USB mass storage boot for
Raspberry Pi 2B v1.2, 3A+, 3B, CM3 *(only)*

Raspberry Pi 3B+ and CM+ support USB mass storage boot out of the box.
Raspberry Pi 4's boot code is stored in EEPROM and can be updated. Support for mass storage boot will be added in a future update.

Legend:
username@host~ $ Terminal Command Prompt
`commands` This signifies commands you are to type in the Terminal following the prompt.

FIRST!
To ensure the working SD card is up to date --
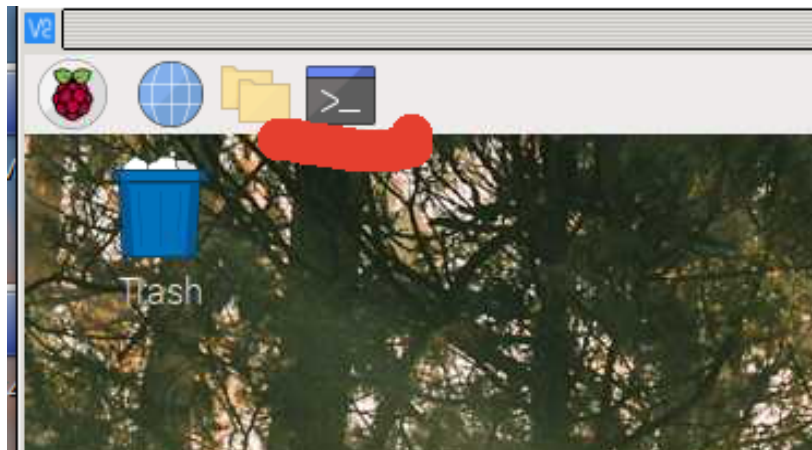Open a Terminal by clicking on the Icon in the top MENU bar. See Figure 1.

Figure 1.

Next**:**
Enter the following commands at the command line in Terminal and press Enter after each command:
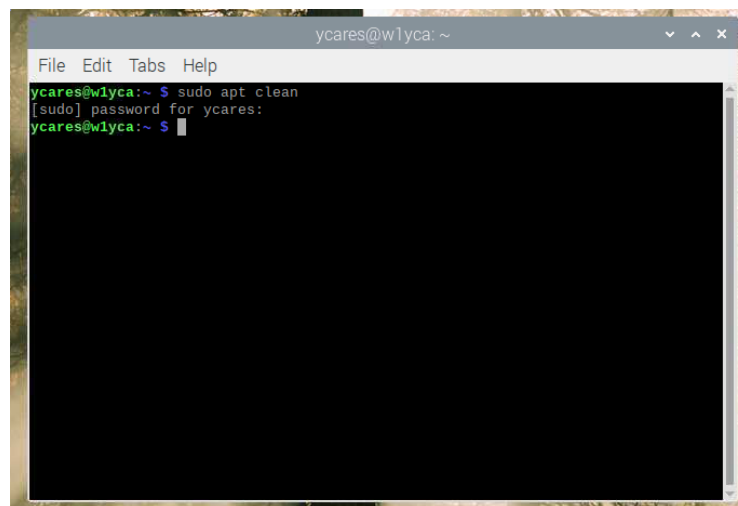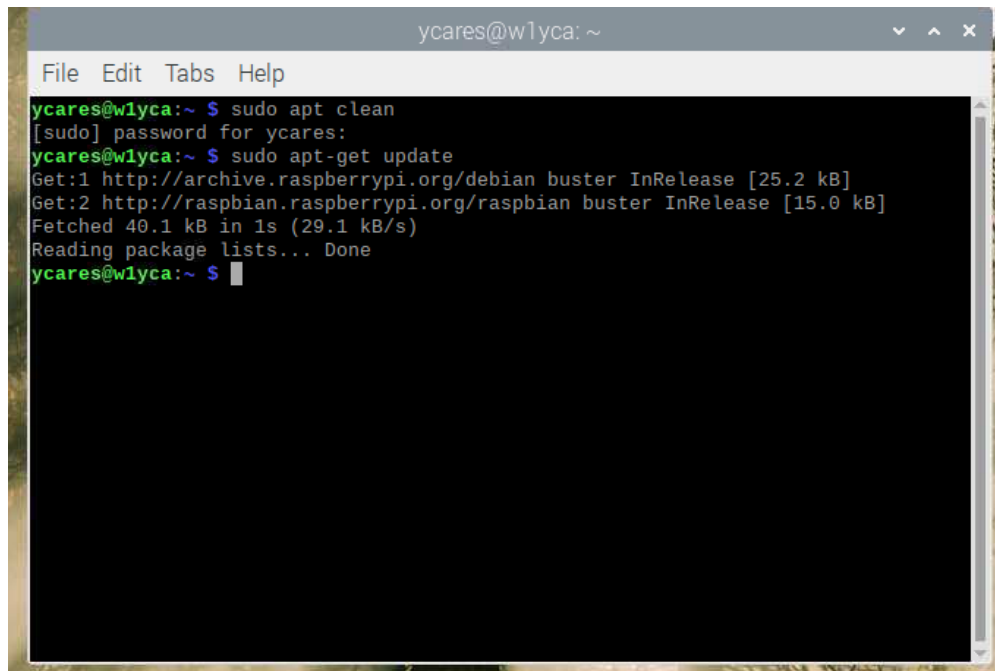
Figure 2.

