

## Table of Contents

Launch Gazebo turtlebot.world and keyboard_teleop .....	1
Control Your Turtlebot! .....	2
roslaunch turtlebot_rviz_launchers view_robot.launch .....	2
RVIZ Robot Visualization (Text Pages 117, 165-169) .....	3
SELECT OPTIONS ON 'DISPLAYS' .....	3
Turtlebot's x axis is pointing toward cube. Scan sees cube and bookcase. ....	4

## Launch Gazebo turtlebot.world and keyboard\_teleop

```
harman@D104-45931:~$ roslaunch turtlebot_gazebo turtlebot_world.launch
```

```
  process has finished cleanly ..... View Gazebo GUI
```

```
harman@D104-45931:~$ roslaunch turtlebot_teleop keyboard_teleop.launch
... logging to /home/harman/.ros/log/d2f268d2-9419-11eb-866e-9cb6d00f6f89/roslaunch-D104-45931-5811.log
Checking log directory for disk usage. This may take awhile.
Press Ctrl-C to interrupt
Done checking log file disk usage. Usage is <1GB.
```

```
started roslaunch server http://D104-45931:36828/
```

### SUMMARY

```
=====
```

### PARAMETERS

- \* /rostdistro: kinetic
- \* /rosversion: 1.12.16
- \* /turtlebot\_teleop\_keyboard/scale\_angular: 1.5
- \* /turtlebot\_teleop\_keyboard/scale\_linear: 0.5

### NODES

```
/
  turtlebot_teleop_keyboard (turtlebot_teleop/turtlebot_teleop_key)
```

```
ROS_MASTER_URI=http://localhost:11311
```

```
process[turtlebot_teleop_keyboard-1]: started with pid [5828]
```

## Control Your Turtlebot!

-----  
Moving around:

u i o  
j k l  
m , .

q/z : increase/decrease max speeds by 10%  
w/x : increase/decrease only linear speed by 10%  
e/c : increase/decrease only angular speed by 10%  
space key, k : force stop  
anything else : stop smoothly

CTRL-C to quit

currently:      speed 0.2      turn 1

## roslaunch turtlebot\_rviz\_launchers view\_robot.launch

```
harman@D104-45931:~$ roslaunch turtlebot_rviz_launchers view_robot.launch
... logging to /home/harman/.ros/log/d2f268d2-9419-11eb-866e-9cb6d00f6f89/roslaunch-D104-45931-6115.log
Checking log directory for disk usage. This may take awhile.
Press Ctrl-C to interrupt
Done checking log file disk usage. Usage is <1GB.
```

```
started roslaunch server http://D104-45931:40556/
```

### SUMMARY

=====

### PARAMETERS

```
* /rostdistro: kinetic
* /rosversion: 1.12.16
```

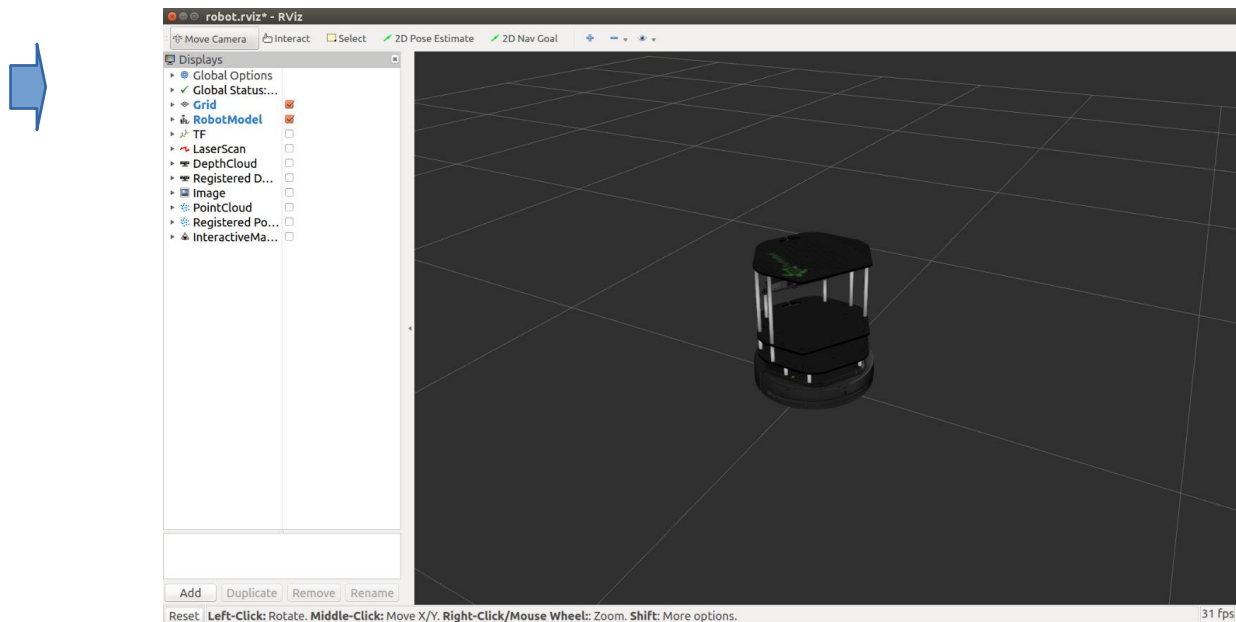
### NODES

```
/
  rviz (rviz/rviz)
```

```
ROS_MASTER_URI=http://localhost:11311
```

```
process[rviz-1]: started with pid [6132]
```

