

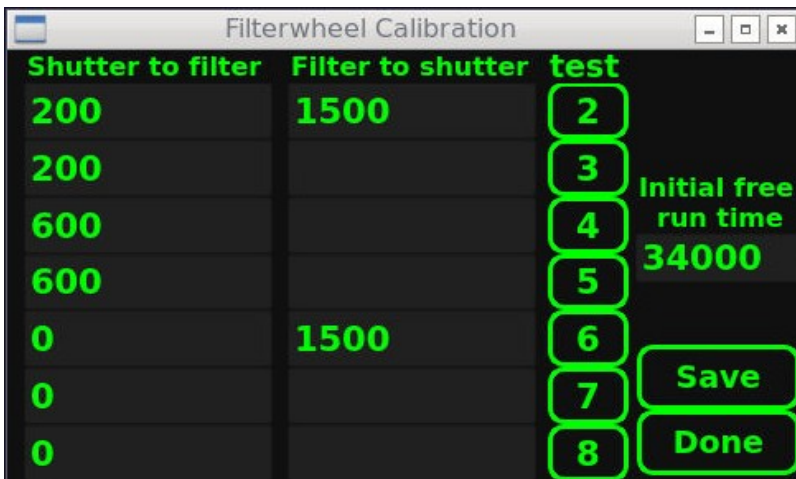
Astrel Instruments

AST-8300-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.

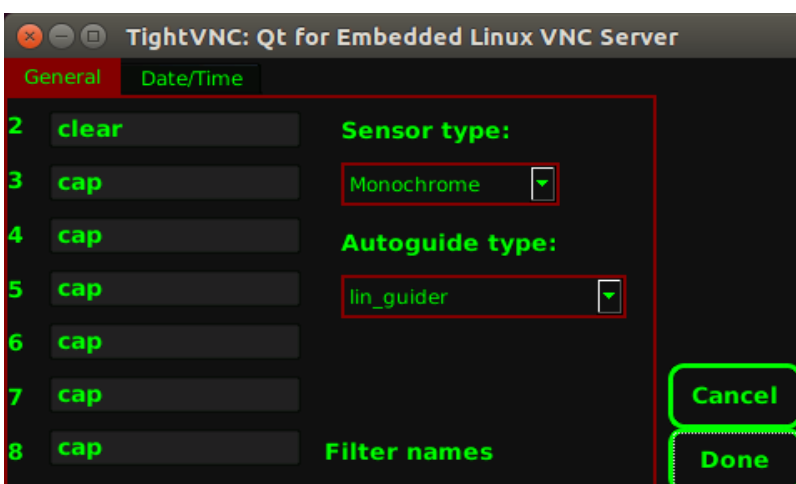
You can fine tune the filter positioning using 2 numbers for each filter: a number for the opening movement (from shutter to filter) and one for the closing movement (from filter to shutter). The filter to shutter column has only 2 values: the one at position 2 is used when the movement is counter-clockwise, while the one at position 6 is for clockwise movements.

When pressing the **test** button corresponding to a filter, an opening movement is done, then, after 10 seconds, the closing movement is done. By carefully look through the optical window, change the 2 numbers until the filter is concentric with the sensor. If the sensor is not visible (small bandwidth 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.

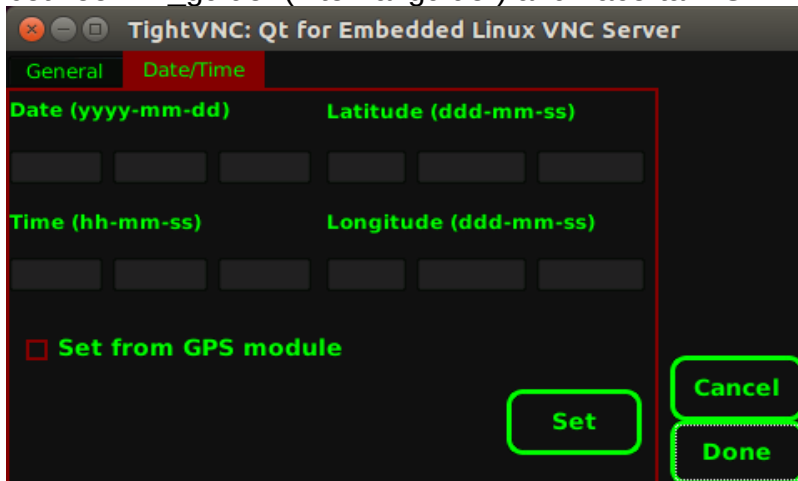
When done, touch the **save** button to store the new calibration data

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**.