

Updated Nov 2018

Many 2011 era MacBook Pros had a fatal flaw, a high-performance AMD graphics card that will fail – it's only a matter of when. The cause appears to be faults that are worsened by prolonged heat. I have had TWO fail. This is a fix, begun by "Peyton plays mac" on YouTube. The good news is that these macs had TWO graphics systems – the fancy AMD chip, and the perfectly OK graphics built into the Intel chip. Basically, this process fools the operating system into thinking that there is ONLY the internal Intel graphics. Once done it simply uses your intel chip.

Caution! Once you do this you should ****NOT**** upgrade your operating system, ever. It is very likely that any upgrade will break it again by returning some aspects of your system to where they were. Just say no.

Here's my fix: Remove the hard drive from the MacBook, and plug it into another Mac (or a PC running linux (A SATA to USB cable , or a simple external enclosure is super handy here) as a non-boot drive.

This would be a good time to back up all your files.

By making it a non-boot external drive on a working system, you eliminate many problems, including:

- Inability to read screen clearly
- Apple System Integrity Protection (SIP) complexities
- Permissions on working libraries

On the "external" volume:

- Boot up the command line window (terminal)
- browse to the "Root" directory and then perform the following steps:

The next steps a) move the AMD library files (kexts) to a safe place b) delete the originals, c) flush the caches, d) update. Essentially you are making the machine not know there is an AMD graphics card.

At command line: (Ignore line breaks)

- `sudo mkdir AMD_Kexts`
- `cd AMD_Kexts`
- `sudo mv /Volumes/i7_SSD/System/Library/Extensions/AMD*`
- `sudo rm -rf /Volumes/i7_SSD`
`/System/Library/Caches/com.apple.kext.caches/`
- `sudo mkdir /Volumes/i7_SSD`
`/System/Library/Caches/com.apple.kext.caches/`
- `sudo touch /Volumes/i7_SSD /System/Library/Extensions/`

Unmount the "external" drive (disk utility or `mount /Volumes/"external" volume`
Put it back in the broken Mac, it should boot with distorted, but readable, graphics.

Open terminal, and issue the following command. This changes the NVRAM to look for the internal graphics.

- `sudo nvram fa4ce28d-b62f-4c99-9cc3-6815686e30f9:gpu-power-prefs=%01%00%00%00`

Reboot. She's fixed..

If you are running High Sierra you have one more problem, for some reason, when the computer goes to sleep and re-awakens, the display will not come back. The mac ****IS**** running – if you go in via “rlogin” you can in fact shut it down safely from the command line, but this is no way to live with your mac.

Instead I compromised: I turned off sleeping (system preferences, energy saver). This means it NEVER sleeps. This impacts battery life when you move the mac around, and means it will make noise all night for example. Not ideal, but it WORKS fine. I relegated this to desk use. YMMV.

I hope this works for you,

Grant