CONTENTS

Issue 109 September 2021

Cover Feature

30 20 Pico projects

Regulars

92 Your Letters
97 Next Month
98 The Final Word

Project Showcases

10 Automated Model Railroad
14 RFID Floppy Disk Reader
16 Remote agricultural monitoring
18 DMGPlus
20 RACOON waste sorter
22 HIIT Workout Trainer
24 Synth6581
26 Automated Standing Desk

Tutorials

39 Ultimate home server - part 2
44 Galaxian attack patterns
47 Create GUIs in Python - part 9
54 Pico communication protocols
58 Isomorphic keyboard - part 2

The Big Feature

64 Student guide

Reviews

74 Pico Wireless Pack
76 HyperPixel 2.1 Round
78 Air Quality Kit
80 10 Amazing game dev projects
82 Learn Python

Community

84 Geeky Faye interview
86 This Month in Raspberry Pi

DISCLAIMER: Some of the tools and techniques shown in The MagPi magazine are dangerous unless used with skill, experience, and appropriate personal protection equipment. While we attempt to guide the reader, ultimately you are responsible for your own safety and understanding the limits of yourself and your equipment. Children should be supervised. Raspberry Pi (Trading) Ltd does not accept responsibility for any injuries, damage to equipment, or costs incurred from projects, tutorials or suggestions in The MagPi magazine. Laws and regulations covering many of the topics in The MagPi magazine are different between countries, and are always subject to change. You are responsible for understanding the requirements in your jurisdiction and ensuring that you comply with them. Some manufacturers place limits on the use of their hardware which some projects or suggestions in The MagPi magazine may go beyond. It is your responsibility to understand the manufacturer’s limits.

WIN 1 OF 10 RASPBERRY PI CASE FANS

Student guide

DMGPlus

Synth6581

Galaxian attack patterns

Isomorphic keyboard - part 2

10 amazing game dev projects

Geeky Faye interview

Geeky Faye interview

WIN 1 OF 10 RASPBERRY PI CASE FANS