# 1) Calibrate SF fingers



The next tutorial is 2) Running the Reflex visualizer

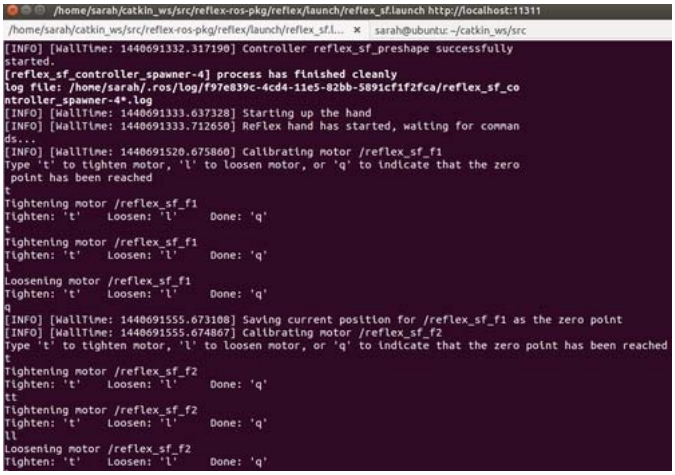
*DISCLAIMER: It's not easy to do, but it's possible that driving a hand past where it's supposed to be driven can cause damage. It's recommended that while your hand is uncalibrated and you are moving the fingers you should be ready to pull the plug or flip the switch if the motors drive too far and start jamming.*

## *Initiate calibration*

Power the hand and connect the USB cable. Then the code needs to be run and the finger calibration code needs to be run (/calibrate_fingers service)

```
roslaunch reflex reflex_sf.launch
(in a new terminal)
rosservice call /reflex_sf/calibrate_fingers
```

After calibration is running, **go back to the window where reflex_sf.launch was run.** You'll see a series of prompts, which will ask you to tighten (t / tt) or loosen (l / ll) each motor. When you get each motor to the place you want, hit 'q' to move on to the next motor.




## *What's actually happening*

Unlike the Reflex Takktile hand, the SF doesn't have any sensor feedback. Whereas the Takktile hand uses encoders to automatically calibrate the fingers, with the SF we need to position the motors by hand and then tell the code to save that motor position as the "zero" point.

These values are saved in the reflex/yaml/reflex_sf_zero_points.yaml file when you run the /calibrate_fingers service. That means calibration doesn't need to happen often (the values are saved) but should be done if you detach the finger tendons/spools or if the tendons stretch.

Keep going on to 2) Running the Reflex visualizer

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