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**KEY=ELECTRONICS - HARRISON GIOVANNA**

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## Electronic Circuits for the Evil Genius

### 57 Lessons with Projects

**McGraw Hill Professional** *Cutcher's 57 lessons build on each other and add up to projects that are fun and practical. The reader gains experience in circuit construction and design and in learning to test, modify, and observe results. The bonus website ( <http://www.books.mcgraw-hill.com/authors/cutcher> ) provides animations, answers to worksheet problems, links to other resources, WAV files to be used as frequency generators, and freeware to apply your PC as an oscilloscope.--From publisher description.*

# Electronic Circuits for the Evil Genius 2/E

**McGraw Hill Professional** *The Fiendishly Fun Way to Master Electronic Circuits! Fully updated throughout, this wickedly inventive guide introduces electronic circuits and circuit design, both analog and digital, through a series of projects you'll complete one simple lesson at a time. The separate lessons build on each other and add up to projects you can put to practical use. You don't need to know anything about electronics to get started. A pre-assembled kit, which includes all the components and PC boards to complete the book projects, is available separately from ABRA electronics on Amazon. Using easy-to-find components and equipment, Electronic Circuits for the Evil Genius, Second Edition, provides hours of rewarding--and slightly twisted--fun. You'll gain valuable experience in circuit construction and design as you test, modify, and observe your results--skills you can put to work in other exciting circuit-building projects. Electronic Circuits for the Evil Genius: Features step-by-step instructions and helpful illustrations Provides tips for customizing the projects Covers the underlying electronics principles behind the projects Removes the frustration factor--all required parts are listed, along with sources Build these and other devious devices: Automatic night light Light-sensitive switch Along-to-digital converter Voltage-controlled oscillator Op amp-controlled power amplifier Burglar alarm Logic gate-based toy Two-way intercom using transistors and op amps Each fun, inexpensive Genius project includes a detailed list of materials, sources for parts, schematics, and lots of clear, well-illustrated instructions for easy assembly. The larger workbook-style layout and convenient two-column format make following the step-by-step instructions a breeze. Make Great Stuff! TAB, an imprint of McGraw-Hill Professional, is a leading publisher of DIY technology books for makers, hackers, and electronics hobbyists.*

## Mechatronics for the Evil Genius

### 25 Build-it-Yourself Projects

**McGraw Hill Professional** *The popular evil genius format provides hobbyists with a fun and inexpensive way to learn Mechatronics (the merger of electronics and mechanics) via 25 complete projects. Projects include: mechanical race car, combat robot, ionic motor, electromagnet, robotic arm, light beam remote control, and more Includes "parts lists" and "tool bin" for each project Covers all the preparation needed to begin building, such as "how to solder," "how to recognize components and diagrams, "how to read a schematic," etc.*

# 15 Dangerously Mad Projects for the Evil Genius

**McGraw Hill Professional** UNLEASH YOUR INNER MAD SCIENTIST! "Wonderful. I learned a lot reading the detailed but easy to understand instructions."--BoingBoing This wickedly inventive guide explains how to design and build 15 fiendishly fun electronics projects. Filled with photos and illustrations, 15 Dangerously Mad Projects for the Evil Genius includes step-by-step directions, as well as a construction primer for those who are new to electronics projects. Using easy-to-find components and equipment, this do-it-yourself book shows you how to create a variety of mischievous gadgets, such as a remote-controlled laser, motorized multicolored LEDs that write in the air, and a surveillance robot. You'll also learn to use the highly popular Arduino microcontroller board with three of the projects. 15 Dangerously Mad Projects for the Evil Genius: Features step-by-step instructions and helpful illustrations Covers essential safety measures Reveals the scientific principles behind the projects Removes the frustration factor--all required parts are listed, along with sources Build these devious devices to amaze your friends and confound your enemies! Coil gun Trebuchet Ping pong ball minigun Mini laser turret Balloon-popping laser gun Touch-activated laser sight Laser-grid intruder alarm Persistence-of-vision display Covert radio bug Laser voice transmitter Flash bomb High-brightness LED strobe Levitation machine Snailbot Surveillance robot Each fun, inexpensive Evil Genius project includes a detailed list of materials, sources for parts, schematics, and lots of clear, well-illustrated instructions for easy assembly. The larger workbook-style layout and convenient two-column format make following the step-by-step instructions a breeze. VIDEOS, PHOTOS, AND SOURCE CODE ARE AVAILABLE AT [WWW.DANGEROUSLYMAD.COM](http://WWW.DANGEROUSLYMAD.COM) Make Great Stuff! TAB, an imprint of McGraw-Hill Professional, is a leading publisher of DIY technology books for makers, hackers, and electronics hobbyists.