## RVIZ Robot Visualization (Text Pages 117, 165-169)

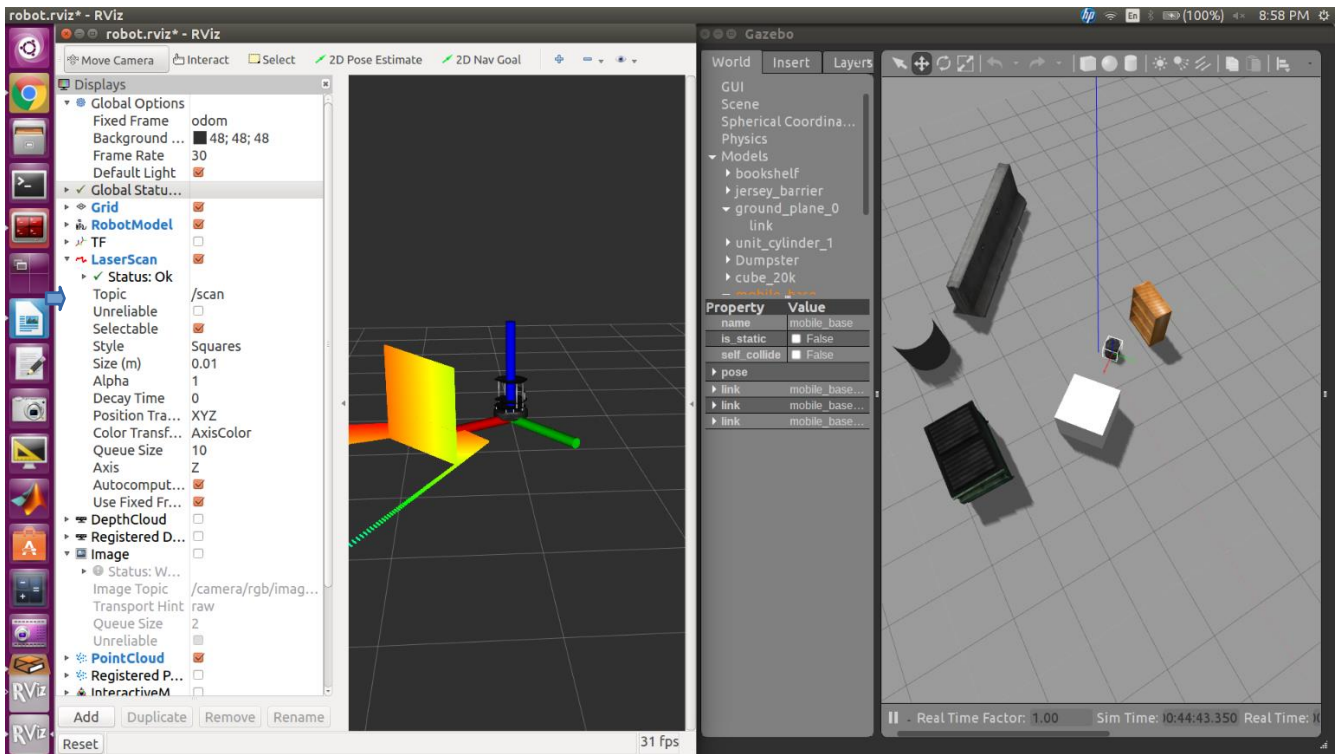


### SELECT OPTIONS ON 'DISPLAYS'

- a. GlobalOptions> Change Fixed Frame > ODOM  
Laser Scan Topic (Open Dropdown = /scan)
- b. ADD DISPLAY TYPES: **ADD** Robot Model (If not selected),  
ADD Axes (Change reference frame = base\_footprint),  
ADD Point Cloud > Camera/depth/points.

Move the TurtleBot with keys (I, l j and q/z w/x e/c) . The scan will show the objects in the Gazebo image

To Save Rviz - File save config as <name>.rviz (IN HOME .rviz)



Red arrow is x-axis. TurtleBot is facing the white cube in Rviz and Gazebo.

**Turtlebot's x axis is pointing toward cube. Scan sees cube and bookcase.**

