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How to Get MacOS on Any Computer (AKA Hackintosh) WINDOWS VISTA AND NEWER ONLY

Prerequisites:

- Time and patience is crucial, you need to wait a long time in some parts, so don't get bored!
- It might not work and errors are bound to happen, so be proud of the effort you put in!
- You will need a 16 GB or more USB stick, and a computer with Windows Vista or newer.
- You will need access to the internet, and an ethernet cable to plug into your laptop.
- If you ever have a question, don't be afraid to check the FAQ, or submit it to be answered!

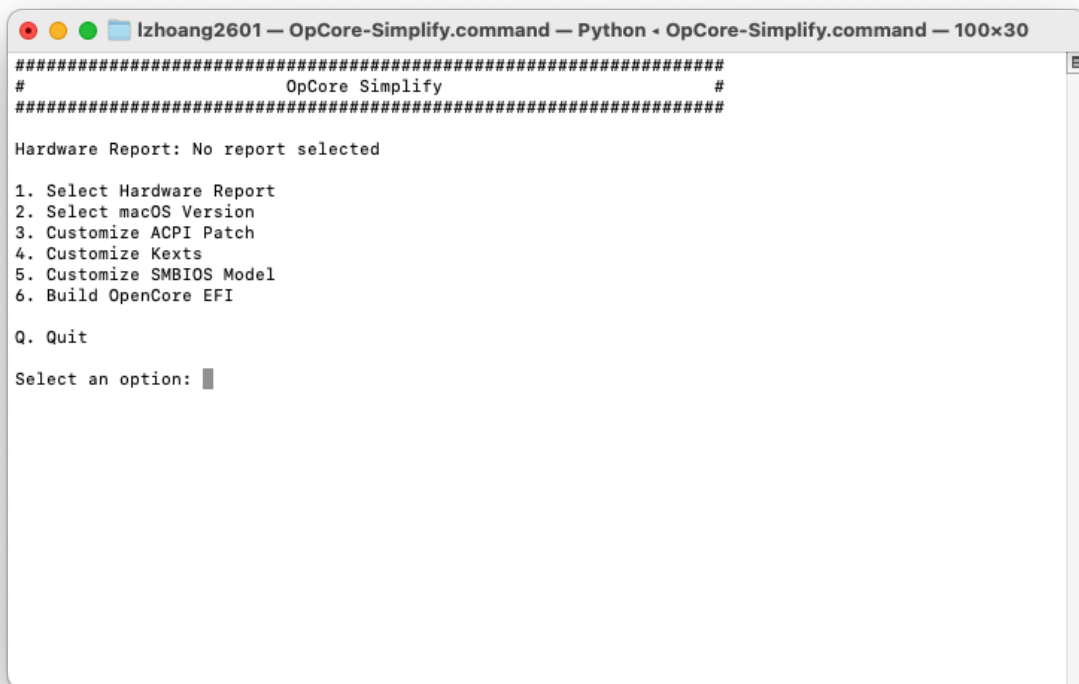
All right, you have been wandering every corner of the internet for a cheap and affordable usable MacBook. Finally, you stumbled on this document, and you are about to learn how to get MacOS on your computer.

Before you do anything else, download Python from [Download Python](#), because a lot of the tools that you will use require Python to work.

First you need to get [Opcore Simplify](#) from Github, by hitting the code button and download zip, and once you download it, extract it and look for the file called Opcore simplify, it should be a Windows batch file, double click it, and you will see a message saying that the file might have a virus. This is because there is no known publisher, click learn more, and the run any way will pop up.

Once you run it, you will see a CMD prompt. Do not worry, that is the app. Before operating systems had graphical apps, they used the CMD prompt as you see to run apps, like in MS-DOS, an old Microsoft operating system.

It might say if you want to download a new update, type “y”, to install it (you need it if you get prompted with it). Then you will see a screen with a list of numbers and actions related to them. Type “1”, and hit enter.



```
#####
#                               #
#####

Hardware Report: No report selected

1. Select Hardware Report
2. Select macOS Version
3. Customize ACPI Patch
4. Customize Kexts
5. Customize SMBIOS Model
6. Build OpenCore EFI

Q. Quit

Select an option: █
```

Once you get to the new screen, type “E”, and hit enter to continue.

```
lzhoang2601 — OpCore-Simplify.command — Python · OpCore-Simplify.command — 100x30
#####
#                               Select hardware report                               #
#####

Before generating the hardware report, please follow these steps:

    1. Install all available drivers if possible (skip if using Windows PE)
    2. Use the latest version of Hardware Sniffer for manual export (if applicable)

E. Export hardware report (Recommended) - This ensures the best results!

Q. Quit

Drag and drop your hardware report here (.JSON) or type "E" to export: E
```