## Raspberry Pi Electronics Projects for the Evil Genius

**McGraw Hill Professional** Program your own MicroPython projects with ease—no prior programming experience necessary! This DIY guide provides a practical introduction to microcontroller programming with MicroPython. Written by an experienced electronics hobbyist, Python for Microcontrollers: Getting Started with MicroPython features eight start-to-finish projects with clear, easy-to-follow instructions for each. You will learn how to use sensors, store data, control motors and other devices, and work with expansion boards. From there, you'll discover how to design, build, and program all kinds of entertaining and practical projects of your own. • Learn MicroPython and object-oriented programming basics • Interface with a PC and load files, programs, and modules • Work with the LEDs, timers, and converters • Control external devices using serial interfaces and PWM • Build and program a let ball detector using

*the three-axis accelerometer • Install and program LCD and touch-sensor expansion boards • Record and play sounds using the AMP audio board*

## MORE Electronic Gadgets for the Evil Genius

### 40 NEW Build-it-Yourself Projects

**McGraw-Hill Education TAB** *This much anticipated follow-up to the wildly popular cultclassic Electronic Gadgets for the Evil Genius gives basement experimenters 40 all-new projects to tinker with. Following the tried-and-true Evil Genius Series format, each project includes a detailed list of materials, sources for parts, schematics, documentation, and lots of clear, well-illustrated instructions for easy assembly. The convenient two-column format makes following step-by-step instructions a breeze. Readers will also get a quick briefing on mathematical theory and a simple explanation of operation along with enjoyable descriptions of key electronics topics such as various methods of acceleration, power conditioning, energy storage, magnetism, and kinetics.*

## 101 Spy Gadgets for the Evil Genius 2/E

**McGraw Hill Professional CREATE FIENDISHLY FUN SPY TOOLS AND COUNTERMEASURES** *Fully updated throughout, this wickedly inventive guide is packed with a wide variety of stealthy sleuthing contraptions you can build yourself. 101 Spy Gadgets for the Evil Genius, Second Edition also shows you how to reclaim your privacy by targeting the very mechanisms that invade your space. Find out how to disable several spy devices by hacking easily available appliances into cool tools of your own, and even turn the tables on the snoopers by using gadgetry to collect information on them. Featuring easy-to-find, inexpensive parts, this hands-on guide helps you build your skills in working with electronics components and tools while you create an impressive arsenal of spy gear and countermeasures. The only limit is your imagination! 101 Spy Gadgets for the Evil Genius, Second Edition: Contains step-by-step instructions and helpful illustrations Provides tips for customizing the projects Covers the underlying principles behind the projects Removes the frustration factor--all required parts are listed Build these and other devious devices: Spy camera Infrared light converter Night vision viewer Phone number decoder Phone spammer jammer Telephone voice changer GPS tracking device Laser spy device Remote control hijacker Camera flash taser Portable alarm system Camera trigger hack Repeating camera timer Sound- and motion-activated cameras Camera zoom extender*

# Electronic Games for the Evil Genius

**McGraw Hill Professional** *Step-by-step instructions and illustrations explain how to build thirty-five electronic games and gadgets, with easy-to-follow plans, clear diagrams, and expert advice for each project.*

