

# Raspberry Pi 3 Boot to USB

This is taken from the following URL: <https://www.raspberrypi.org/documentation/hardware/raspberrypi/bootmodes/msd.md>

I have documented it here as I use this guide a lot, and I don't want to lose it :)

This tutorial explains how to boot your Raspberry Pi 3 from a USB mass storage device such as a flash drive or USB hard disk. Be warned that this feature is experimental and may not work with all USB mass storage devices.

USB Hard Drives seem particularly fussy.

## Program USB Boot Mode

Before a Pi will network boot, it needs to be booted with a config option to enable USB boot mode. Enabling this config option requires special `start.elf` and `bootcode.bin` files. These can be installed by using the "next" branch on `rpi-update`.

```
sudo mkdir /mnt/target sudo mount /dev/sda2 /mnt/target/ sudo mkdir /mnt/target/boot sudo mount /dev/sda1 /mnt/target/boot/ sudo apt-get update; sudo apt-get install rsync sudo rsync -ax --progress / /boot /mnt/target
```

```
cd /mnt/target sudo mount -bind /dev dev sudo mount -bind /sys sys sudo mount -bind /proc proc sudo chroot /mnt/target rm /etc/ssh/ssh_host* dpkg-reconfigure openssh-server exit sudo umount dev sudo umount sys sudo umount proc
```

```
sudo sed -i "s,root=/dev/mmcblk0p2,root=/dev/sda2," /mnt/target/boot/cmdline.txt sudo sed -i "s,/dev/mmcblk0p,/dev/sda," /mnt/target/etc/fstab
```

```
cd ~ sudo umount /mnt/target/boot sudo umount /mnt/target # sudo poweroff
```

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