It may take a bit of time, but you should eventually see a list of computer components you have, and what MacOS version it supports. By the way, if you get a message saying “no compatible [insert computer part here] found”. Your computer is not supported for MacOS. If it works, 😊, you are supported for getting MacOS!!!

```
lzhoang2601 — OpCore-Simplify.command — Python · OpCore-Simplify.command — 100x30
#####
#                               Compatibility Checker                               #
#####

1. CPU:
  - 12th Gen Intel(R) Core(TM) i9-12900K: Up to macOS Sequoia 15

2. GPU:
  - AMD Radeon RX 6600: Up to macOS Sequoia 15
    - Connected Monitors: Acer V246HQL (HDMI), EGM22F75 (DP)
  - Intel(R) UHD Graphics 770: Unsupported

3. Sound:
  - High Definition Audio Device: Up to macOS Sequoia 15
  - High Definition Audio Device_#1: Up to macOS Sequoia 15
  - High Definition Audio Device_#2: Unsupported

4. Network:
  - Intel(R) Wi-Fi 6E AX211 160MHz: Unsupported
  - Broadcom 802.11ac Network Adapter: Up to macOS Sequoia 15
  - Realtek Gaming 2.5GbE Family Controller: Up to macOS Sonoma 14

5. Storage Controllers:
  - Standard SATA AHCI Controller: Unchecked
  - Standard SATA AHCI Controller_#1: Unchecked
  - Samsung SM981/PM981/PM983: Unsupported

Press Enter to continue...|
```

Anyways, once the process is done, hit “Enter” to go back. Look at the top of the CMD prompt once you go back and look for “Supported macOS Version” under “Hardware Compatibility”. To the right of “Supported macOS Version”, look for the macOS version with the greatest number. REMEMBER THIS. It is very important.

```
lzhoang2601 — OpCore-Simplify.command — Python · OpCore-Simplify.command — 100x30
#####
#                               OpCore Simplify                               #
#####

Hardware Report: /Users/lzhoang2601/Documents/GitHub/Report_Collection/GIGABYTE Z790 AORUS PRO X/Report.json

* Hardware Compatibility:
  - Supported macOS Version: macOS Sequoia 15 - macOS Monterey 12
  - Unsupported devices:
    1. Integrated GPU: Intel(R) UHD Graphics 770
    2. Network: Intel(R) Wi-Fi 6E AX211 160MHz
    3. Network: Realtek Gaming 2.5GbE Family Controller
    4. Storage Controllers: Samsung SM981/PM981/PM983
* EFI Options:
  - macOS Version: macOS Sequoia 15 (24.99.99)
  - SMBIOS: iMacPro1,1

1. Select Hardware Report
2. Select macOS Version
3. Customize ACPI Patch
4. Customize Kexts
5. Customize SMBIOS Model
6. Build OpenCore EFI

Q. Quit

Select an option: █
```

Hit “2” and again, hit enter. Then, from the list select the version that you had to remember by selecting its number the list and typing (eg. 21. macOS 15 Sequoia, you would type “21”) . Then hit enter.

Finally, once you are back to the main menu, hit “6” and enter to start building your EFI (the folder with all the drivers.).

If you get prompted to “scan for WiFi profiles”, type “y” and hit enter.

```
Izhoang2601 — OpCore-Simplify.command — python3 • OpCore-Simplify.command — 100x30

#####
#                               WiFi Profile Extractor                               #
#####

Note:
- When using itlwm kext, WiFi appears as Ethernet in macOS
- You'll need Heliport app to manage WiFi connections in macOS
- This step will enable auto WiFi connections at boot time
  and is useful for users installing macOS via Recovery OS
- Only supports WiFi networks using WPA-PSK or Open authentication

Would you like to scan for WiFi profiles? (Y/n): █
```

