Book Review
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# Book Title – Raspberry Pi User Guide (3rd Edition)

# Authors – Eben Upton and Gareth Halfacree

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## SUMMARY

This book is the definitive guide to the Raspberry Pi mini-computer written by the co-founder of the Raspberry Pi organization – Eben Upton – and co-written by Gareth Halfacree - a technical journalist with in depth knowledge of the Raspberry Pi, Linux and Micro-electronics.

As a result it is a well written, comprehensive guide to the Raspberry PI and is of particular value to a teacher or someone like myself who has to assist pure beginners to set up and start using their Raspberry Pi’s. It is also of benefit to someone who has a particular use for setting up the Pi as a Home Theatre PC, Productivity PC or a Web Server (as it contains specific guidance on these topics). In all it is a great addition to our Melbourne PC Group library.

## Recommendation

This book would be of great benefit to a beginner who has a reasonable knowledge of Computing and has the confidence to set up a Pi for themselves – (although it is a recommended that these people should also refer to the RaspberryPi.Org web site as some of the details of the Raspberry Pi itself have been superseded by later models since the book was published).

The most value will be gained from the book by working your way through every chapter, including the basics of Linux System Administration, as there are some gems of information in there that even those who have previously built Raspberry Pi Systems will be delighted to uncover.

## Overview of Book Contents

In the following section I will summarise some of the chapters to give you more of a “feel” for the book’s contents. The Book is divided into 5 “PARTS” and I will describe PART 1 in detail and give Chapter Titles only for PARTS 2, 3 4 & 5 as they are largely self-descriptive.

## PART 1

## Introduction

Even though this is a “technical” book it is written in plain English and the Introduction contains a brief history of the development of the Pi and its reason for existence from the actual people who created it.

This is of particular relevance to our own Melbourne PC Organisation as it explains that the purpose of the Pi is to give a better understanding of Computing skills to the later generations of Computer Users who do not have the benefit of having worked in a “Command Line” environment (such as DOS) and therefore do not understand what is happening “under the covers” of a PC.

## Chapter 1 - Meet the Raspberry Pi

This section describes the various models of the Raspberry Pi but as pointed out earlier it is slightly out of date as newer models have recently been released. However, there are some useful facts in here about the ARM Processor and how Linux differs from Windows.

## Chapter 2 - Getting Started with the Raspberry Pi

This section explains how to install the software, connect a display and keyboard and connect to the internet etc. Again, there are some sections that are slightly different on the latest versions of the Pi but the steps that must be gone through are the same.

## Chapter 3 - Linux System Administration

This is a must read for anybody who hasn’t used Linux before. It explains common Linux commands, the Linux directory Structure and the methods of obtaining, installing and updating the necessary software to get your Pi running correctly.

## Chapter 4 - Troubleshooting

Another must read. Even if you haven’t experienced any problems this will prepare you for the day when you undoubtedly will !!!

## Chapter 5 - Network Configuration

If you are going to run into trouble then networking is the most likely area for concern. The section on Installing Wireless Firmware is the most useful advice I have ever seen on how to overcome this.

## Chapter 6 – The Raspberry Pi Software Configuration Tool

This is probably the most important chapter for a beginner to read. The Raspberry Pi was designed and developed in the U.K. and as a consequence defaults to a keyboard with pound signs and a clock based on the U.K. time zone. This section clearly instructs you how to change these to suit your own location.

## Chapter 7 – Advanced Raspberry Pi Configuration

As the name suggests, this enables the experienced Pi user to change Hardware Memory and Software settings

# PART 2

## Chapter 8 – The Pi as a Home Theatre PC

Describes in detail how to set this up

## Chapter 9 – The Pi as a Productivity Machine

Describes in detail how to set this up

## Chapter 10 – The Pi as a Web Server

Describes in detail how to set this up

# PART 3

## Chapter 11 – An introduction to Scratch

Describes how to write programs in this language

## Chapter 12 – An introduction to Python

Describes how to write programs in this language

## Chapter 13 – Minecraft Pi Edition

Describes how to write programs that interface to and modify this popular game program

# PART 4

## Chapter 14 – Learning to Hack Hardware

A beginner’s guide to interfacing the hardware to other electronic components.

## Chapter 15 – The GPIO Port

A more detailed instruction on how to talk to other electronic components

## Chapter 16 – The Raspberry Pi Camera Module

How to install and operate the optional camera add-on board

## Chapter 17 – Add-on Boards

Details three other add-on boards and their operation

# PART 5

## APPENDIX A

Sample Python Programs in detail

## APPENDIX B

Raspberry Pi Camera Module Quick Reference

## APPENDIX C

HDMI Display Modes