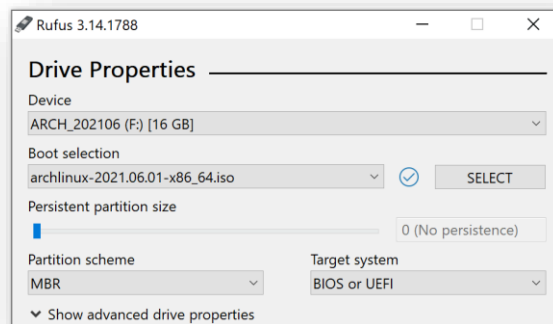


I chose the **Archlinux route** because my late 2011 MBP 8,2 was dual booting MacOS Catalina & Windows 10 Pro. I accidentally reset the NVRAM to fix the wifi issue with Catalina & ended up with a **black screen**; it is nearly impossible to know where I should be clicking or when I should be hitting the Enter key.

These are the exact steps I took to recover from the black screen:

Note: I performed Steps 1 & 2 below using another Windows PC & [Notepad++](#) as editor.

1. **Create** Archlinux bootable USB flash drive using [Rufus](#) with latest official [Archlinux iso](#); formatted MBR for BIOS/UEFI systems in Rufus



2. After Archlinux bootable USB flash drive has been created, **modify** two files to append *nomodeset* kernel parameter to syslinux boot configuration:

- a. Navigate inside the Archlinux bootable USB flash drive to
*Drv:\syslinux\archiso_sys-linux.cfg and edit the following:
 - i) *APPEND archisobasedir=arch archisolabel=ARCH_202106 nomodeset*
 - ii) Save the edit and exit
- b. Navigate to *Drv:\loader\entries\01-archiso-x86_64-linux.conf and edit the following:
 - i) *options archisobasedir=arch archisolabel=ARCH_202106 nomodeset*
 - ii) Save the edit and exit

3. **Unscrew** bottom cover (2011 MBP 8,2 has 10 screws; 7 short + 3 long) & unplug HDD/SSD & Super Drive cable; put a scotch tape over the connectors to prevent accidental reconnection; replace cover but do not screw back.

Note: You could attach scotch tape on both sides of bottom cover to temporarily hold the cover in place to prevent damage/dropping the cover when flipping the MBP.


4. **Boot** to it:
 - a. Insert the Archlinux bootable USB flash drive to Macbook Pro.

*Drv is the drive letter assigned by the Windows system to your Archlinux bootable USB Flash drive

- b. Press power button & wait for about 2 mins. (depending on the speed of your USB flash drive, it could be shorter but to be on the safe side, wait 2 mins.)
- c. Hit Enter once
- d. Type *reboot* & hit **Enter** once.
- e. If you hear the MBP reboot, then you know your Archlinux bootable USB flash drive is configured correctly & was waiting for your input at the Linux console after the 2 mins wait.
- f. Repeat 4b & 4c again.

5. Edit EFI vars:

- a. The efivarfs filesystem is mounted by default. The efivarfs needs to be mounted with read/write permissions so that you will not be getting the "operation not permitted" message (which you can't tell) while attempting the following procedures (**remember to hit Enter after each command; take note of the spaces**):
 - i) Type *cd /*
 - ii) Type *umount /sys/firmware/efi/efivars/*
 - iii) Type *mount -t efivarfs rw /sys/firmware/efi/efivars/*
 - iv) Type *cd /sys/firmware/efi/efivars/*
 - v) Type *rm gpu-power-prefs-* followed by **Tab** key (once only) for autocompletion
 - vi) Type *printf "\x07\x00\x00\x00\x01\x00\x00\x00" >*
/sys/firmware/efi/efivars/gpu-power-prefs-fa4ce28d-b62f-4c99-9cc3-6815686e30f9
 - vii) Type *chattr +i "/sys/firmware/efi/efivars/gpu-power-prefs-fa4ce28d-b62f-4c99-9cc3-6815686e30f9"*
 - viii) Type *cd /*
 - ix) Type *umount /sys/firmware/efi/efivars/*
 - x) Type *reboot*

If you typed everything correctly (you're doing this with a black screen!), you should hear your MBP reboot & your screen turn back on without any icons except for the  after some time.

At this point, you've successfully recovered from the black screen problem.

Now you can reverse everything you have done in step 3; reconnect the two connectors & put back the screws for the bottom cover.

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Credits: AppleMacFinder of macrumors.com and realmacmods.com

Source: <https://forums.macrumors.com/threads/force-2011-macbook-pro-8-2-with-failed-amd-gpu-to-always-use-intel-integrated-gpu-efi-variable-fix.2037591/?post=24405190#post-24405190>

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