Then type “13” for the codec ID and hit enter.

```
lzhoang2601 — OpCore-Simplify.command — python3 • OpCore-Simplify.command — 100x42
#####
#                               Choosing Codec Layout ID                               #
#####

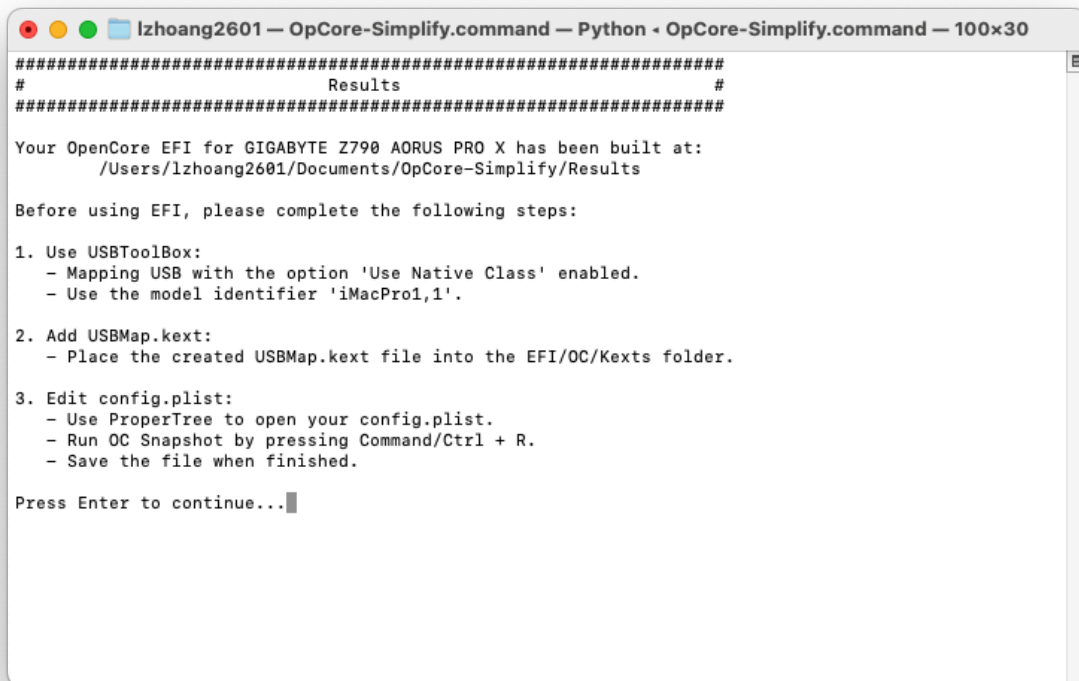
List of Codec Layouts:

ID   Comment
-----
3    Mirone - Realtek ALC255
11   Realtek ALC255(3234) for Dell Optiplex series by Heporis
12   ALC255, Dell Optiplex 7040 MT
13   InsanelyDeepak - Realtek ALC255_v1
15   Realtek ALC255 Gigabyte Brix BRI5(H) by Najdanovic Ivan
17   InsanelyDeepak - Realtek ALC255_v2
18   DuNe - Realtek ALC255 for Aorus X5V7
20   Realtek ALC255 for Dell 7447 by was3912734
21   ALC255 for Asus X441UA-WX096D by Andres ZeroCross
22   Realtek ALC255(3234) for Asus N752VX by Feartech
23   Realtek ALC255 for Acer Aspire A515-54G
27   ALC255 for Asus X556UA m-dudarev
28   Realtek ALC255 for Lenovo B470 - vusun123
29   dhinakg - Realtek ALC255 for Acer Predator G3-571
30   HongyuS - Realtek ALC255 for XiaoMiAir 13.3
31   cowpod - Realtek ALC255 for UX360CA
37   Imoize - Realtek ALC255 for Acer Nitro 5 AN515-52-73Y8
66   ALC255 for Dell Optiplex7060/7070MT(Separate LineOut)
69   juniorcaesar - Acer Aspire A315-56-327T ALC255
71   DoctorStrange96 - Realtek ALC255 for Acer Aspire A51x
80   Realtek ALC255 for Acer Aspire 7 A715-42G AMD by Long
82   Realtek ALC255 for minisforum U820 by DalianSky
86   Armênio - Realtek ALC255/ALC3234 - Dell 7348
96   Bhavin dell 5559 alc255
99   DalianSky - Realtek ALC255 (3246) for XiaoMi Air
100  DalianSky - Realtek ALC255 (3246) for alienware alpha r2
255  Realtek ALC255(3234) for Dell Inspiron 5548 by CynCYX

Note:
- The default layout may not be optimal.
- Test different layouts to find what works best for your system.

Enter the ID of the codec layout you want to use (default: 13):
```

