

2b Connect display

If *not* using HDMI,
plug in your analogue
TV or display

3 Connect input

Plug in a USB keyboard
and mouse

4 Connect network

Connect to your wired
network [optional]

1 Insert SD card

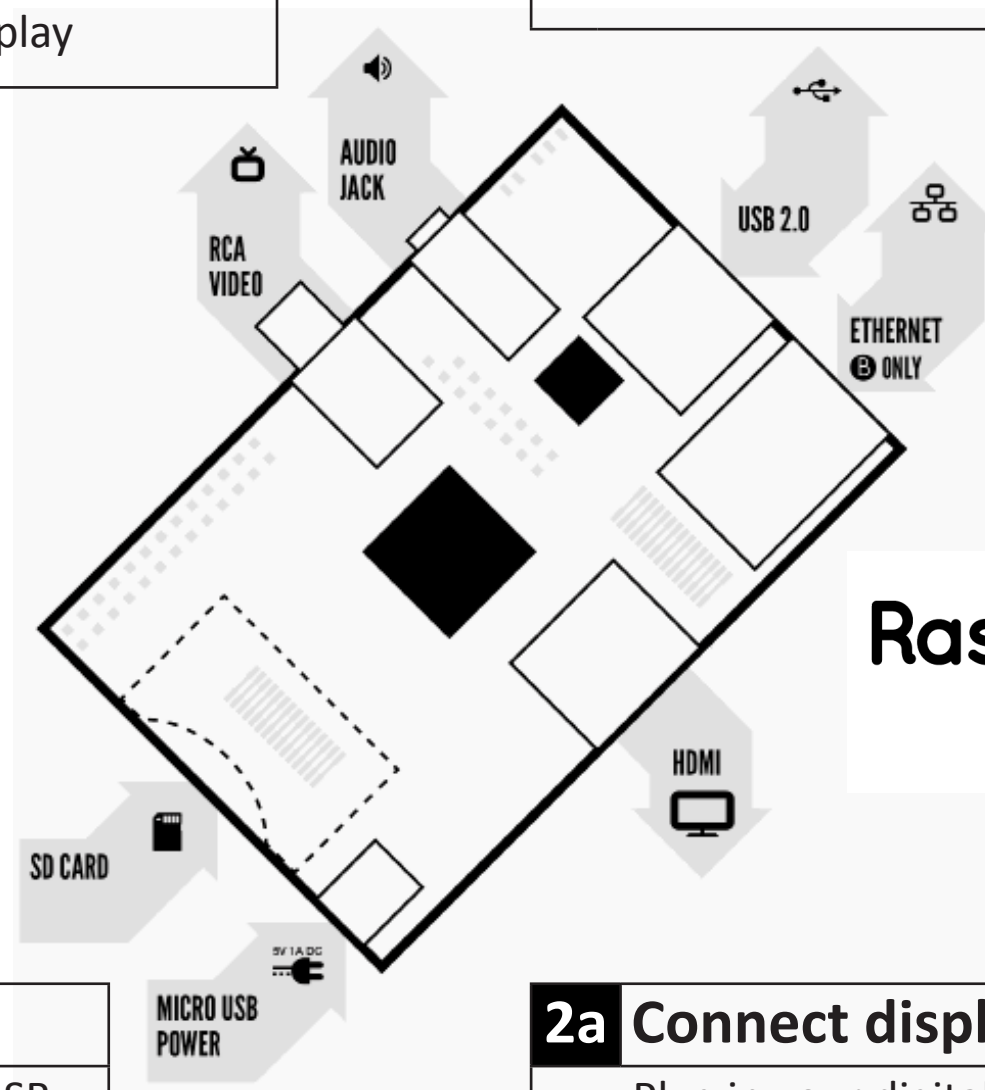
See page 3 for how to
prepare the SD card

5 Power up

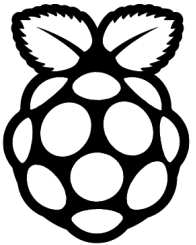
Plug in the micro USB
power supply

2a Connect display

Plug in your digital TV
or monitor



Raspberry Pi
Quick start



To set up your Raspberry Pi you will need:

	Item	Minimum recommended specification & notes
1	SD card	- Minimum size 4Gb; class 4 (the <i>class</i> indicates how fast the card is). - We recommend using branded SD cards as they are more reliable.
2a	HDMI to HDMI / DVI lead	- HDMI to HDMI lead (for HD TVs and monitors with HDMI input). OR - HDMI to DVI lead (for monitors with DVI input). - Leads and adapters are available for few pounds -- there is no need to buy expensive ones!
2b	RCA video lead	A standard RCA composite video lead to connect to your analogue display if you are not using the HDMI output.
3	Keyboard and mouse	- Any standard USB keyboard and mouse should work. - Keyboards or mice that take a lot of power from the USB ports, however, may need a powered USB hub. This may include some wireless devices.
4	Ethernet (network) cable [optional]	Networking is optional, although it makes updating and getting new software for your Raspberry Pi much easier.
5	Power adapter	- A good quality, micro USB power supply that can provide at least 700mA at 5V is essential. - Many mobile phone chargers are suitable—check the label on the plug. - If your supply provides less than 5V then your Raspberry Pi may not work at all, or it may behave erratically. Be wary of very cheap chargers: some are not what they claim to be. - It does not matter if your supply is rated at <i>more</i> than 700mA.
6	Audio lead [optional]	- If you are using HDMI to HDMI then you will get digital audio via this. - If you are using the analogue RCA connection or a HDMI to DVI cable, stereo audio is available from the 3.5mm jack next to the RCA connector.

