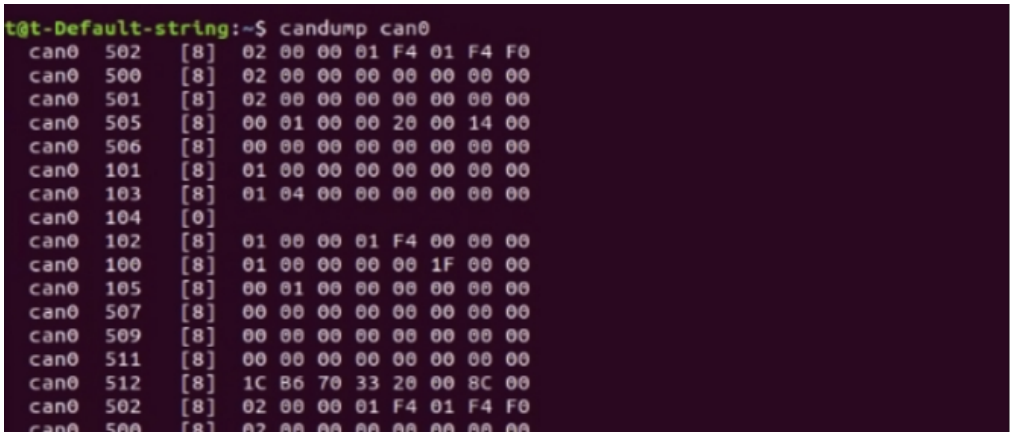
Chapter 3: Chassis control command issuance

(based on ROS messages)

3.1 Preparatory matters

(Note: the stile needs to be set up in case of accidents)

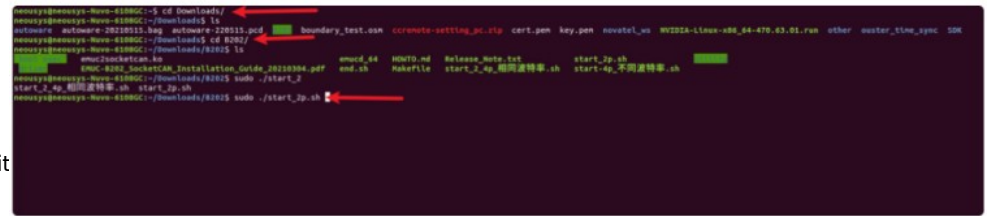
1. Open the terminal: `candump can0` and enter the command to see if the communication between the controller and the chassis is normal.



如过没有出现can0，can1，表示can驱动启动失败

- 如果是晨曜工控机，请执行以下

```
在该目录~/Downloas/B202下执行
sudo ./start_2p.sh
输入密码：12345678
```



