Contents

➤ Issue 129 ➤ May 2023

Cover Feature

34 DIY Home Automation

Regulars

30 Case Study: Freight Farms

90 Your Letters

92 Community Events Calendar

97 Next Month

98 The Final Word

Project Showcases

08 Shiloh Studios

12 ClippyGPT

16 Doom on a LEGO brick

18 Clamshell BlackBerry cyberdeck

22 Greening the Spark

24 Bugg.xyz acoustic monitoring







The MagPi is published monthly by Raspberry Pi Ltd, Maurice Wilkes Building, St. John's Innovation Park, Cowley Road, Cambridge, CB4 oDS, United Kingdom. Publishers Service Associates, 2406 Reach Road, Williamsport, PA, 17701. is the mailing agent for copies distributed in the US and Canada. Application to mail at Periodicals prices is pending at Williamsport, PA, POSTMASTER: Send address changes to The Magpi, c/o Publishers Service Associates, 2406 Reach Road, Williamsport, PA, 17701.

Tutorials

- **42** Build your own GPT Chatbot
- **46** Introduction to inputs and outputs
- **50** Bluetooth music visualiser
- **54** Camera Module: Getting Started
- **60** RFID spells fun

Create a Bluetooth music visualiser



The Big Feature



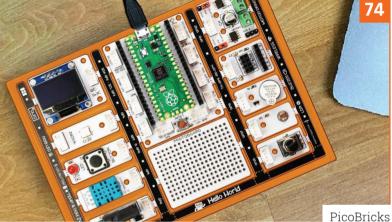


Reviews

- **72** Compute Blade
- **74** PicoBricks
- 77 10 amazing browsers
- **81** Learn Sense HAT

Community

- **84** Brian Jepson interview
- **86** This Month in Raspberry Pi





WIN GLOBAL SHUTTER CAMERA MODULES 55

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 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.