Once that is done, you should be prompted to a screen like this:



```
lzhoang2601 — OpCore-Simplify.command — Python · OpCore-Simplify.command — 100x30
#####
#                               Results                               #
#####

Your OpenCore EFI for GIGABYTE Z790 AORUS PRO X has been built at:
  /Users/lzhoang2601/Documents/OpCore-Simplify/Results

Before using EFI, please complete the following steps:

1. Use USBToolBox:
   - Mapping USB with the option 'Use Native Class' enabled.
   - Use the model identifier 'iMacPro1,1'.

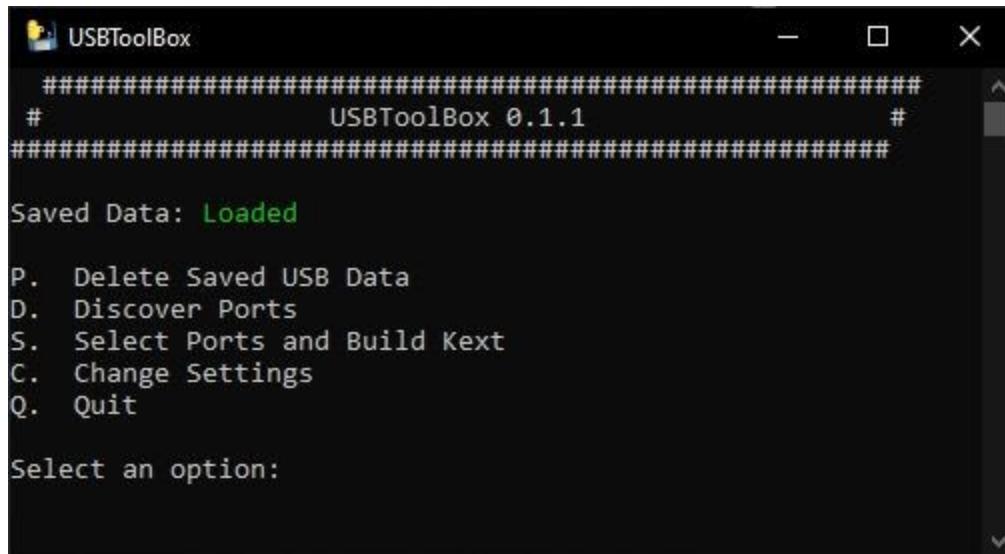
2. Add USBMap.kext:
   - Place the created USBMap.kext file into the EFI/OC/Kexts folder.

3. Edit config.plist:
   - Use ProperTree to open your config.plist.
   - Run OC Snapshot by pressing Command/Ctrl + R.
   - Save the file when finished.

Press Enter to continue...|
```

Find a way to take a picture of this, whether it is using the snipping tool, or using a phone, TAKE A PICTURE OF THIS. you should probably go to file explorer and make a folder called “MacOS Stuff”, and then go to the Opcore Simplify folder, open it, go to results, look for the EFI folder, and drag and drop it into the “MacOS Stuff” folder.

Once you do that go to [this site](#). Download it by, again, clicking the code button and hitting download zip. Extract it. Then, in the website, go to tags, then click releases, and download windows.exe. Your browser might block it, but just click learn more, and download anyways. Once you run it (windows.exe), you might again be stopped by Windows, but click learn more and run anyways. Your screen should look like this:

A screenshot of a macOS window titled "USBToolBox". The window has a dark background with white text. At the top, it says "##### USBToolBox 0.1.1 #####". Below that, it says "Saved Data: Loaded" in green. Then, there is a list of options: "P. Delete Saved USB Data", "D. Discover Ports", "S. Select Ports and Build Kext", "C. Change Settings", and "Q. Quit". At the bottom, it says "Select an option:". The window has standard macOS window controls (minimize, maximize, close) in the top right corner.

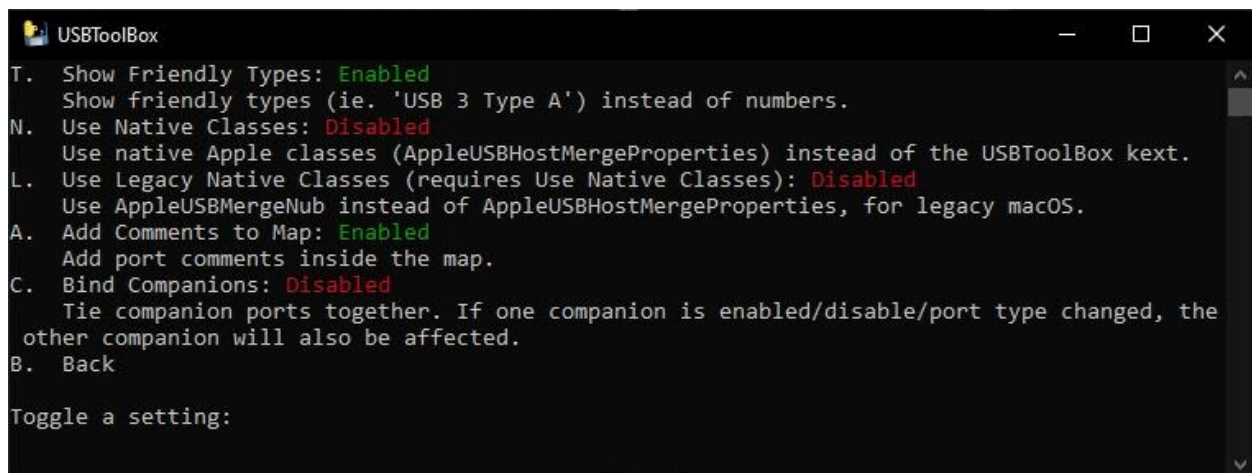
```
##### USBToolBox 0.1.1 #####
#                               #
#####
Saved Data: Loaded

P. Delete Saved USB Data
D. Discover Ports
S. Select Ports and Build Kext
C. Change Settings
Q. Quit

Select an option:
```

Click “D”, and then click enter. Once you are there, wait a quick second, and then hit “B” and enter.

