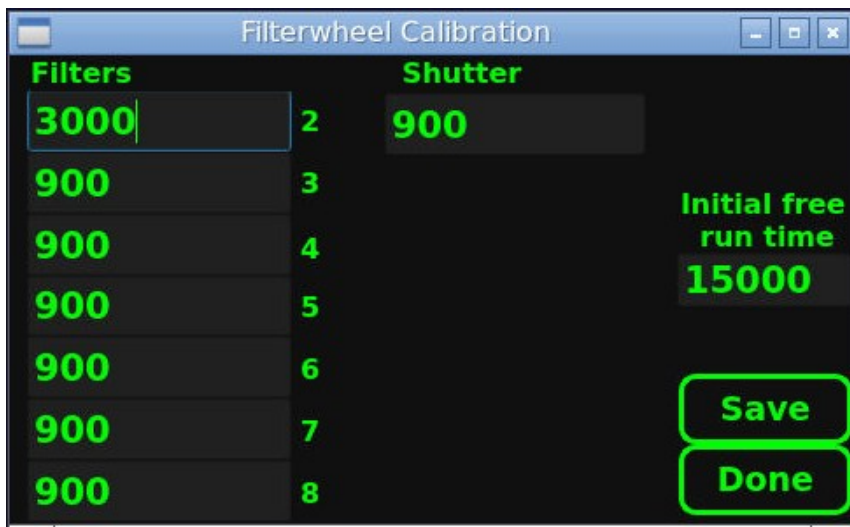


Astrel Instruments

AST-183-X
ADMIN TOOLS USER GUIDE
rev A

Filterwheel calibration



The Filterwheel calibration app is used to fine tune the filterwheel filter position. The calibration is done by Astrel before sending the camera, but in some cases, like for example a filter addition or removal, it could be necessary to recalibrate the filterwheel using this app.

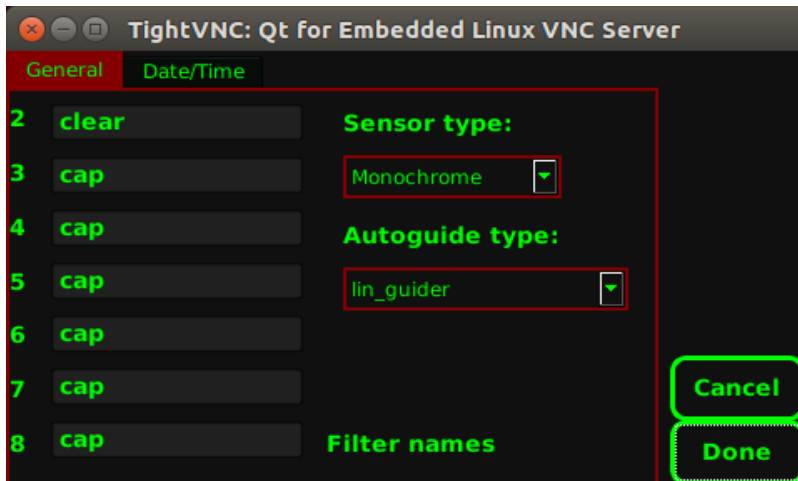
The camera, during boot, finds the absolute filters positions by reading the number of counts generated by a sensor during filterwheel movement. For each filter position the sensor returns a very similar number of counts, apart position 1, where it reports an higher number of counts.

You can fine tune the filter positioning using different offsets for each filter and for the shutter. The procedure for calibrating the wheel uses this app together with the filterwheel app. Use the filterwheel app to position the wheel on a filter and, by carefully looking through the optical window, evaluate if the filter is centered with the sensor. If not, change the corresponding number in this app (filters positions are numbered from 2 to 8 in the order shown in the configure app while the shutter is position 1), press **save** to store the new offsets, move to a different filter and then back to the selected filter and verify if with the new offset the centering is better. Continue until the filter is concentric with the sensor and then do the same for all the filters. If the sensor is not visible (narrowband filters), align the filter to be concentric with the optical window diaphragm.

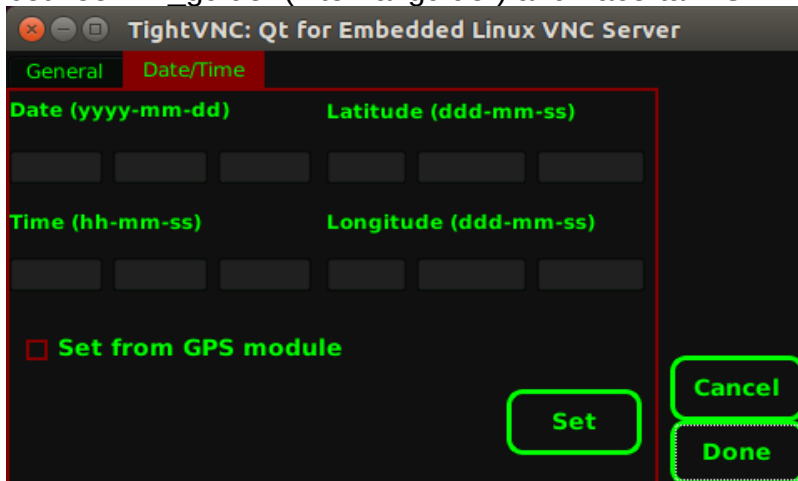
The **initial free run time** value is used to set the amount of time the filterwheel motor is run free without looking at the positioning sensor. In this phase the motor goes faster, so putting higher values in this field makes the filterwheel go faster, but with too high values you run the risk of missing one position.

When done, press the **done** button to exit

Configure



In the **general** tab you can enter the names of the filters for the corresponding filterwheel position, choose the **sensor type** between mono and single shot color and the **autoguider type** between `lin_guider` (internal guider) and Lacerta MGEN external autoguider



In the **Date/Time** tab you can enter the date, time and geographical coordinates. This info will be added in the images FITS header. Press **Set** when done.

When available, you can get these info directly from the GPS USB module by checking **Set from GPS module** and then press **Set**.