• 如果是集合诚工控机，请执行以下

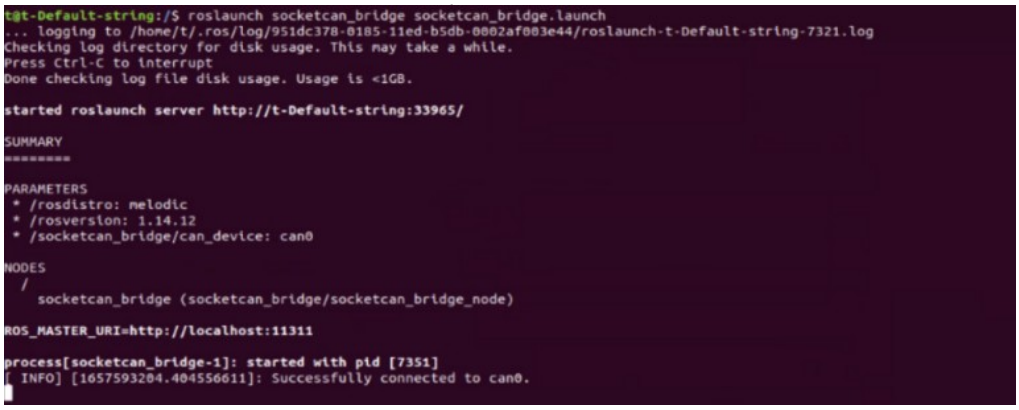
```
在该目录/home/EMUC_B202_SocketCAN_driver_v3.2_utility_v3.1_20210302下执行
sudo ./start.sh
输入密码：11111111
```

```
t@t-Default-string:~$ clear
t@t-Default-string:~$ cd ..
t@t-Default-string:/home$ ls
EMUC_B202_SocketCAN_driver_v3.2_utility_v3.1_20210302  EMUC_B202_SocketCAN_driver_v3.2_utility_v3.1_20210302.zip  t
t@t-Default-string:/home$ cd EMUC_B202_SocketCAN_driver_v3.2_utility_v3.1_20210302/
t@t-Default-string:/home/EMUC_B202_SocketCAN_driver_v3.2_utility_v3.1_20210302$ sudo ./start.sh
[sudo] password for t:
Sorry, try again.
[sudo] password for t:
/sbin/ifconfig
t@t-Default-string:/home/EMUC_B202_SocketCAN_driver_v3.2_utility_v3.1_20210302$ candump can0
  can0  506   [8]  00 00 00 00 00 00 00 00
  can0  502   [8]  00 00 01 01 F4 01 F4 00
  can0  500   [8]  00 00 01 00 00 00 00 00
  can0  501   [8]  00 00 01 00 00 00 00 00
  can0  505   [8]  00 00 00 00 38 00 00 00
  can0  506   [8]  00 00 00 00 00 00 00 00
  can0  504   [8]  00 01 00 00 00 00 00 00
  can0  503   [8]  01 01 00 00 00 00 00 00
  can0  502   [8]  00 00 01 01 F4 01 F4 00
  can0  500   [8]  00 00 01 00 00 00 00 00
  can0  501   [8]  00 00 01 00 00 00 00 00
  can0  505   [8]  00 00 00 00 38 00 00 00
  can0  506   [8]  00 00 00 00 00 00 00 00
  can0  502   [8]  00 00 01 01 F4 01 F4 00
  can0  500   [8]  00 00 01 00 00 00 00 00
  can0  501   [8]  00 00 01 00 00 00 00 00
```

2. Start **pix_driver**: **roslaunch pix_driver pix_driver.launch**

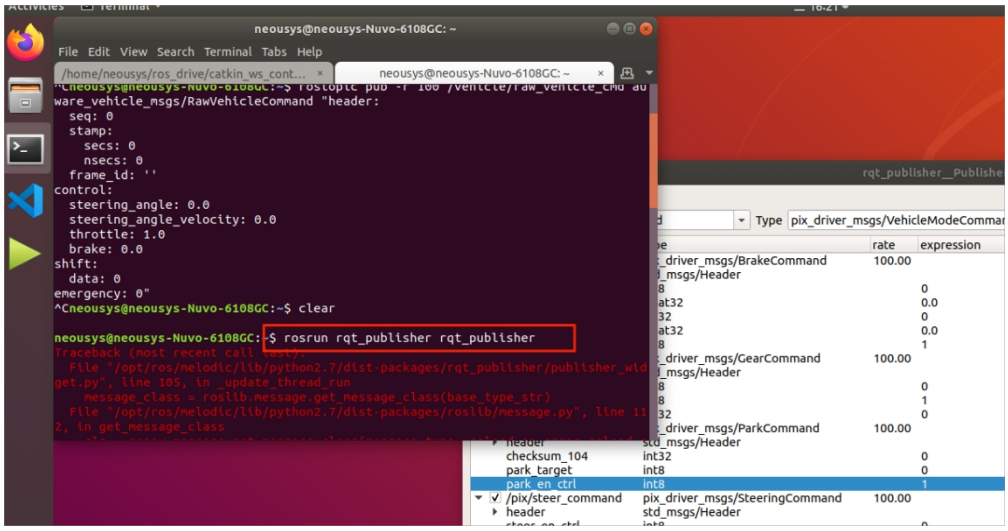
```
t@t-Default-string:~$ roslaunch pix_driver pix_driver.launch
... logging to /home/t/.ros/log/15065238-018d-11ed-b5db-0002af003e44/roslaunch-t-Default-string-8121.log
Checking log directory for disk usage. This may take a while.
Press Ctrl-C to interrupt
Done checking log file disk usage. Usage is <1GB.

started roslaunch server http://t-Default-string:42129/

SUMMARY
========

PARAMETERS
 * /aeb_en_ctrl: 1
 * /rosdistro: melodic
 * /rosversion: 1.14.12

NODES
  /
    command_node (pix_driver/pix_driver_command_node)
    control_converter (pix_driver/control_converter_speed_1.py)
    read_converter (pix_driver/report_converter.py)
    report_node (pix_driver/pix_driver_report_node)
    vehicle_report (pix_driver/vehicle_report_2.py)

auto-starting new master
process[master]: started with pid [8146]
ROS_MASTER_URI=http://localhost:11311

setting /run_id to 15065238-018d-11ed-b5db-0002af003e44
process[rosout-1]: started with pid [8172]
started core service [/rosout]
process[report_node-2]: started with pid [8175]
process[command_node-3]: started with pid [8176]
process[read_converter-4]: started with pid [8181]
process[control_converter-5]: started with pid [8186]
process[vehicle_report-6]: started with pid [8192]
-0.360068930108
```

