Deep PiCar Take Home Instructions

To use the Deep PiCar at home, you must do the following configuration.

1. Connect the Pi to your home network and gather IP information
2. Remotely connect to your Pi over through your laptop

1. Connect the Pi to your home network and gather IP information

Before starting, make sure you have gathered the following:

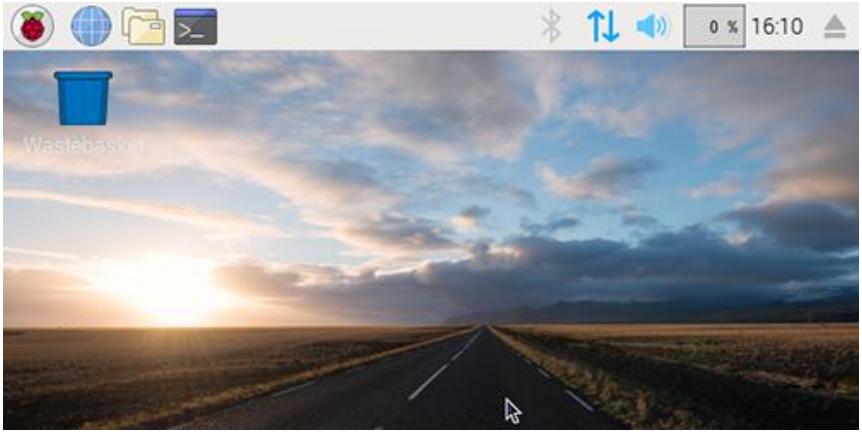
- 1 Micro USB (Male) to USB (Female) adapter
- 1 Mini HDMI (Male) to HDMI (Female).
- Micro USB Cable to power the Pi
- 1 HDMI cable routed to monitor of your choice
- 1 Computer mouse
- 1 Computer Keyboard
- 1 Monitor
- 1 USB Hub (recommended, but not necessary)

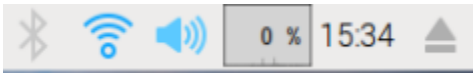
Step 1: Ensure all connections

- Connect the Pi to the desired monitor using the Mini HDMI adapter and HDMI Cable. (Do this before powering the Pi on or else it may not display anything.)
- Connect your computer mouse to the USB adapter (Or hub if you have one)
    - Also connect the keyboard to the hub if possible.
- Connect the Pi to the battery bank. The Pi should display a green light to show that it is getting power.
- After a few seconds, you should see the raspberry pi's boot screen and the Raspbian operating system should load.
- If it asks for a password, it should be **pi1234**

Step 2: Log in and access Wifi Settings.

- You should be on a desktop screen like the photo below.

- 

- Go to the top right and access the Wifi settings.
- Connect the Pi to your local network. Make sure to mark “Connect automatically”. Once successful, there should be a Wifi symbol in the top right
- 

Step 3: Gather Hostname and IP Information

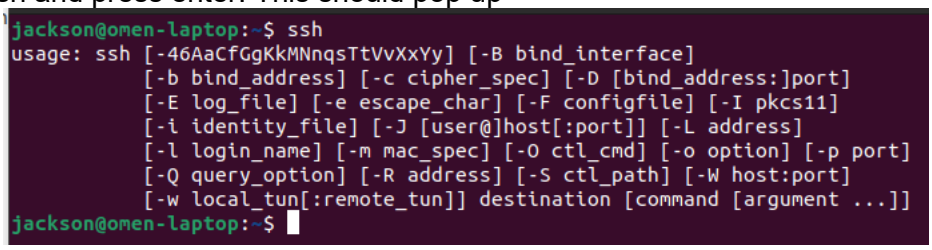
- Use the mouse to select the terminal from the top bar
  - Terminal icon: 
- Look at the hostname from the terminal line and record it.
  - Example: scpi0-43 would look like `pi@scpi0-43: ~/` in the terminal.
- Type in `ifconfig`

```
wlan0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 172.17.125.42  netmask 255.255.240.0  broadcast 172.17.127.255
        inet6 fe80::215:5dff:fea8:7202  prefixlen 64  scopeid 0x20<link>
        ether 00:15:5d:a8:72:02  txqueuelen 1000  (Ethernet)
        RX packets 214  bytes 325739 (325.7 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 114  bytes 11136 (11.1 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

- Find `wlan0` from the output.
- Record the value next to `inet` that is your ip address.
- In the example above, it would be 172.17.125.42. Write down your IP address.

Final Note: I would recommend that you keep the Pi plugged in even after getting the ip address, just in case there are any issues.

2. Remotely connect to your Pi over through your laptop

- Make sure your laptop has ssh installed.
  - open terminal or command prompt (on your local machine)
  - Type ssh and press enter. This should pop up
    - 

- If this does not work, you will need to install putty on your machine (personal windows machine)

- **Type the following ssh command**
  - ssh pi@ip_ address (Example: ssh pi@192.168.3.143)
  - OR: ssh pi@scpi0-##
  - If it asks about a fingerprint, type: **yes**
  - When it asks for a password: **pi1234**
- **Once you see your hostname change to something like:**
  - pi@scpi0-43: ~/
- **You have successfully connected to your car!**

Final Notes: Due to how most networks are configured, your IP address will probably change periodically. You should be able to ssh using the hostname (ssh pi@scpi0-##) but it might be less reliable.

The rest of the google doc should be fairly accurate, other than the IP/SSH stuff.