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Titolo	3D Printing with Delta Printers [[electronic resource] /] / by Charles Bell
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ISBN	1-4842-1173-1
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (355 p.)
Collana	Technology in action
Disciplina	004
Soggetti	Computer input-output equipment Optical data processing Computer graphics Hardware and Maker Computer Imaging, Vision, Pattern Recognition and Graphics Computer Graphics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Contents at a Glance; Contents; About the Author; About the Technical Reviewer; Acknowledgments; Introduction; Chapter 1: Introduction to Delta 3D Printers; Getting Started; What Is 3D Printing?; The 3D Printing Process; How an Object Is Printed; 3D Printing Consumables; Filament; Print Surface Treatments; Blue Painter's Tape ; Kapton Tape ; ABS Juice; Cartesian vs . Delta Printers; Getting a Delta Printer; Categories of 3D Printers; Professional Grade ; Consumer Grade ; Hobbyist Grade (RepRap); Build or Buy?; Reasons for Building Your Own Delta Printer Reasons for Buying a Delta Printer Buying a Used 3D Printer; Summary; Chapter 2: Delta Printer Hardware; Anatomy of a Delta Printer; Axes; Hardware Components; Extruder; Hot End; Axis Movement; Smooth Rods; Linear Rails; Roller Carriages; Recirculating Balls on Frame Rails; Delta Arms; Stepper Motors; Build Plate; Electronics; Frame; Design Variants; SeeMeCNC Rostock Max v2; Kossel Pro; Mini Kossel; Which Is Best?; Summary; Chapter 3: Delta Printer Software; Computer-Aided Design; CAD Software Choices; Blender; OpenSCAD; Computer-Aided Manufacturing; Using CAM Software CAM Software Choices Repetier-Host; MatterControl; Simplify3D; How

Do They Compare?; Firmware; Configuring Firmware; Marlin; Repetier-Firmware; Remote Printing Solutions; OctoPi: OctoPrint Running on a Raspberry Pi; Getting Started; Using OctoPi; MatterControl Touch; Getting Started; Using MatterControl Touch; Which Is Best?; Object Repositories ; Thingiverse; YouMagine; Summary; Chapter 4: Tips for Building a Delta Printer; Tools and Skills Required; A Word About Tool Quality; Required Tools; General Tools; Tools for Building a Delta Printer; Recommended Tools Optional Tools Skills; Mechanical; Electrical; Delta Printer Build Tips; General Notes; Organize Your Small Parts; Read the Instructions; Use a Clean, Clear Workspace; Check the Bill of Materials ; Lay Out Your Tools; Don't Mix SAE and Metric; Keep Your Hands Clean; No Duct Tape Allowed; Give Me a Break!; Don't Force Components Together; Don't Stray from the Plan; Keep an Engineering Logbook ; It's Not a Toy!; Frame Components; Cleaning Bolt and Rod Holes ; Test-Fit Parts Before Assembly; Measure Twice; Nut Traps ; Tighten, but Don't Overtighten; Fixing Stripped Bolts Locate Lost Nuts and Other Small BitsBuild Your Top and Bottom Frame As Completely As Possible; Add Extra Nuts; The Moving Parts; Working with Oiled Parts ; Keep Smooth and Threaded Rods Clean; Belt Tensioners ; Align Pulleys with the Belt; Don't Stress the Plastic ; Take Care with Mounting the Accessories; Electronics; ESD Is the Enemy; Test Your Components Separately; Don't Rush Assembly; You Cannot Use Too Many Zip Ties ; Cutting Wires to Length; Cut Zip Ties Close to the Nub; Use High-Temp Wire for Heaters; Use ESD Shielding for LCD Cables; Insulate Mains; Use Stress Relief Spread the Load

Sommario/riassunto

Do you find yourself wondering what the fuss is about a delta 3D printer? Perhaps you've decided to buy one but all of your 3D printing friends are busily perfecting their Cartesian printers. Maybe you find yourself stymied by the fact that your delta printer has very different needs for setup, configuration, calibration, and maintenance than Cartesian printers. 3D Printing with Delta Printers contains detailed descriptions of the innovative delta design including unique hardware, software, and maintenance requirements. The book also covers tips for building your own delta printer as well as examples of common enhancements. This book will enable you to build, configure, and enhance your delta printer. The topics covered will reveal the often-mysterious nuances of the delta design that will enable your printer to compete with the best of what your 3D printer friends can build.
