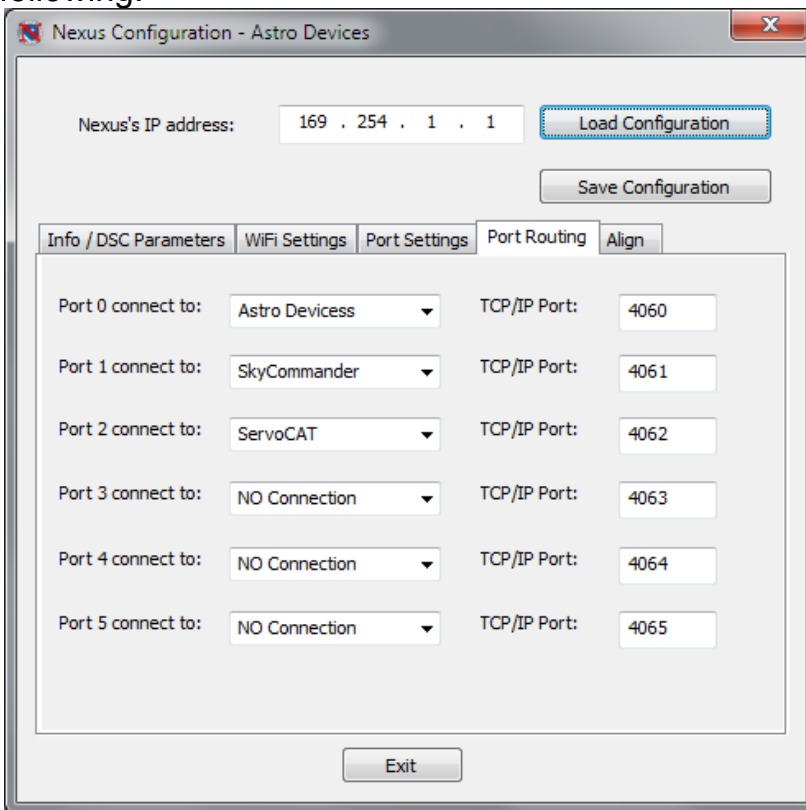
### 3. Install and run Nexus configuration utility.



4. If your Nexus has not been pre-configured for operating with ServoCAT then it requires some basic configuration. Press 'Load Configuration'. Now press 'Port Settings' and make sure that it has the same values as follows:



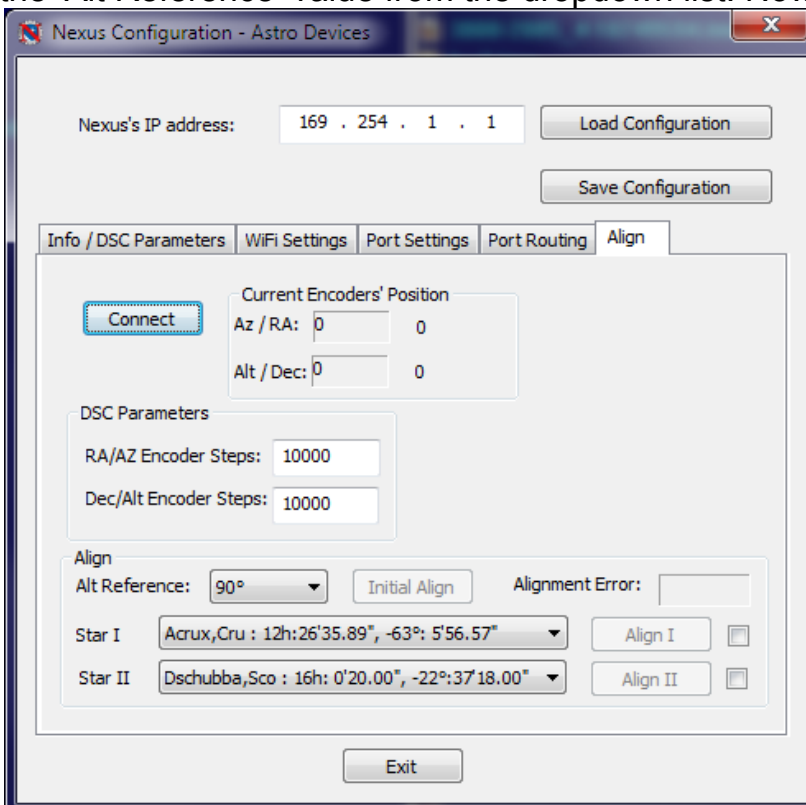
5. It is also necessary to make sure that the settings for 'Port Routing' matches the following:



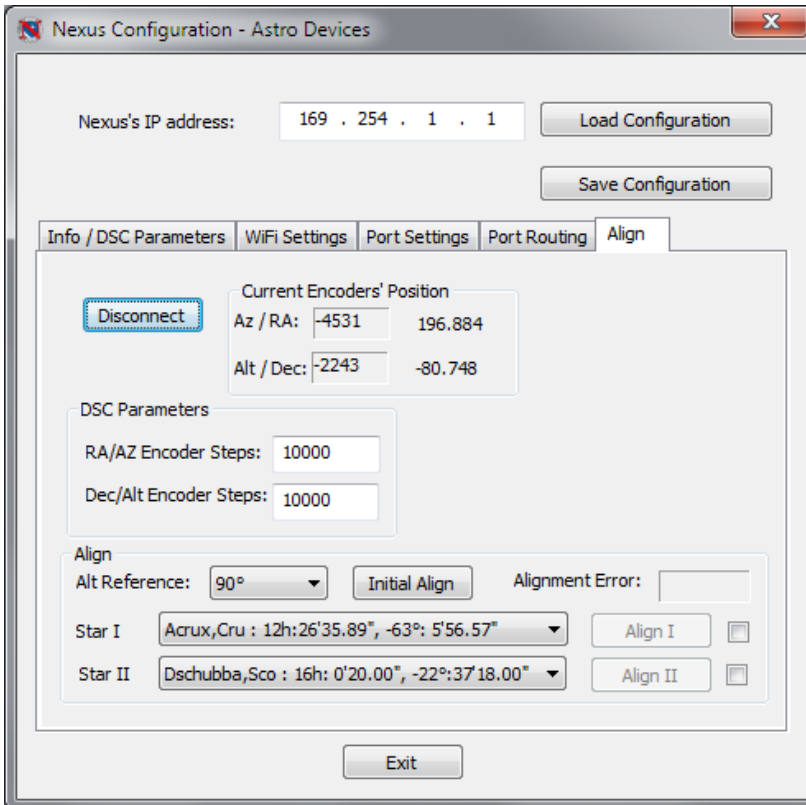
6. If any changes were required press 'Save Configuration' button and restart Nexus.

## Two star Alignment

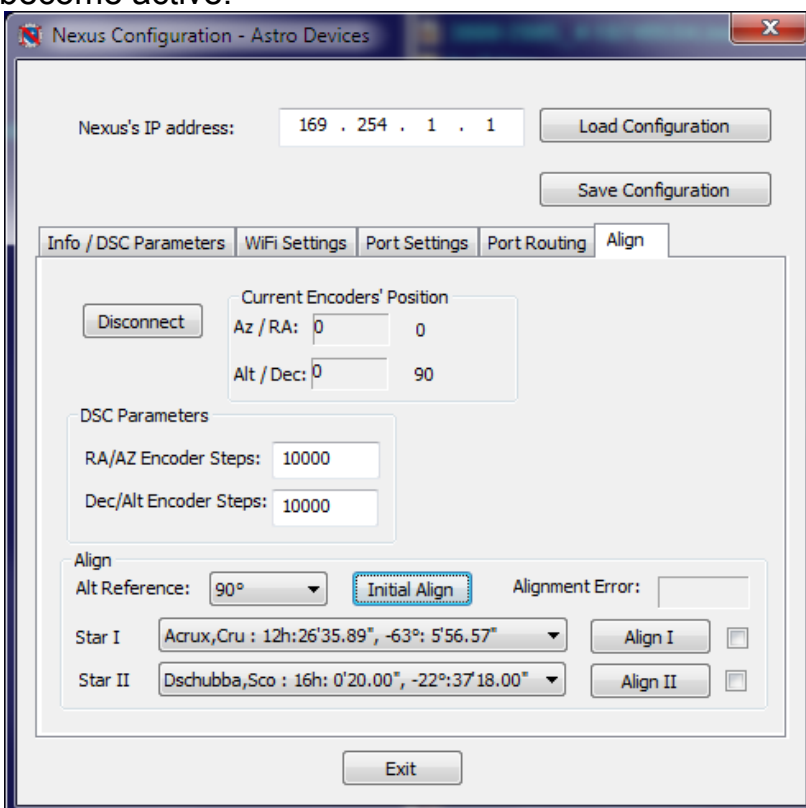
1. Press the 'Align' tab. Set encoders steps to the ones used by the telescope. Select the 'Alt Reference' value from the dropdown list. Now it is time to press 'Connect'.