`sudo apt-get clean` You will be asked for your password… -enter it. See Figure 2, above.

(continued)

> `sudo apt-get update` If you are up-to-date, then then you will see Figure 3, below:

Figure 3.

If the Raspian OS in not up to date, you will see many lines scroll-by as the program updates. A command prompt will return when complete.

Continue entering the following commands: You may be asked to confirm if you wish to continue, answer in the affirmative: **Y**

> `sudo apt-get autoremove`
>
> `sudo apt-get upgrade` (*this may take a few minutes, be patient*)
>
> `sudo apt-get dist-upgrade` (*this may take a few minutes*)
>
> `sudo reboot now`

Assuming no errors, and reboot has completed, the next step is to make a backup of the SD card to a USB memory stick by the following:

1. Insert a new USB memory stick which has been <u>partitioned and formatted</u> as **EXT4** into the Rpi USB Port
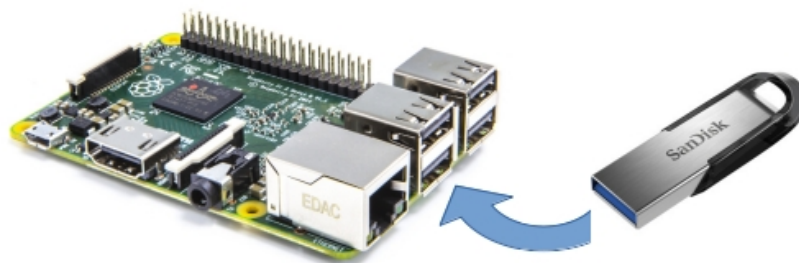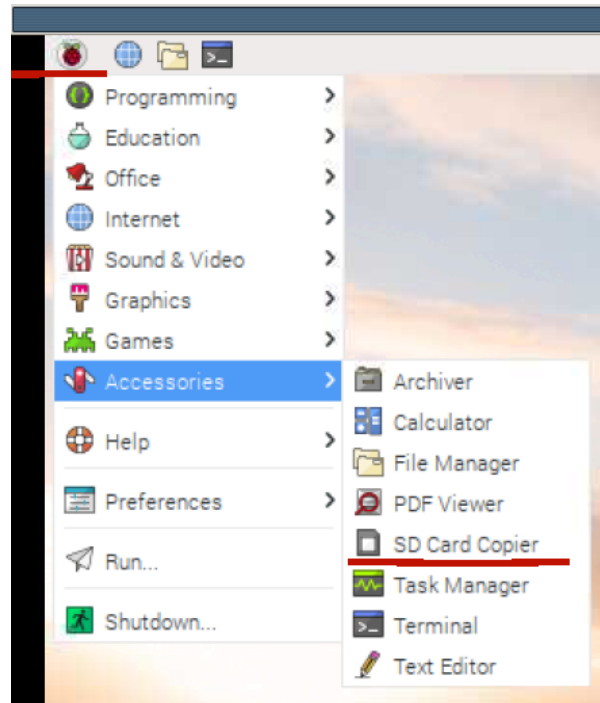

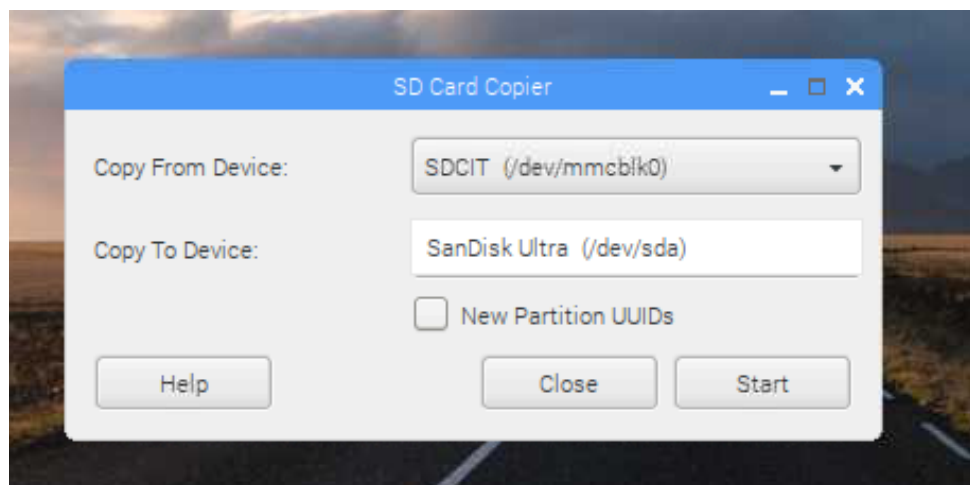Figure 4.