Once you are back to the main menu, hit “C”, and again, hit enter. You should be sent to a screen like this:

A screenshot of the "USBToolBox" application window showing a settings menu. The menu items are: "T. Show Friendly Types: Enabled" (with a description: "Show friendly types (ie. 'USB 3 Type A') instead of numbers."), "N. Use Native Classes: Disabled" (with a description: "Use native Apple classes (AppleUSBHostMergeProperties) instead of the USBToolBox kext."), "L. Use Legacy Native Classes (requires Use Native Classes): Disabled" (with a description: "Use AppleUSBMergeNub instead of AppleUSBHostMergeProperties, for legacy macOS."), "A. Add Comments to Map: Enabled" (with a description: "Add port comments inside the map."), "C. Bind Companions: Disabled" (with a description: "Tie companion ports together. If one companion is enabled/disable/port type changed, the other companion will also be affected."), and "B. Back". At the bottom, it says "Toggle a setting:". The window has standard macOS window controls in the top right corner.

```
T. Show Friendly Types: Enabled
   Show friendly types (ie. 'USB 3 Type A') instead of numbers.
N. Use Native Classes: Disabled
   Use native Apple classes (AppleUSBHostMergeProperties) instead of the USBToolBox kext.
L. Use Legacy Native Classes (requires Use Native Classes): Disabled
   Use AppleUSBMergeNub instead of AppleUSBHostMergeProperties, for legacy macOS.
A. Add Comments to Map: Enabled
   Add port comments inside the map.
C. Bind Companions: Disabled
   Tie companion ports together. If one companion is enabled/disable/port type changed, the
   other companion will also be affected.
B. Back

Toggle a setting:
```

Hit “N” and enter, then “B” and enter.

Once you are back at the main menu, click “S”, then enter. You should be taken to a screen somewhat like this:

```

[#] 18. Port 18 | USB 3.0 | Type C - with switch | Companion to 2
    - RTL9210 - operating at USB 3.0
    - Unknown Device - operating at USB 1.1
[#] 19. Port 19 | USB 3.0 | USB 3 Type A | Companion to 3
    - Ultra - operating at USB 3.0
[#] 20. Port 20 | USB 3.0 | USB 3 Type A | Companion to 4
    - Ultra - operating at USB 3.0
[#] 21. Port 21 | USB 3.0 | USB 3 Type A | Companion to 5
    - Ultra - operating at USB 3.0
[#] 22. Port 22 | USB 3.0 | USB 3 Type A | Companion to 6
    - Ultra - operating at USB 3.0

Binding companions is currently off.

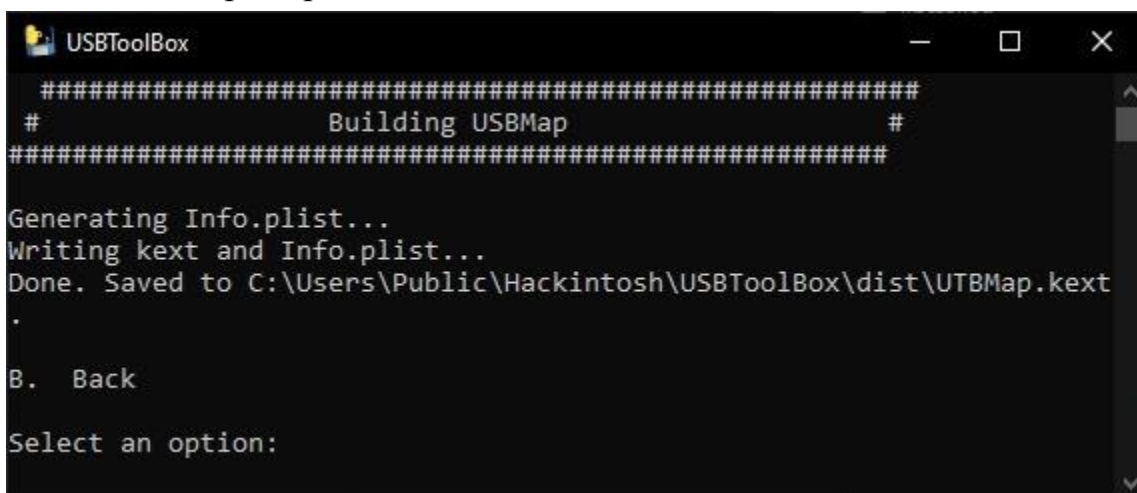
K. Build USBMap.kext
A. Select All
N. Select None
P. Enable All Populated Ports
D. Disable All Empty Ports
T. Show Types
B. Back

- Select ports to toggle with comma-delimited lists (eg. 1,2,3,4,5)
- Change types using this formula T:1,2,3,4,5:t where t is the type
- Set custom names using this formula C:1:Name - Name = None to clear
Select an option: T:19,20,21,22:3

```

Click “K” then enter, and you should be prompted to choose a computer since you have legacy class on. Open the screenshot of the Opcore Simplify and where it says the model identifier you have to use, type that EXACTLY the same (without the “” marks of course) in the prompt to enter the legacy class and hit enter.

