

## First Trial

Note: This Pi-motion Raspberry Pi AI Visual PTZ requires the purchaser to make network settings based on their local conditions. If you know how to set a static ip address for the Raspberry Pi, you can read it directly from the third section.

### 1. How to inquiry local network address

After completing the hardware assembly according to the installation steps of the manual, we need to connect the keyboard, mouse, and display to the Raspberry Pi. Turn on the power on the expansion board. Click on the terminal in the upper left corner, as shown in Figure 1:

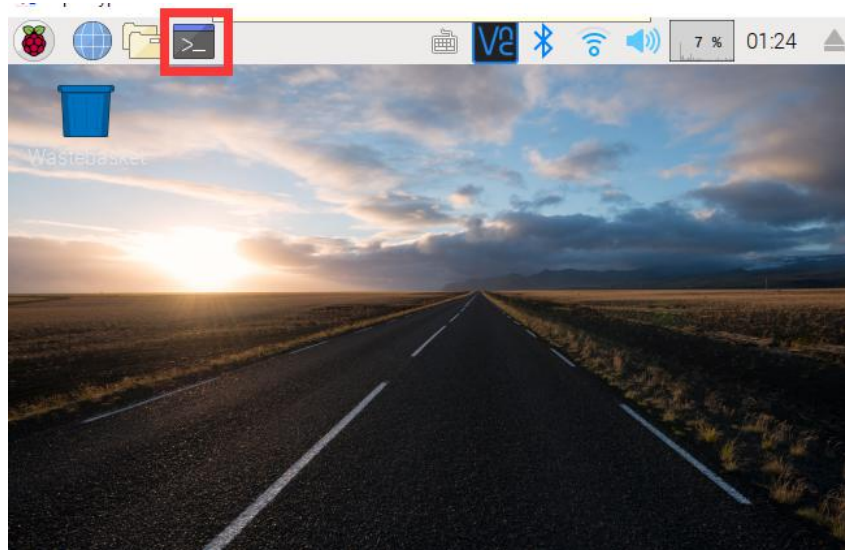


Figure 1-1

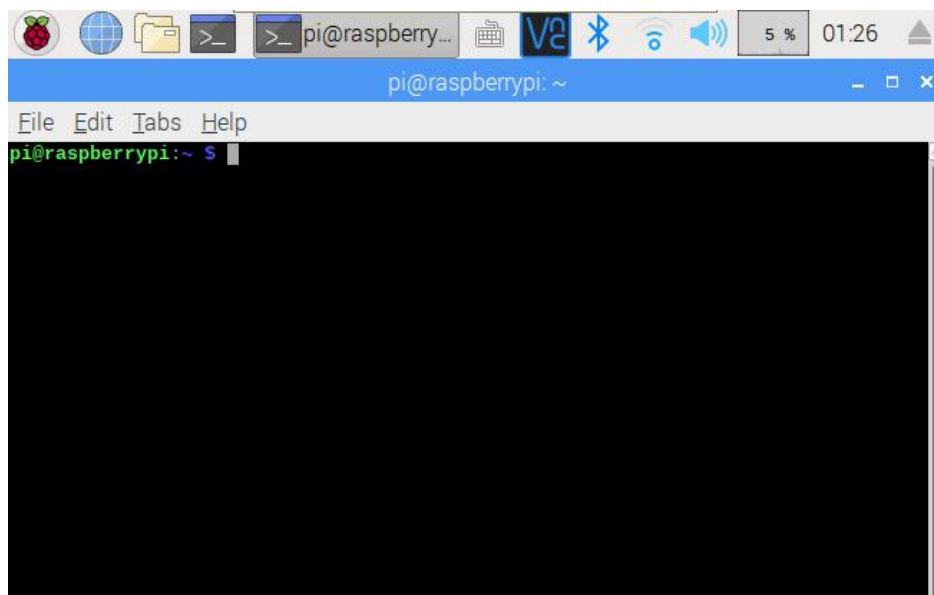


Figure 1-2

We need to input:

**sudo ifconfig**

You will see some message as shown in Figure 2 below:

```

pi@raspberrypi:~ $ sudo ifconfig
eth0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
    ether b8:27:eb:69:ed:17 txqueuelen 1000 (Ethernet)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 17 bytes 1004 (1004.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 17 bytes 1004 (1004.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlan0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.1.66 netmask 255.255.255.0 broadcast 192.168.1.255
    inet6 fe80::8e22:1cae:bba8:cdde prefixlen 64 scopeid 0x20<link>
    ether b8:27:eb:3c:b8:42 txqueuelen 1000 (Ethernet)
    RX packets 4457 bytes 336450 (328.5 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 3467 bytes 2192752 (2.0 MiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

pi@raspberrypi:~ $

```

Figure 2

If your Raspberry Pi connect to wired network, you should see information described by the "eth0" option.