3. Launch **socketcan_bridge**: **roslaunch socketcan_bridge socketcan_bridge.launch**

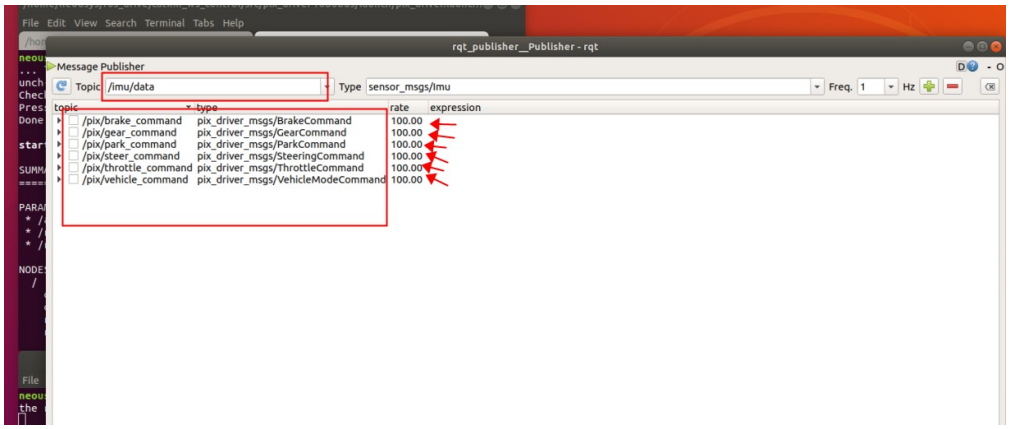


3.2 Speed, steering, brakes.

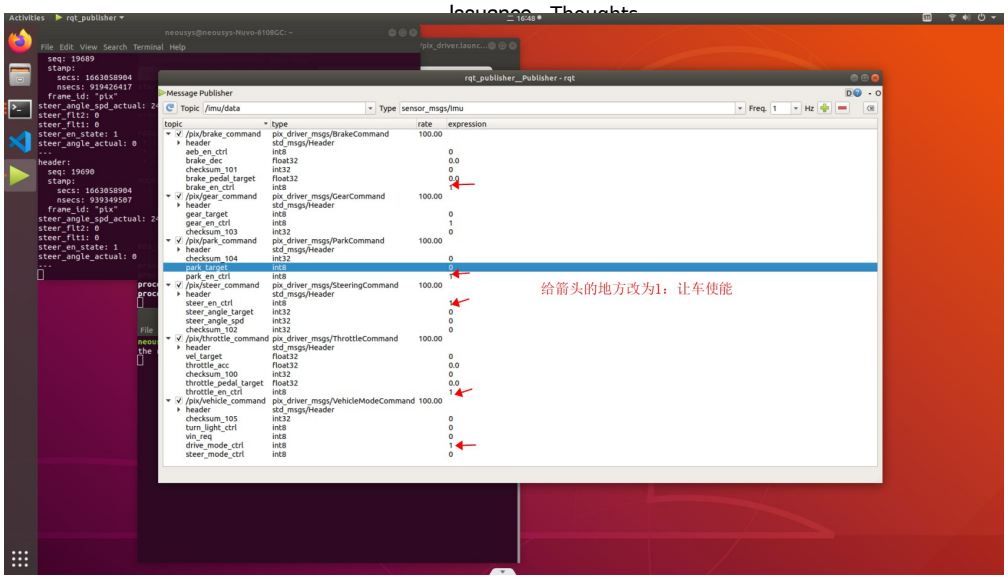
Start the **ros** tool: **rosrun rqt_publisher rqt_publisher**