## tinyAVR Microcontroller Projects for the Evil Genius

**McGraw Hill Professional** *CREATE FIENDISHLY FUN tinyAVR MICROCONTROLLER PROJECTS* This wickedly inventive guide shows you how to conceptualize, build, and program 34 tinyAVR microcontroller devices that you can use for either entertainment or practical purposes. After covering the development process, tools, and power supply sources, *tinyAVR Microcontroller Projects for the Evil Genius* gets you working on exciting LED, graphics LCD, sensor, audio, and alternate energy projects. Using easy-to-find components and equipment, this hands-on guide helps you build a solid foundation in electronics and embedded programming while accomplishing useful--and slightly twisted--projects. Most of the projects have fascinating visual appeal in the form of large LED-based displays, and others feature a voice playback mechanism. Full source code and circuit files for each project are available for download. *tinyAVR Microcontroller Projects for the Evil Genius: Features step-by-step instructions and helpful illustrations* Allows you to customize each project for your own requirements Offers full source code for all projects for download Build these and other devious devices: Flickering LED candle Random color and music generator Mood lamp VU meter with 20 LEDs Celsius and Fahrenheit thermometer RGB dice Tengu on graphics display Spinning LED top with message display Contactless tachometer Electronic birthday blowout candles Fridge alarm Musical toy Batteryless infrared remote Batteryless persistence-of-vision toy Each fun, inexpensive Evil Genius project includes a detailed list of materials, sources for parts, schematics, and lots of clear, well-illustrated instructions for easy assembly. The larger workbook-style layout and convenient two-column format make following the step-by-step instructions a breeze. Make Great Stuff! TAB, an imprint of McGraw-Hill Professional, is a leading publisher of DIY technology books for makers, hackers, and electronics hobbyists.

## Electronics Sensors for the Evil Genius: 54 Electrifying

## Projects

**McGraw-Hill/TAB Electronics** *54 super-entertaining projects offer insights into the sights, sounds, and smells of nature Nature meets the Evil Genius via 54 fun, safe, and inexpensive projects that allow you to explore the fascinating and often mysterious world of natural phenomena using your own home-built sensors. Each project includes a list of materials, sources for parts, schematics, and lots of clear, well-illustrated instructions. Projects include: rain detector, air pressure sensor, cloud chamber, lightning detector, electronic gas sniffer, seismograph, radiation detector, and more*

## Arduino + Android Projects for the Evil Genius: Control Arduino with Your Smartphone or Tablet

**McGraw Hill Professional** *TEAM ARDUINO UP WITH ANDROID FOR SOME MISCHIEVOUS FUN! Filled with practical, do-it-yourself gadgets, Arduino + Android Projects for the Evil Genius shows you how to create Arduino devices and control them with Android smartphones and tablets. Easy-to-find equipment and components are used for all the projects in the book. This wickedly inventive guide covers the Android Open Application Development Kit (ADK) and USB interface and explains how to use them with the basic Arduino platform. Methods of communication between Android and Arduino that don't require the ADK--including sound, Bluetooth, and WiFi/Ethernet are also discussed. An Arduino ADK programming tutorial helps you get started right away. Arduino + Android Projects for the Evil Genius: Contains step-by-step instructions and helpful illustrations Provides tips for customizing the projects Covers the underlying principles behind the projects Removes the frustration factor--all required parts are listed Provides all source code on the book's website Build these and other devious devices: Bluetooth robot Android Geiger counter Android-controlled light show TV remote Temperature logger Ultrasonic range finder Home automation controller Remote power and lighting control Smart thermostat RFID door lock Signaling flags Delay timer*

## Raspberry Pi Projects for the Evil Genius

**McGraw-Hill Education TAB** *A dozen fiendishly fun projects for the Raspberry Pi! This wickedly inventive guide shows you how to create all kinds of entertaining and practical projects with Raspberry Pi operating system and programming environment. In Raspberry*

*Pi Projects for the Evil Genius, you'll learn how to build a Bluetooth-controlled robot, a weather station, home automation and security controllers, a universal remote, and even a minimalist website. You'll also find out how to establish communication between Android devices and the RasPi. Each fun, inexpensive Evil Genius project includes a detailed list of materials, sources for parts, schematics, and lots of clear, well-illustrated instructions for easy assembly. The larger workbook-style layout makes following the step-by-step instructions a breeze. Build these and other devious devices: LED blinker MP3 player Camera controller Bluetooth robot Earthquake detector Home automation controller Weather station Home security controller RFID door latch Remote power controller Radon detector Make Great Stuff! TAB, an imprint of McGraw-Hill Professional, is a leading publisher of DIY technology books for makers, hackers, and electronics hobbyists.*