If your Raspberry Pi connect to wireless network, you should see information described by the "wlan0" option.

For example, as shown in Figure 2 below, the IP address of "wlan0" is "192.168.1.66".

Next, you can view the network segment of the local network by other devices, and you can view it from any device that has access to the local Internet, for example:

1. Android phone: "Settings" - "WLAN" - "Details" - "IP address"
2. iOS mobile phone: "Settings" - "wireless LAN" - "details" - "IP address"
3. Windows computer: "Start" - search for "cmd" - enter "ipconfig"
4. macOS computer: open terminal - enter "ifconfig"

The useful information obtained by the above four methods of searching are:

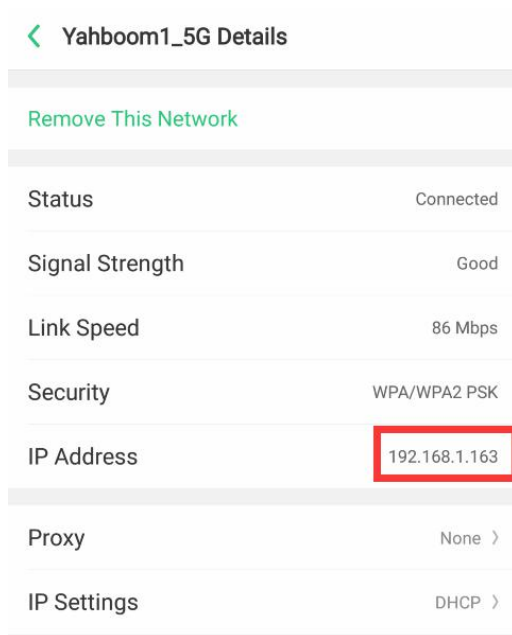


Figure 3 Android phone IP Address

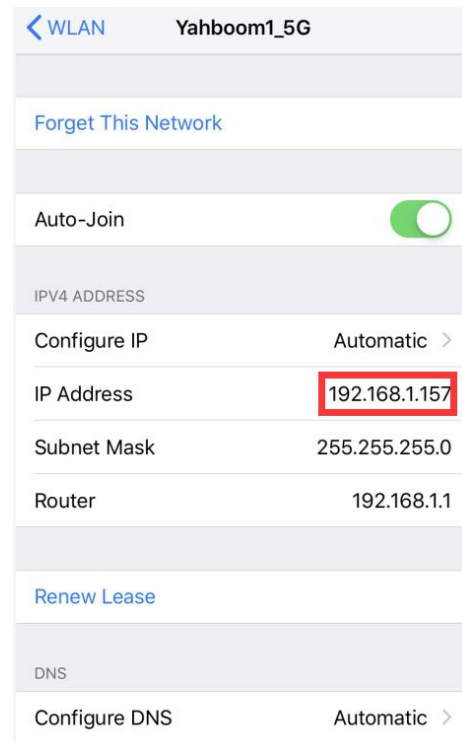


Figure 4 iphone IP Address

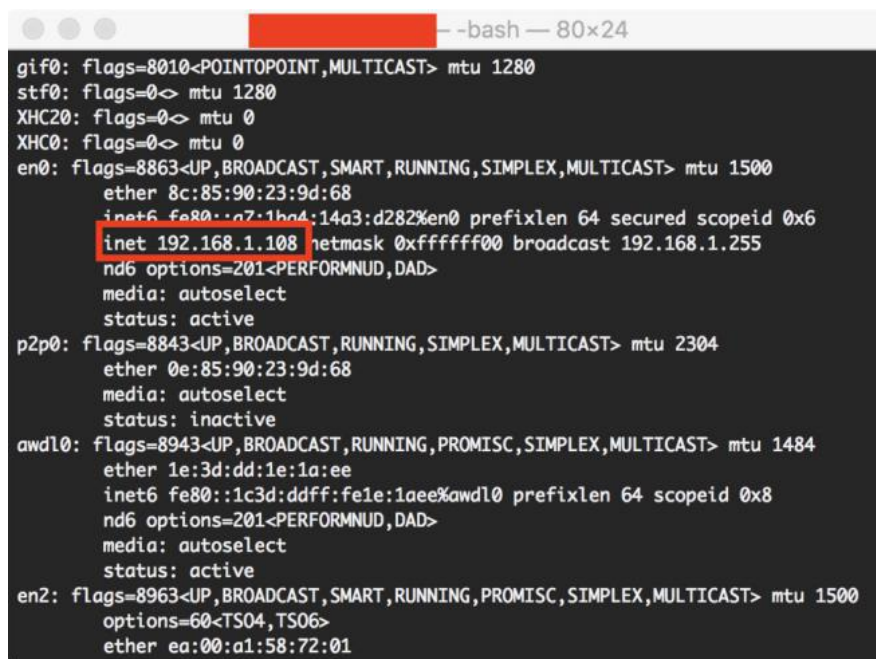
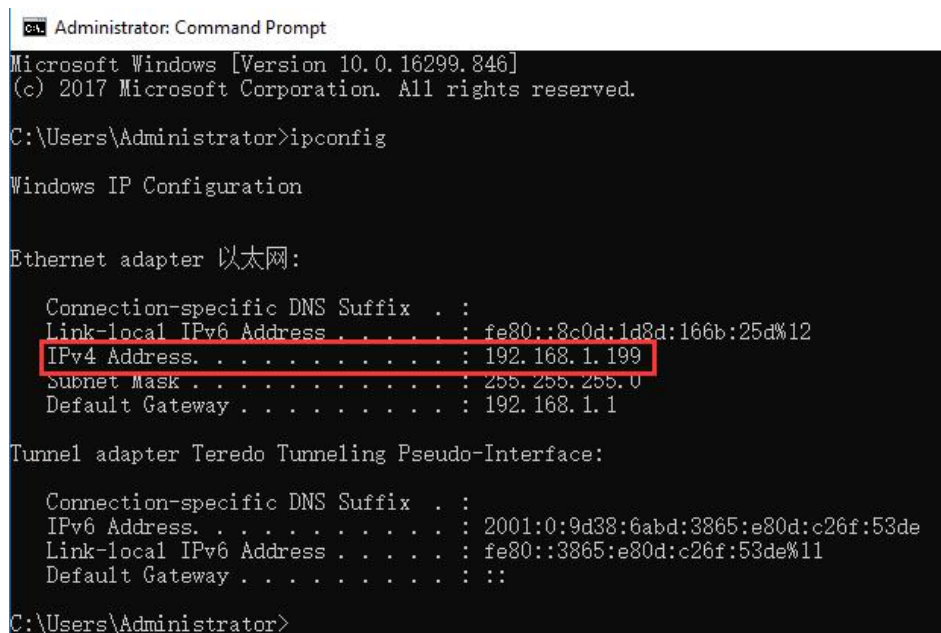


Figure5 macOSPC IP Address



```

Administrator: Command Prompt
Microsoft Windows [Version 10.0.16299.846]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>ipconfig

Windows IP Configuration

Ethernet adapter 以太网:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::8c0d:1d8d:166b:25d%12
    IPv4 Address. . . . . : 192.168.1.199
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1

Tunnel adapter Teredo Tunneling Pseudo-Interface:

    Connection-specific DNS Suffix  . : 
    IPv6 Address. . . . . : 2001:0:9d38:6abd:3865:e80d:c26f:53de
    Link-local IPv6 Address . . . . . : fe80::3865:e80d:c26f:53de%11
    Default Gateway . . . . . : ::

C:\Users\Administrator>

```

Figure 6 WINDOWS PC IP Address

