

What now?

A full explanation of how to use RISC OS wouldn't be possible in this short document – but if this is the first time you have run it on your Raspberry Pi, a web browser called NetSurf will open a window showing you a 'Welcome' document, which should include a link that provides some instructions.

If you have already closed this window, look towards the top left of the desktop background – the pinboard in RISC OS terms – and you should see an icon titled Welcome/html. Simply double-click on that using the left mouse button, and the document will load into NetSurf.

You will also find icons called 'IStore' and 'IPackMan' - these are applications that link to online repositories, from which you can download plenty of additional software – but don't forget to check out what's already on your SD card as part of the default installation!

There are also lots of resources – forums, software to download, etc. – on the internet. Here are a couple of websites to start you off:

RISC OS OPEN

www.riscosopen.org

You might recognise that address; it was the website from which you downloaded the SD card image. RISC OS Open is the company responsible for looking after the RISC OS source code, and how it develops. There is a wealth of information on the website, including a forum where you will find a number of people who are very knowledgeable about the operating system.

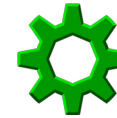
RISCOSITORY

www.riscository.com

RISCOSitory is a site where news and information about RISC OS often appears, and it is therefore a useful resource for finding additional software, as well as links to other websites and online resources.

There are a few shows that take place each year – not unlike Recursion, but much smaller – relating specifically to RISC OS, and a number of local user groups up and down the country; details of many of these can be found on RISCOSitory on the 'RISC OS Calendar' page.

If you also check out the 'Videos' page, you will find a step-by-step video guide to installing RISC OS on the Raspberry Pi – the instructions from pages 2 and 3 of this document, but in video form.



RISC OS

The *original* operating system
for ARM-based computer systems!

Installing RISC OS on the Raspberry Pi: A quick guide

About RISC OS

Initially released under the name Arthur, RISC OS is an operating system that was originally developed by Acorn Computers Ltd to run on their ARM-based Archimedes computer systems. These computer systems were first launched in 1987 – thirty years ago this year – and the ARM processor was itself designed by Acorn for use in them. As such, RISC OS is the *original* operating system designed for the ARM processor architecture.



A key feature of the operating system is its very small size and fast start-up times. The original version was included in a 512KB ROM chip built into the computer, and resulted in it being ready for use almost from the moment it was switched on. Today it is a little bigger and no longer stored in a ROM *chip*, but it is still very small compared with other systems. The core operating system is stored in a single file called a *ROM image*, which is loaded when the system starts, and means it still benefits from a very fast start-up time.



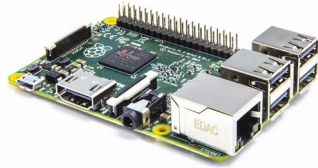
Other notable features include extensive and consistent use of drag and drop, context-sensitive pop-up menus, and the naming and use of the three mouse buttons. There is an exceptional vector graphics package bundled with it, as well as a powerful version of a programming language called BBC BASIC built in. You will probably see a number of programs written in BBC BASIC in the RISC OS area of Recursion today, including a number of fun games.

If you want to try out RISC OS for yourself, it's dead easy to get it up and running on a Raspberry Pi – and that's what this document is all about; installing RISC OS on a Raspberry Pi!

What you will need

If you already have a Raspberry Pi – perhaps you are currently using Raspbian on it, for example – then you will already have everything you need. To sum up, however, your ‘shopping list’ looks like this:

- A Raspberry Pi.
Model A, B, or B+, version 1, 2 or 3, or a Raspberry Pi Zero¹.
- An SD or micro-SD card (depending which model of Pi you have), with a minimum capacity of 2GB.
- A USB keyboard.
- A USB mouse with three buttons²
- A HDMI lead to connect the Pi to a screen.
- A screen to go at the other end of the HDMI lead!
- A USB power supply.
- A network cable connected to your home router if you want to access the internet.



For the purpose of this exercise, you will also need access to a Windows computer with a card reader in order to prepare the SD card.

Finally, you must download two things from the internet onto your Windows computer:

- Win32 Disk Imager, which you can find at:

sourceforge.net/projects/win32diskimager/

Install this just as you would any other software. This is what you will use to prepare the SD card for use in the Raspberry Pi.

- The RISC OS SD card image for the Raspberry Pi, which can be found at:

www.riscosopen.org/content/downloads/raspberry-pi

The file to download is the topmost one under the heading “Complete SD card images” and is currently called “RC15 SD card image”

This needs to be ‘extracted’ from the zip file – right click on it and choose ‘Extract’ to do so. The *.img* file contained inside it is what will be put on the SD card so that the Raspberry Pi can boot into RISC OS.

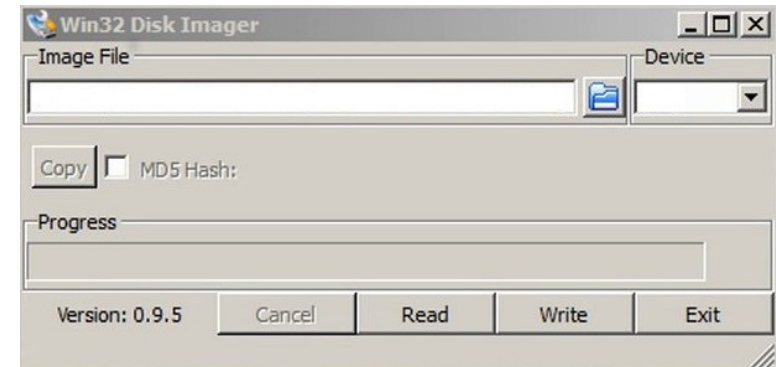
Once you have downloaded and installed or extracted both of these, you can prepare the SD card ready for use in the Raspberry Pi.

1. Note that if you have a Raspberry Pi Zero, you will also need suitable adapters to allow you to connect your keyboard, mouse, screen, etc.
2. You will probably have a mouse with two buttons and a scroll-wheel. The wheel can usually be pressed, and so used as the middle button.

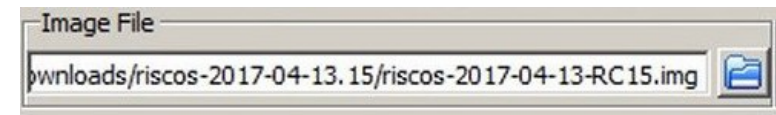
Putting RISC OS on the SD card

This is as easy as... well, Pi!

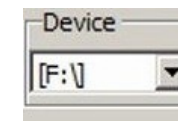
Run Win32 Disk Imager. Depending on how your computer is set up, you might need to run it as Administrator – to do this, right click on it and then click ‘Run as administrator’ from the menu.



Click on the ‘folder’ icon next to the ‘Image File’ field, and find the RISC OS image file – it should be in a subdirectory with a name that begins ‘riscos-’ in the same location you downloaded the zip file. Open the folder, and look for a file that begins ‘riscos-’ - Win32 Disk Imager will only show you image (.img) files, so you should only see the right one. Click on it, and the field will be filled in with the file.



You should now insert the SD card in your card reader. If you have no other USB-based storage devices plugged in, Win32 Disk Imager should recognise it immediately, and its drive letter should appear in the ‘Device’ field.



You may at this stage wish to open a folder to look at what’s on the card, just to double check it’s the right one.

Once you are satisfied that everything is ready, click on ‘Write’ and the image will be written to the SD card. This may take a little time, but once it’s done you can eject the card in the usual way.

If you now put the card in a Raspberry Pi and power it up, you will be running RISC OS!