2

(continued)

2. Select the menu **Raspberry icon**, then select **Accessories,** then select **SD Card Copier.**
    See Figure 5, below:

Figure 5.

3. You will be asked for your password...   -enter it.

4. Choose Copy From Device, usually **(/dev/mmcblk0)**, or something similar, and choose
    Copy to Device, usually **(/dev/sda)** See Figure 6, below.

Figure 6.

5. Click **Start.** A lot of magic happens, and you will see a series of progress bars. When
    completed, Click **Close**. That's it – you have copied your RPi SD card to a memory stick.
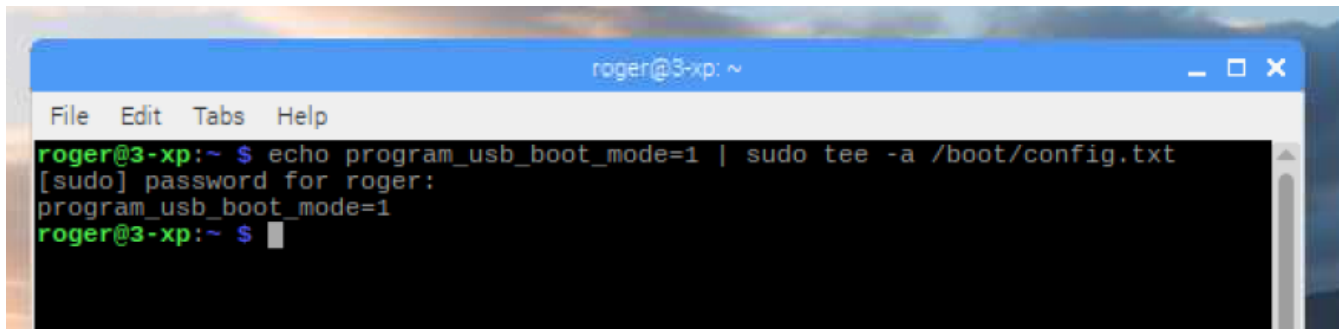
(continued)

Now were are going to tell the RPi to boot from the new memory stick.

Remove the memory stick, and Enter the following into a terminal...

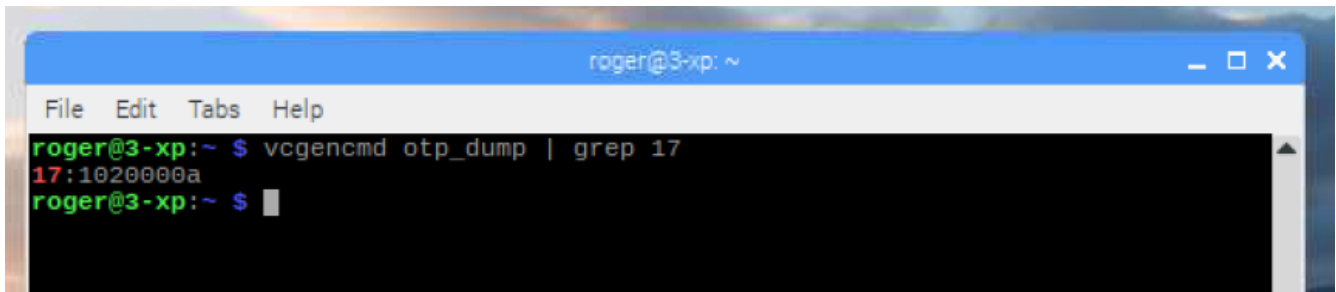`echo program_usb_boot_mode=1 | sudo tee -a /boot/config.txt`

and press Enter.   You will be asked for your password…   -enter it.

That's it!   Now reboot: `sudo reboot now`
After the reboot, check that boot mode has been enabled with this command:

`vcgencmd otp_dump | grep 17`

Your results should be similar…   SUCCESS!

Shut down the RPi with: `sudo shutdown -h now`
When the RPi has completely powered-down you may remove the SD Card and insert the memory stick.

You may now boot from the memory stick.   Save your SD Card as a back-up.