You should be prompted to a screen like this:



```

USBToolBox
#####
#                               Building USBMap                               #
#####

Generating Info.plist...
Writing kext and Info.plist...
Done. Saved to C:\Users\Public\Hackintosh\USBToolBox\dist\UTBMap.kext
.

B. Back

Select an option:

```

Copy the location of the file (the thing starting with C). Then go to file explorer and paste that in the top bar that says the location you are in, copy the folder that is a .kext file, and paste it in the EFI/OC/Kekts folder. You can now close the USBToolBox app.

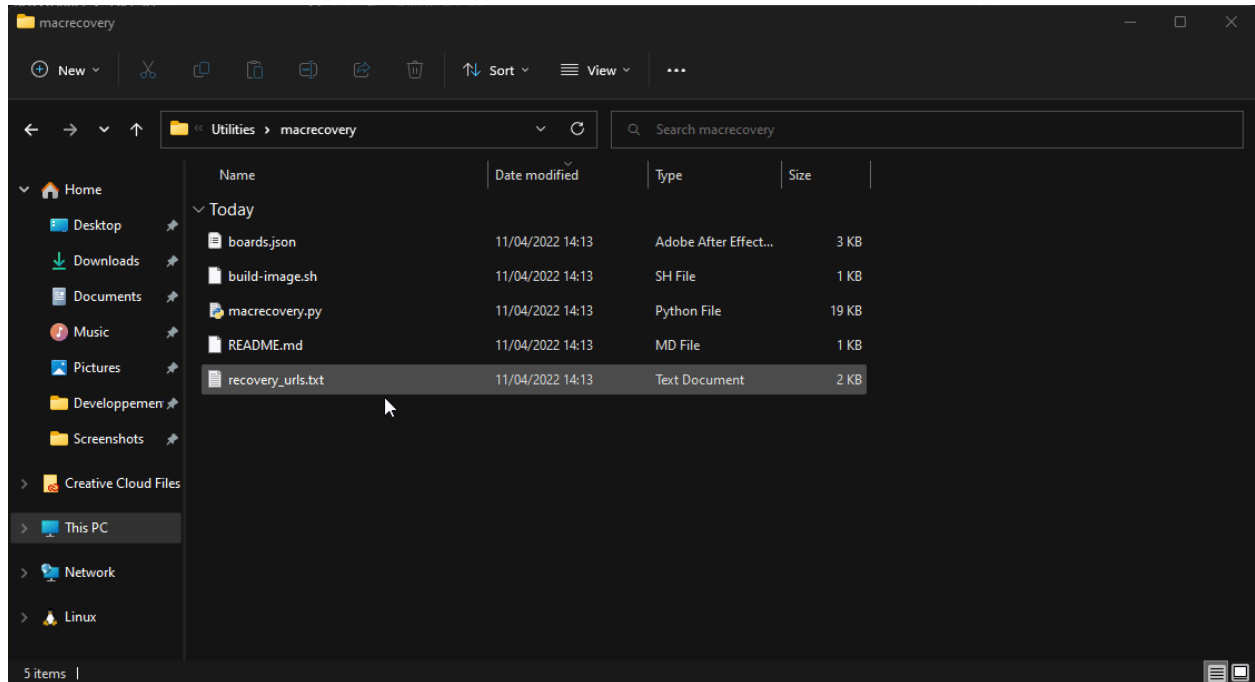
Next, download the zip from [here](#) by clicking the code button and download zip. Extract it and run the ProperTree Windows batch file. If Windows blocks the app, click learn more and run anyways.

You should see two screens, one blank CMD screen, and a python screen. Go to the python screen and once you are on it, click CTRL+R. It should open file explorer, and what you have to do is go to the “OC” folder and select it, it is in the EFI folder.

It might prompt you then to delete duplicates, click OK. It also might ask to add missing directories, and again, click OK. Then close the python screen and when it asks to save, click yes and save it, don't change the name, just use the default “Untitled”, and save it.

YOUR EFI FOLDER IS DONE!!

