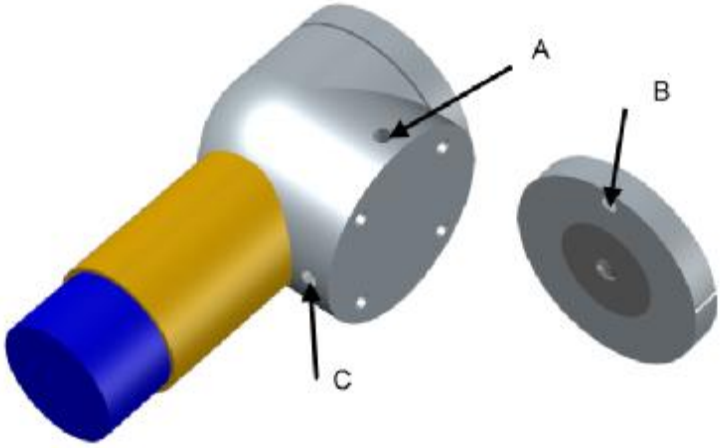
Sixth Axis sensor adjustment

IMPORTANT: do not back-drive the 6th axis wrist roll.
See diagrams below:

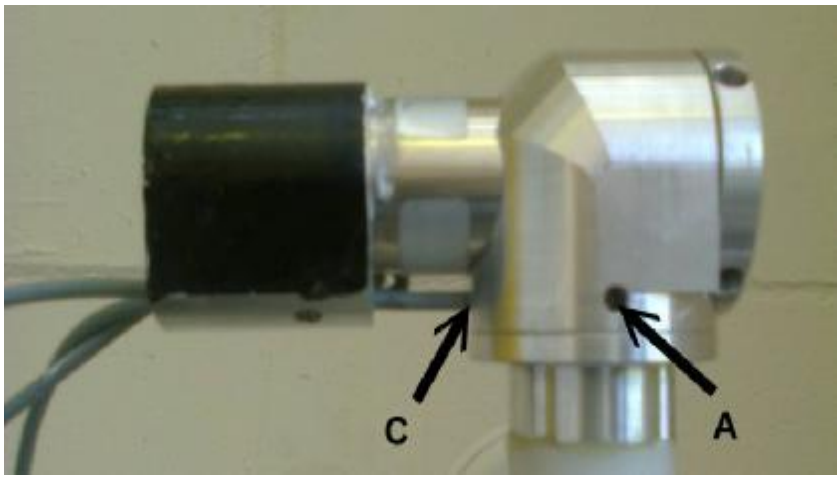


The diagram shows: left the complete assembly, right the mounting plate.
Calibration works as follows: most of the time the sensor (mounted at C) is sensing the mounting plate and reads '1'. During CALIBRATE or DATUM the plate rotates until the hole B lines up with the sensor then it changes to '0'.

HELP24 - 6th Axis Adjustment

ST Robotics

How to adjust



With the arm in HOME position enter PP. You should see
11111110
If you see
11011110
then the wrist roll is on the sensor. It should be possible to clear the sensor by moving the wrist roll motor with a command:

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TELL WRIST 1000 MOVE
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you should now see
11111110
If, no matter where you send the wrist you always see 11011110 then the wrist sensor is too far from the plate. Slacken the sensor set screw at A and push the sensor in using the wire at C until it contacts the plate. The PP should change to 11111110. Now pull the sensor back, estimating 0.5mm. The read should stay at 11111110. If it goes to 0 then push back in a little. Tighten the set screw a VERY SMALL AMOUNT: just enough to hold the sensor. If you tighten too much you will crush the sensor.

Now test with

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TELL WRIST DATUM
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You may get a “too far message”, repeat the command a few times until the sensor hole is reached. Of course if you have gone 360 degrees then you may need to check adjustment again. Be sure about adjustment before replacement of sensor.