## 30 Arduino Projects for the Evil Genius, Second Edition

**McGraw-Hill Professional** *This do-it-yourself guide shows you how to program and build projects with the Arduino Uno and Leonardo boards and the Arduino 1.0 development environment. It gets you started right away with the simplified C programming you need to know and demonstrates how to take advantage of the latest Arduino capabilities. You'll learn how to attach an Arduino board to your computer, program it, and connect electronics to it to create your own devices. A bonus chapter uses the special USB keyboard/mouse-impersonation feature exclusive to the Arduino Leonardo--*

## Holography Projects for the Evil Genius

**McGraw Hill Professional** *Take Your Imagination to Another Dimension This wickedly inventive guide explores the art and science of holography and shows you how to create your own intriguing holograms using inexpensive materials. Holography Projects for the Evil Genius explains the tools and techniques you need to know to represent three dimensions on a flat, two-dimensional plane. Using easy-to-find components and equipment, this do-it-yourself book presents a wide variety of holography projects--including science fair ideas--that are guaranteed to impress. You'll find detailed guidelines and parameters as well as discussions of the theory behind the practice. Holography Projects for the Evil Genius: Features step-by-step instructions and helpful illustrations for each project Allows you to customize your projects Includes details on the scientific principles behind the projects Removes the frustration factor--all required parts are listed, along with sources Enlightening coverage of: The history of holography Human vision basics Practical optics How to bend and distort laser light to form a hologram Holographic chemistry Setting up your holography workshop Working with lasers, glass plates, and film Basic to advanced holographic setups Advanced holographic chemical preparations Computer-generated*

*holography Electronic circuits for holographers*

## Bionics for the Evil Genius

### 25 Build-it-Yourself Projects

**McGraw-Hill Education TAB** *Presents a collection of twenty-five step-by-step projects that introduce bionics, providing illustrations on how life forms can be enhanced with mechanical and electrical components, and including an electric fish, a bat ear, a lie detector, an electronic nerve stimulator, and more.*

### 20 Makey Makey Projects for the Evil Genius

**McGraw Hill Professional** *A comprehensive overview of robotics principles, systems, and applications This hands-on TAB guide is filled with DIY projects that show readers, step-by-step, how to start creating and making cool inventions with the Makey Makey invention kit. Each project features easy-to-follow, fully-illustrated instructions and detailed photographs of the finished gadget. You will see how to apply these skills and start building your own Makey Makey projects. 20 Makey Makey Projects for the Evil Genius starts off with very approachable introductory projects, making it a great starting point for beginners. It then builds to more challenging projects, allowing more experienced users to go further by incorporating technologies like Raspberry Pi, Processing and Scratch programming, 3D Printing, and creating wearable electronics with Makey Makey. Projects are divided into four categories: "Fun and Games," "Interactive," "Hacks and Pranks," and "Makey Makey Go." • No prior programming or technical experience is required • Basic enough for beginners, but challenging enough for advanced makers • Written by two educators who believe in fostering creative innovation for all*

### 125 Physics Projects for the Evil Genius

**McGraw Hill Professional** *125 Wickedly Fun Ways to Test the Laws of Physics! Now you can prove your knowledge of physics without expending a lot of energy. 125 Physics Projects for the Evil Genius is filled with hands-on explorations into key areas of this fascinating field. Best of all, these experiments can be performed without a formal lab, a large budget, or years of technical experience! Using easy-to-find parts and tools, this do-it-yourself guide offers a wide variety of physics experiments you can*