Know your leads:



HDMI connector



HDMI to DVI lead



RCA composite video connector

WARNINGS

- This product shall only be connected to an external power supply rated at 5V dc, and a minimum current of 500-700mA for model A and 700-1200mA for model B. Any external power supply used with the Raspberry-Pi shall comply with relevant regulations and standards applicable in the country of intended use.
- This product should not be overclocked as this may make certain components very hot.
- This product should be operated in a well ventilated environment and the case should not be covered.
- This product should be placed on a stable, flat, non-conductive surface in use and should not be contacted by conductive items.
- The connection of unapproved devices to the GPIO connector may affect compliance or result in damage to the unit and invalidate the warranty.
- All peripherals used with the Raspberry Pi should comply with relevant standards for the country of use and be marked accordingly to ensure that safety and performance requirements are met. These articles include but are not limited to keyboards, monitors, and mice used in conjunction with the Raspberry Pi.
- Where peripherals are connected that do not include the cable or connector, the cable or connector used must offer adequate insulation and operation in order that the requirements of the relevant performance and safety requirements are met.

INSTRUCTIONS FOR SAFE USE

- Do **not** expose it to water, moisture or place on a conductive surface whilst in operation.
- Do **not** expose it to heat from any source; the Raspberry Pi is designed for reliable operation at normal ambient room temperatures.
- Take care whilst handling to avoid mechanical or electrical damage to the printed circuit board and connectors.
- Avoid handling the printed circuit board while it is powered. Only handle by the edges to minimise the risk of electrostatic discharge damage.
- The Raspberry Pi is not designed to be powered from a USB port on other connected equipment, if this is attempted it may malfunction.

PREPARING YOUR SD CARD FOR THE RASPBERRY PI

In order to use your Raspberry Pi, you will need to install an Operating System (OS) onto an SD card. An Operating System is the set of basic programs and utilities that allow your computer to run; examples include Windows on a PC or OSX on a Mac.

These instructions will guide you through installing a recovery program on your SD card that will allow you to easily install different OS's and to recover your card if you break it.

1. Insert an SD card that is 4GB or greater in size into your computer

2. Format the SD card so that the Pi can read it

a. Windows

- i. Download the SD Association's Formatting Tool from https://www.sdcard.org/downloads/formatter_4/eula_windows/
- ii. Install and run the Formatting Tool on your machine
- iii. Set "FORMAT SIZE ADJUSTMENT" option to "ON" in the "Options" menu
- iv. Check that the SD card you inserted matches the one selected by the Tool
- v. Click the "Format" button

b. Mac

- i. Download the SD Association's Formatting Tool from https://www.sdcard.org/downloads/formatter_4/eula_mac/
- ii. Install and run the Formatting Tool on your machine
- iii. Select "Overwrite Format"
- iv. Check that the SD card you inserted matches the one selected by the Tool
- v. Click the "Format" button

c. Linux

- i. We recommend using gparted (or the command line version parted)

3. Format the entire disk as FAT 3. Download the New Out Of Box Software (NOOBS) from:

downloads.raspberrypi.org/noobs

4. Unzip the downloaded file
 - a. **Windows**
 - i. Right click on the file and choose “Extract all”
 - b. **Mac**
 - i. Double tap on the file
 - c. **Linux**
 - i. Run unzip [downloaded filename]
5. Copy the extracted files onto the SD card that you just formatted
6. Insert the SD card into your Pi and connect the power supply

Your Pi will now boot into NOOBS and should display a list of operating systems that you can choose to install. If your display remains blank, you should select the correct output mode for your display by pressing one of the following number keys on your keyboard;

1. **HDMI mode** - this is the default display mode.
2. **HDMI safe mode** - select this mode if you are using the HDMI connector and cannot see anything on screen when the Pi has booted.
3. **Composite PAL mode** - select either this mode or composite NTSC mode if you are using the composite RCA video connector
4. **Composite NTSC mode**

Note: The built-in Windows formatting tool will only format the first partition that Windows can read not the entire disk. For this reason we advise using the official SD Card Association Formatting Tool.

COMPLIANCE INFORMATION

The Raspberry Pi complies with the relevant provisions of the RoHS Directive for the European Union. In common with all Electrical and Electronic Equipment (EEE) the Raspberry Pi should not be disposed of as household waste. Alternative arrangements may apply in other jurisdictions.

ELECTROMAGNETIC COMPATIBILITY AND OPERATION

- This product is in conformity with the protection requirements of EU Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility.
- This product has been tested and found to comply with the limits for Class B Information Technology Equipment according to the European Standard EN 55022.
- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.
- NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna
 - Increase the separation between the equipment and receiver
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
 - Consult the dealer or an experienced radio/TV technician for help
- WARNING: Please do not alter or modify the design of this product, doing so may void your ability to use the product freely.