Now go download the [opencore pkg from here](#). Extract it. But then go to the utilities folder in the opencore pkg and go to the macrecovery folder. Then, in the top, highlight the location and replace it with “cmd”, and hit enter, like this:



Depending on the type of MacOS version you are going to get, type one of these commands and hit enter:

Lion (10.7):

```
py macrecovery.py -b Mac-2E6FAB96566FE58C -m 00000000000F25Y00  
download
```

```
py macrecovery.py -b Mac-C3EC7CD22292981F -m 00000000000F0HM00  
download
```

Mountain Lion (10.8):

```
py macrecovery.py -b Mac-7DF2A3B5E5D671ED -m 00000000000F65100  
download
```

Mavericks (10.9):

```
py macrecovery.py -b Mac-F60DEB81FF30ACF6 -m 00000000000FNN100  
download
```

Yosemite (10.10):

```
py macrecovery.py -b Mac-E43C1C25D4880AD6 -m 00000000000GDVW00  
download
```

El Capitan (10.11):

```
py macrecovery.py -b Mac-FFE5EF870D7BA81A -m 00000000000GQRX00  
download
```

Sierra (10.12):

```
py macrecovery.py -b Mac-77F17D7DA9285301 -m 00000000000J0DX00  
download
```

High Sierra (10.13)

```
py macrecovery.py -b Mac-7BA5B2D9E42DDD94 -m 00000000000J80300  
download
```

```
py macrecovery.py -b Mac-BE088AF8C5EB4FA2 -m 00000000000J80300  
download
```

Mojave (10.14)

```
py macrecovery.py -b Mac-7BA5B2DFE22DDD8C -m 00000000000KXPG00  
download
```

Catalina (10.15)

```
py macrecovery.py -b Mac-00BE6ED71E35EB86 -m 000000000000000000  
download
```

Big Sur (11)

```
py macrecovery.py -b Mac-42FD25EABCABB274 -m 000000000000000000  
download
```

Monterey (12)

```
py macrecovery.py -b Mac-FFE5EF870D7BA81A -m 000000000000000000  
download
```

Ventura (13)

```
py macrecovery.py -b Mac-4B682C642B45593E -m 000000000000000000  
download
```

Sonoma (14)

```
py macrecovery.py -b Mac-226CB3C6A851A671 -m 000000000000000000  
download
```

```
# Latest version
```

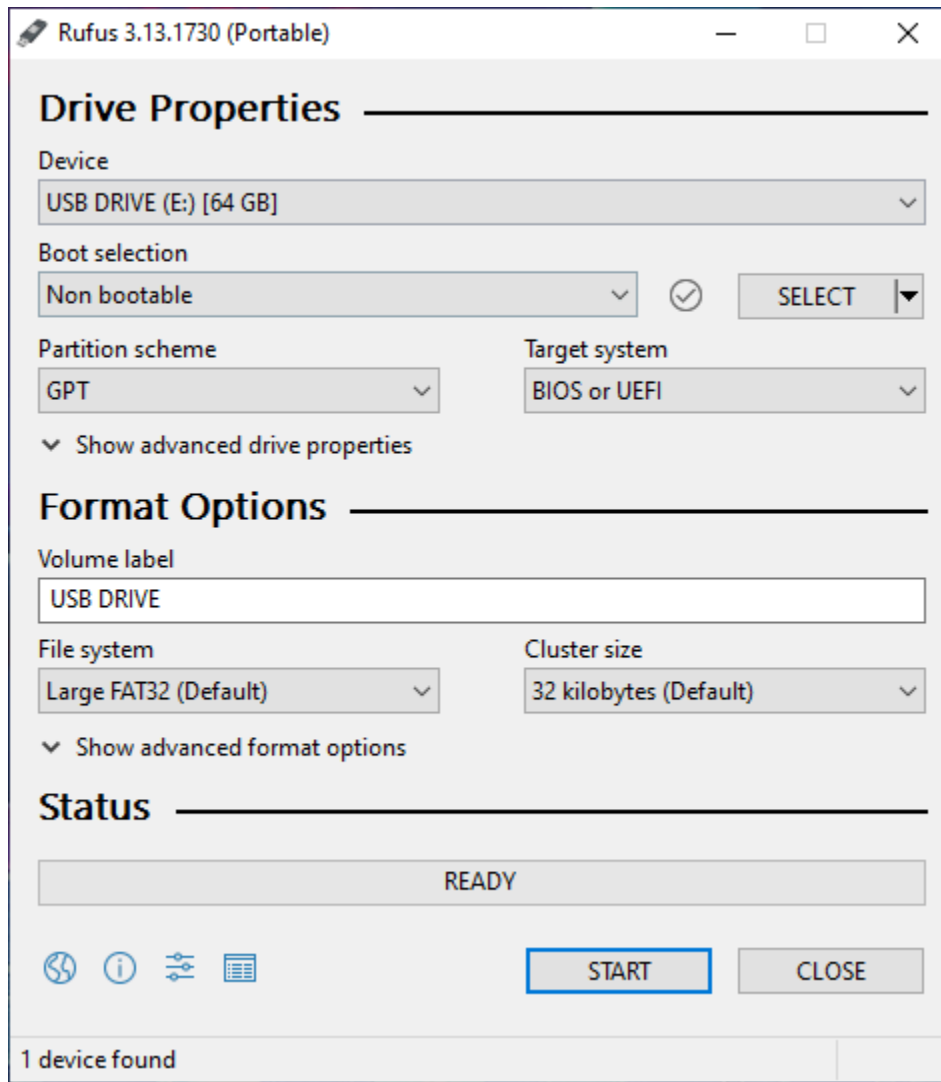
```
# ie. Sequoia (15)
```

```
py macrecovery.py -b Mac-937A206F2EE63C01 -m 000000000000000000  
download
```