As shown in the above four results, the current network segment is 1, so the third digit of the IP address of each service is ".1".

You need to remember the local network address + Subnet address. For example, the network address + Subnet address of the above four results is "192.168.1"

## 2. how to set a static IP address

We need to input:

**sudo nano /etc/dhcpd.conf**

You can also use other favorite text compilers. After entering the file, find the two commands at the bottom of the file as shown in Figure 7 below.

```

#profile static_eth0
#static ip_address=192.168.1.23/24
#static routers=192.168.1.1
#static domain_name_servers=192.168.1.1

# fallback to static profile on eth0
#interface eth0
#fallback static_eth0

interface eth0

static ip_address=192.168.1.55/24
static routers=192.168.1.1
static domain_name_servers=192.168.1.1

interface wlan0

static ip_address=192.168.1.66/24
static routers=192.168.1.1
static domain_name_servers=192.168.1.1

```

Figure 7

According to the network address found in the first step, configure the static IP address of the Raspberry Pi.

(For example: If the IP address of the discovered mobile phone is "192.168.0.70", you can change the Raspberry Pi command to:)

***interface eth0***

***static ip\_address=192.168.0.55/24***

***static routers=192.168.0.1***

***static domain\_name\_servers=192.168.0.1***

***interface wlan0***

***static ip\_address=192.168.0.66/24***

***static routers=192.168.0.1***

***static domain\_name\_servers=192.168.0.1***

eth0 and wlan0 do not conflict, you can also set both at the same time. After the modification is completed, you need to press ctrl+x , "y", "enter" on the keyboard to save and exit the file.

