

## 5、 Robot calibration

### 5.1、 Imu Calibration

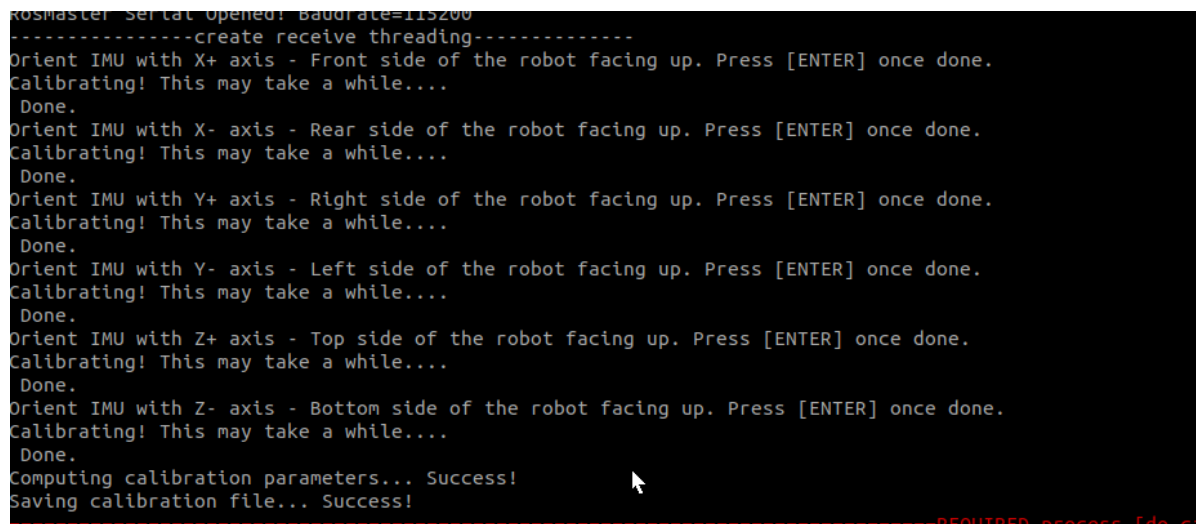
#### 5.1.1、 Calibration steps

**Note: When calibrating, make sure the robot is still**

1) 、 Run

```
cd ~/driver_ws/src/yahboom_bringup/launch
roslaunch calibrate_imu.launch
```

As shown in the figure below, press Enter to calibrate the data in the X+, X-, Y+, Y-, Z+, Z- directions in turn. After the calibration, it will be automatically saved to the specified folder.



```
rosmaster Serial opened! Baudrate=115200
-----create receive threading-----
Orient IMU with X+ axis - Front side of the robot facing up. Press [ENTER] once done.
Calibrating! This may take a while...
Done.
Orient IMU with X- axis - Rear side of the robot facing up. Press [ENTER] once done.
Calibrating! This may take a while...
Done.
Orient IMU with Y+ axis - Right side of the robot facing up. Press [ENTER] once done.
Calibrating! This may take a while...
Done.
Orient IMU with Y- axis - Left side of the robot facing up. Press [ENTER] once done.
Calibrating! This may take a while...
Done.
Orient IMU with Z+ axis - Top side of the robot facing up. Press [ENTER] once done.
Calibrating! This may take a while...
Done.
Orient IMU with Z- axis - Bottom side of the robot facing up. Press [ENTER] once done.
Calibrating! This may take a while...
Done.
Computing calibration parameters... Success!
Saving calibration file... Success!
```

After running, the program will exit with an error, which is normal.

Calibration data is stored in,

```
~/driver_ws/src/yahboomcar_bringup/param/imu_calib.yaml
```