Once it is done, go to the open core pkg, go to utilities, and go to macrecovery. There should be a folder called “com.apple.recovery.boot”. Put that in the folder with your EFI folder, NOT IN THE EFI THOUGH.

Then go [here](#) and scroll down and download the latest x86_x64 release. Open it and if you get prompted to allow changes, say yes. This is for usb drives with 16gb+ storage. At the top select the drive that is yours, and just copy all the

settings that are in this picture:



Once you click start, it will prompt that this will delete all the data in the usb, WHICH IS TRUE, click yes if you want to continue. Once it is done, go to file explorer and delete the two files that will be on your USB drive.

Finally, copy over the EFI folder, and also copy over the “com.apple.recovery.boot” folder. If done right, there should be two folders, one that is a EFI folder, and one that is “com.apple.recovery.boot”.’

Your USB is now bootable 😊!

Before we boot from the USB, make sure you have a stable ethernet connection you can use and it is plugged in even if you have WiFi support, because for this step you need it.

To boot from a USB, shut down your computer, but first look at this list of boot keys, or search it up for your computer:

Boot Options Entry Key		
Brands	Laptop	Desktop Computer
Dell	F12	Esc
HP	F9 or Esc	F12
Acer	F12	F12
Toshiba	F12	F12
Lenovo	F12	F12
Thinkpad	F12	F12
Asus	Esc	F8
Samsung	F12	F12
Sony	Esc	Esc
Gateway	F12	F12
Msi	F11	F11
Fujitsu	F12	F12
GIGABYTE	F12	F12

Once the computer is shut down, click the power on button and mash the boot option button for your computer until it says something about boot options or entering one time boot options.

Once you are there, use the arrow keys to move to the USB drive that you have connected, and click enter.

Once you do that, wait until you see 4 options, like this:

1. Windows
2. macOS Base System (External) / Install macOS [Your MacOS Version] (External) / *USB drive name* (External)
3. OpenShell.efi
4. Reset NVRAM

You might need to hit space to show all options. Then, use the arrow keys to move to the second option and click enter. You then have to wait. Once you see a screen that says examining volumes wait until you see a screen with the options:

Restore from a time machine

Reinstall [Version of MacOS you want to install]

Safari

Disk manager

Once you are there, click reinstall [Version of MacOS you want to install] and click continue. You can use your mouse. Once you are there, click continue, agree to the terms of conditions, and select the disk you want to install MacOS on and click continue.

[I MAY OR MAY NOT ADD HOW TO PARTITION]

It might reboot, and every time it does, make sure to mash the boot options key for your computer every time it turns off, and select your USB. Then, always select the second option when you see the list of 4 options to choose from.

You might not feel like it is doing anything, but it is. Next, once it is done, you should be greeted into the normal MacOS setup, DO NOT UNPLUG THE USB. Complete the setup, and once you are done, go [here](#).

Click code and download zip. On MacOS, files are typically automatically extracted, but if not, extract it. You want to click the .command file and open it. It will prompt you with a publisher not recognized and you will need to put your password in to run the file.

Once that is done, in the app, type the number of the storage disk that you installed MacOS on, not the USB. Then hit enter. It may ask you to enter your password, enter it, it will not show up what you wrote, but once you are done typing your password hit enter. It will tell you when it is done.

Close the app and go to finder, the file app for MacOS. Go to your USB drive and copy the EFI folder that you made earlier. There should be a new non-ejectable disk in the list of storage devices called “EFI”. Open that disk and there should be one folder. Delete it and paste the folder that you copied. Once it is done, restart your computer, remove the USB drive, and you are done.

**CONGRATULATIONS, YOU
HAVE COMPLETED THIS
GUIDE AND NOW HAVE
MACOS!**