Restart the Raspberry Pi. You will find that the IP address has changed by using the "ifconfig" command on the terminal again.

### **3.set the startup file of the program run**

After successfully setting the static IP for the Raspberry Pi, we should enter /home/pi/Adafruit\_Python\_PCA9685 on the graphical page and find and open "ConnectInfo.txt" in the folder, we need to modify the first line IP of the text document to the Raspberry Pi static IP address set in the second part, as shown in Figure 8 below. And save and exit.



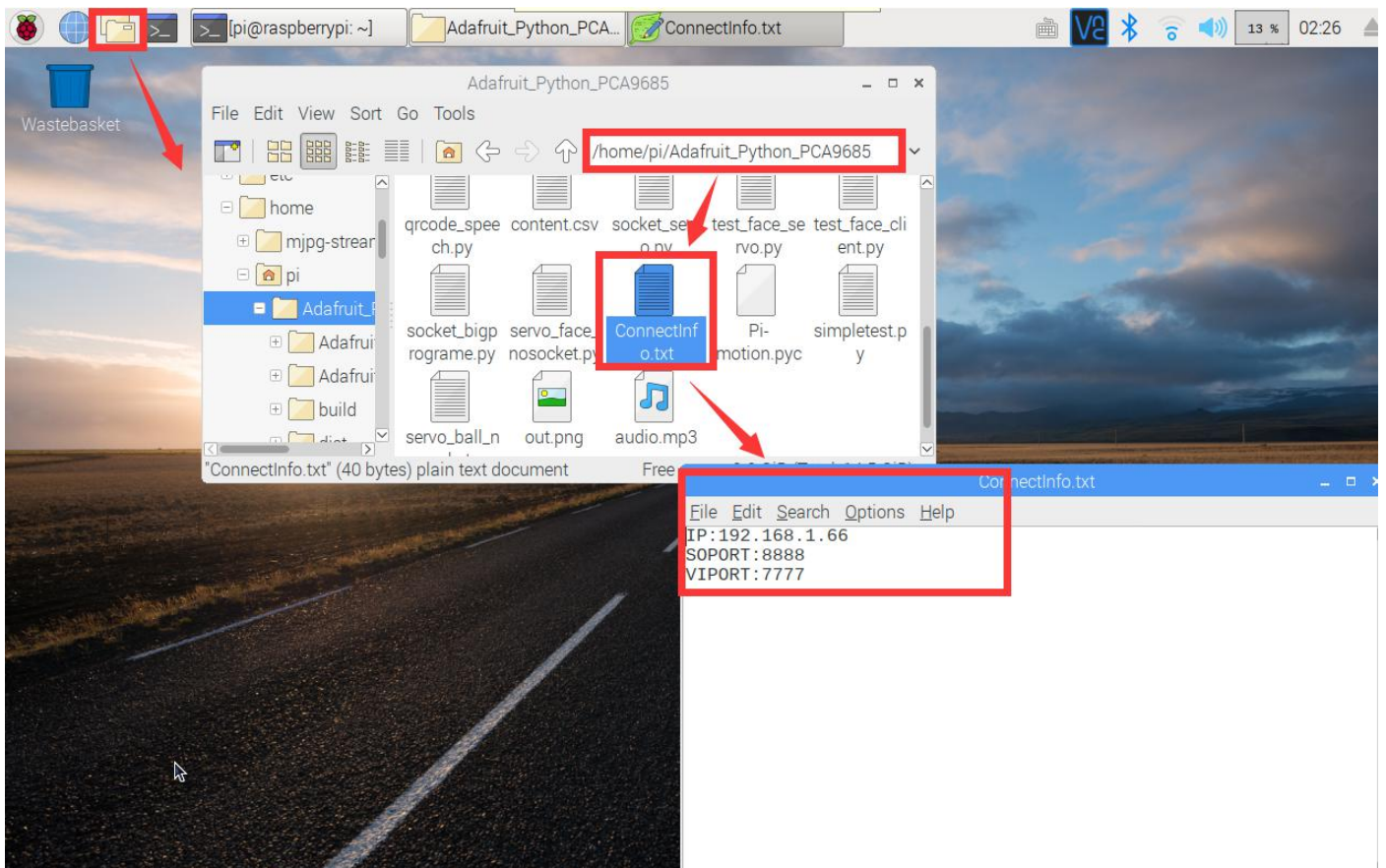


Figure 8

After the modification is completed, after restarting the Raspberry Pi, open the Yahboom Pi-motion mobile App or the Pi-motion PC software to use it.