

Lesson 6 Precautions for Assembly

Many servos are used in this robot. Therefore, the assembly of servos has great impact on its performance. Before assembling the servo rocker arm, it's recommended to power on the servo and control the servo shaft to rotate to the initial position, so then the rocker arm installed at a specific angle will be in the initial position.

Operation steps of powering on the servo:

Boot up the Raspberry Pi.

Connect the servo. Pay attention to the direction of the port when assembling. The yellow wire is connected to the yellow pin, the red wire to the red pin, and the brown wire to the black pin. Connect all 4 servos to pins 0-3.

Run the code

1. Remotely log in to the Raspberry Pi terminal.

```
Linux raspberrypi 4.19.118-v7l+ #1311 SMP Mon Apr 27 14:26:42 BST 2020 armv7l
The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Sat Aug 29 08:17:49 2020 from 192.168.3.208

SSH is enabled and the default password for the 'pi' user has not been changed.
This is a security risk - please login as the 'pi' user and type 'passwd' to set
a new password.

pi@raspberrypi:~ $
```

2. Enter the command and press Enter to enter the folder where the program is located:

```
cd adeept_roboticarm/
```

```
pi@raspberrypi:~$ cd adeept_roboticarm/  
pi@raspberrypi:~/adeept_roboticarm$
```

3. View the contents of the current directory file:

```
ls
```

```
pi@raspberrypi:~/adeept_roboticarm$  
pi@raspberrypi:~/adeept_roboticarm$ ls  
1_servo.py 2_joystick.py 3_init servo.py 4_arm.py PCF8591.py setup.py  
pi@raspberrypi:~/adeept_roboticarm$
```

4. Enter the command and press Enter to run the program:

```
sudo python3 3_init servo.py
```

```
pi@raspberrypi:~/adeept_roboticarm$  
pi@raspberrypi:~/adeept_roboticarm$ sudo python3 3_init servo.py  
█
```

5. After running the program successfully, The servo will rotate to the initial position.

6. When you want to terminate the running program, you can press the shortcut key "Ctrl + C" on the keyboard.

Pay attention not to move the servo shaft during assembly. If you want to adjust the angle of the rocker arm, please remove it from the servo, find a proper angle and insert again.