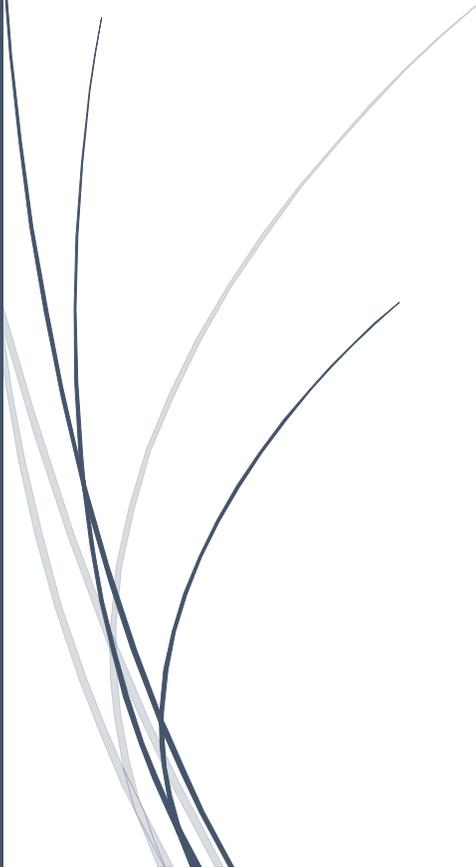




9/8/2017

MICO 6 DOF Supplementary Guide



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Setup - Hardware

- Secure the base to the table with the C-clamps found inside the MICO 6DOF case (assembly required for the base. Will need the large hex screw to bolt the base plate with the base stud – the required blue hex key should be inside the case as well).
- Secure the MICO 6DOF to the base using the thumb screws.
- Connect the power adaptor to the MICO 6DOF (the connectors are keyed).
- Connect the RS-485 cable (yellow cable with silver connectors) to the MICO 6DOF (keyed circular connector end) and to the PCI RS-485 adaptor card on the back of the PC (width connector end).
- Position the arm such that it has space to move around (i.e., not pointing down towards the table top) – the demo will move the arm around the initial POSE, approximate +/- 30 deg range for each of the joints.
- The arm will hold its position when powered on.
- Note: To avoid damage to the arm and fingers, provide support for the arm when powered off. For example, point the gripper/fingers up while resting the “elbow” of the arm on a soft surface (such as foam). Pay attention to the shoulder joint for self-collision.

Setup – Software

This guide just covers how to use the Torque Reset Model. For details of the other models provided please see the MICO_6DOF_Lab_Guide found in the Laboratory Guide folder.

Torque Reset

The Torque Reset model can be used to zero the torque sensors of the 6 DOF MICO. It is recommended to perform a Torque Reset periodically to ensure torque values are true and as consistent as possible.

- Power on the arm in close to a full vertical position
- Go to the **Reset Torque** subfolder.
- Open the **MICO_Rest_Torque_6DOF.slx** model
- The model will look like this

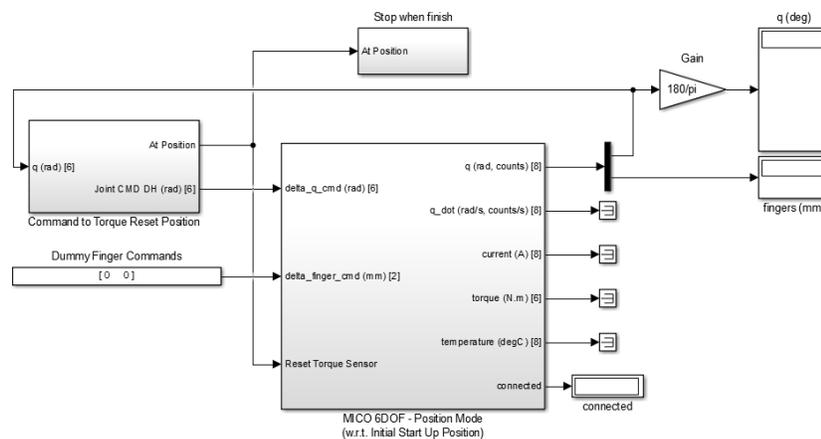
Quanser Robotics Package for Research - (MICO 6DOF) Reset Torque Sensor

Manually move the arm close to the vertical up position and turn power on.

Build/Compile the model and then Run.

Note: Make sure the workspace surrounding the arm is clear to avoid potential collisions!

NOTE: Double check the serial port numbers the MICO is connected to before running the mode!!!



- Compile and run model
- Arm will begin calibration
- Once complete model will automatically stop with message “Torque Sensor Rest Completed”