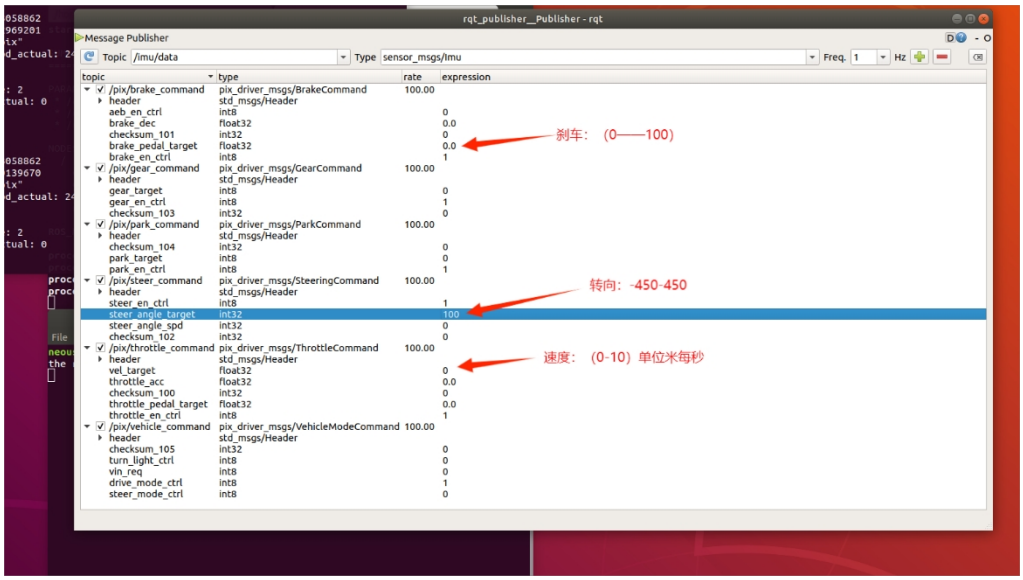
`Topic` add the following topics: `brake_command` `gear_command` `park_command` `throttle_command` `vehicle_command` then `rate` to `100`



And then enable the



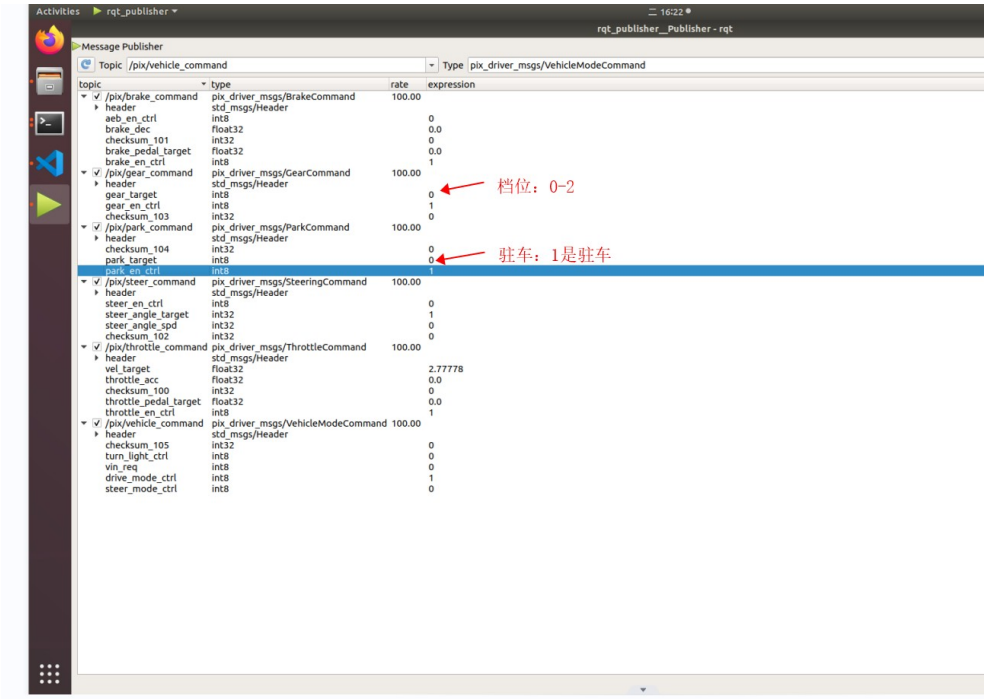
Give the speed or steering or braking value.



Remote control decentralization：`gear-N, self-driving, speed`

3.3 Parking, gears

Enter the value of the gear or park, decentralization




10km/h
Industrial Remote Control Receiver
档位调至D或R
Headlights Off
Handbrake On
遥控器放权
模式改为Speed
Throttle&Brake
Power Switch
Motor Control Selection
Lock/Unlock
Display Switch
DriveMode