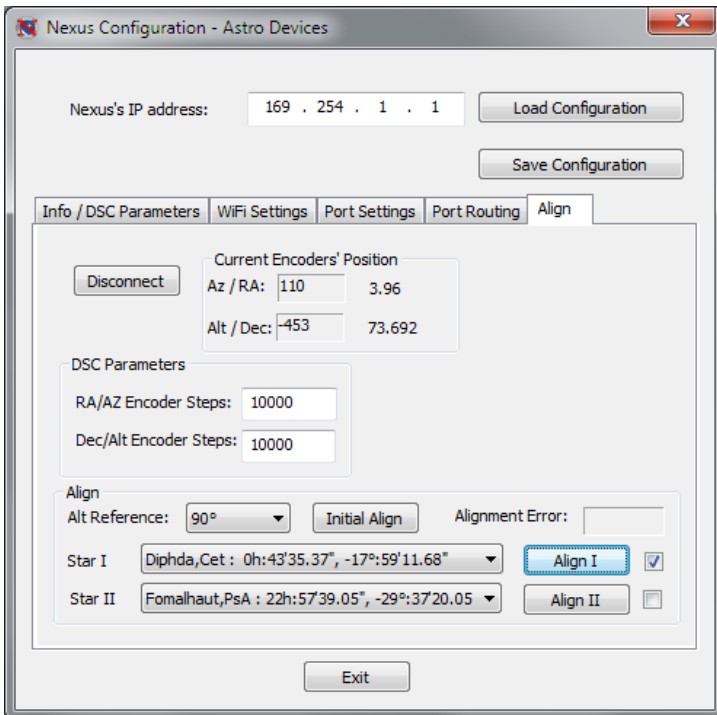
2. The 'Initial Align' button will become active as soon as the connection is established. Make sure that the encoders' position values change when moving the telescope. This can also be used to test the encoders.



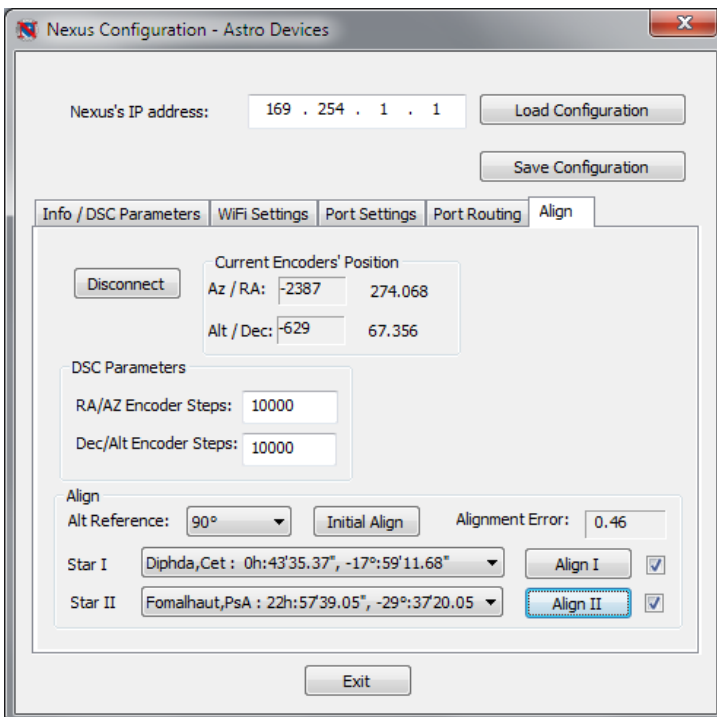
3. Set the telescope at the 'Alt Reference' angle (90 degrees in this example – vertical) and press 'Initial Align' button and wait until the encoders' position values go to 0, 90 (for 90 degrees) or 0, 0 (0 degrees, horizontal). 'Align I' and 'Align II' buttons will now become active.



3. Select two alignment stars from 'Star I' and 'Star II' dropdown lists. The selected stars will be saved and used next time the configuration utility is run. Point the telescope at the first selected alignment star and press 'Align I' button. A check mark will appear next to the button as soon as Nexus acknowledges it received the command.



4. Point the telescope at the second selected alignment star and press 'Align II' button. A check mark will appear next to the button as soon as Nexus acknowledges it received the command. The 'Alignment Error' field will show how precise the alignment was achieved. The red LED on ServoCAT should now become steady ON.



5. **Done!!!** Now it is time to connect you favourite planetarium software through the COM port created using ServoCAT or ServoCAT+Argo Navis protocol. Please refer to the user manual of the planetarium software for further detail on how to use it with ServoCAT.