Quick Setup: Raspberry Pi

You **must** power your Pi with an AC adapter. The Pi draws more current than computer peripherals, so plugging a Pi into a computer's USB port might cause serious issues.

1. When you first start up the Pi, it will ask what OS you want to install. The only option should be "Raspbian". Select Raspbian and click "Install".
2. You will receive a warning saying that you're about to overwrite the existing OS. Select OK. The OS will proceed to install and this will take some time.
3. The system will prompt you when the install is finished. Press "OK" and it will reboot to the desktop.
4. You will need to set your WiFi country code to "United States" to connect to a network
    a. Click on the Start Menu button in the upper left hand corner.
    b. Scroll to Preferences, then Raspberry Pi Configuration.
    c. On the Configuration menu, go to the "Localisation" tab.
    d. Under the "WiFi Country" setting, scroll to "US United States".
5. Your Pi will not connect to "UTA Auto Login" automatically. To configure your WiFi:
    a. Open the terminal and type "`sudo nano /etc/wpa_supplicant/wpa_supplicant.conf`"
    b. Below the present contents of the file, type the following:

```
ctrl_interface_group=0
eapol_version=1
ap_scan=1
fast_reauth=0

network={
  ssid="UTA Auto Login"
  scan_ssid=1
  key_mgmt=WPA-EAP
  eap=PEAP
  identity="uta\netid"
  password="password"
  phase1="MSCHAPV2"
}
```

    c. In the above, "netid" and "password" should be replaced with your UTA NetID and password.
    d. Reboot the Pi and you should connect to UTA Auto Login automatically.
6. Update your Pi so that you have the latest software. Open a command line and run:
    a. "sudo apt-get update"
    b. "sudo apt-get upgrade"
    c. "sudo apt-get dist-upgrade"

Connecting your Pi to a Windows 10 Machine with Ethernet

On the Pi:

1. The Ethernet adapter on the Pi needs a static IP address. To configure one:
    a. Right-click on the network status icon and select "Wireless & Wired Network Settings."
    b. By Configure, select "interface" and "eth0."
    c. Uncheck "Automatically configure empty options."
    d. Next to IPv4 Address, enter a static address. I recommend "192.168.2.10" to simplify everything.
2. The Pi must have a password for remote connections to work. To configure one:
    a. Go to Preferences -> Raspberry Pi Configuration
    b. Next to Password, click "Change Password…"
3. You must enable SSH so that the Pi will accept remote connections. To enable it:
    a. Go to Preferences -> Raspberry Pi Configuration -> Interfaces.
    b. Set SSH to "Enabled."

4. Reboot the machine.

On your Windows 10 Machine:

1. To make your connection as simple as possible, your Ethernet adapter needs a static IP address. To configure one:
    a. Pull up the Control Panel and select “Network & Internet.”
    b. On the left-hand options, select “Ethernet.”
    c. On the right-hand side, select “Change adapter options.”
    d. There may be multiple interfaces to choose from, especially if you are using virtual machines, VPNs, or a packet sniffer. Choose the interface you’re using to connect to your Pi.
    e. Look for the menu item that says, “Internet Protocol Version 4 (TCP/IPv4)” and select “Properties.”
    f. Choose “Use the following IP address” and enter an address and a subnet mask. For the sake of simplicity, I recommend “192.168.2.1” as your address and “255.255.255.0” as your subnet mask.
2. Reboot the machine.

To test the connection:

1. Your Pi may need to have the Ethernet cable plugged in on boot, otherwise it may put the adapter to sleep.
2. Connect both machines and make sure the indicator lights on the Ethernet ports indicate activity.
3. From you Windows machine, launch a command prompt and type “ping 192.168.2.10”.
    a. The prompt should indicate replies.
    b. While it is possible to ping your Windows machine from your Pi, firewalls will frequently block those messages. Not receiving a ping reply from your Windows machine is not necessarily indicative of a problem.
4. You should now be able to use PuTTY, FileZilla, and any other utility you use with Omega.