accomplish on your own. Topics covered include motion, gravity, energy, sound, light, heat, electricity, and more. Each of the projects in this unique guide includes parameters, a detailed methodology, expected results, and an explanation of why the experiment works. *125 Physics Projects for the Evil Genius: Features step-by-step instructions for 125 challenging and fun physics experiments, complete with helpful illustrations Allows you to customize each experiment for your purposes Includes details on the underlying principles behind each experiment Removes the frustration factor--all required parts are listed, along with sources 125 Physics Projects for the Evil Genius provides you with all of the information you need to demonstrate: Constant velocity Circular motion and centripetal force Gravitational acceleration Newton's laws of motion Energy and momentum The wave properties of sound Refraction, reflection, and the speed of light Thermal expansion and absolute zero Electrostatic force, resistance, and magnetic levitation The earth's magnetic field The size of a photon, the charge of an electron, and the photoelectric effect And more*

## 50 Green Projects for the Evil Genius

**McGraw Hill Professional** *50 Ways to Be a Green Evil Genius! Who knew being environmentally conscious would ever be considered evil? With 50 Green Projects for the Evil Genius, you'll have wicked fun while reducing your impact on the planet and saving money. Using easy-to-find parts and tools, this do-it-yourself guide offers a wide variety of environmentally focused projects you can accomplish on your own. Topics covered include transportation, alternative fuels, solar, wind, and hydro power, home insulation, construction, and more. The projects in this unique guide range from easy to more complex and are designed to optimize your time and simplify your life! 50 Green Projects for the Evil Genius: Features step-by-step instructions for 50 environmentally friendly projects, complete with helpful illustrations Shows you how to design, build, and install your creations Allows you to customize each project for your purposes Removes the frustration factor--all required parts are listed, along with sources 50 Green Projects for the Evil Genius provides you with all the plans and schematics you need to: Dramatically improve the fuel efficiency of your car Insulate the windows in your home Build a worm compost bin Audit your appliances with an energy meter Build a water purifier Set up a rainwater collection system Create a solar water heater Construct a homopolar motor Assemble a solar module from PV cells Create a wind turbine Assemble your own weather-protected human-powered vehicle Convert your car to biodiesel Build a contained composite structure And more*

## 46 Science Fair Projects for the Evil Genius

**McGraw Hill Professional** *SHAKE UP YOUR SCIENCE FAIR WITH THESE CUTTING-EDGE, ATTENTION-GRABBING PROJECTS!* Want to win first place in the next science fair? *46 Science Fair Projects for the Evil Genius* has everything you need to create amazing, sophisticated projects that will wow the judges and keep everyone talking long after the awards are handed out. Using inexpensive, easy-to-find parts and tools, and following standard science fair requirements, these creative new projects test 46 theories from various disciplines, including physics, astronomy, energy, environmental science, and economics. Each project begins with an intriguing hypothesis that leaves plenty of room for you to add your own tweaks, making the project entirely different and new—the only limit is your imagination! *46 Science Fair Projects for the Evil Genius: Features instructions and plans for 46 inventive, winning projects, complete with 100 how-to illustrations Shows you how to assemble, design, and build devices to test the hypotheses offered for each project Leaves room for you to customize your project and create several variations, so the experiment is entirely your own! Removes the frustration-factor—all the parts you need are listed, along with sources Regardless of your skill level, 46 Science Fair Projects for the Evil Genius provides you with all the parts lists and tools you need to test the hypotheses and complete projects with ease, such as: Water, Water, Everywhere—the effect of salt water flooding a lawn “Vlip!”—dogs respond to sounds, not the meaning of words Web Crawler—the effectiveness of Internet search engines M&M Ring around the World—the validity of sample size “Commercial” TV-comparison of programming to advertising content Sounds fishy—do goldfish have a water temperature preference? Split and Dip—strategy for making money in the stock market High-Tech Times—the willingness of people of different ages to adapt to new technology Not Just Lemonade—is adding lemon to cleaners just for marketing? Kinetic Pendulum—the relationship between a pendulum, an arc, and time*

## Programming Video Games for the Evil Genius

**McGraw Hill Professional** *IF EVIL'S YOUR NAME, THEN THESE ARE YOUR GAMES!* Always wanted to be a genius game creator? This *Evil Genius* guide goes far beyond a typical programming class or text to reveal insider tips for breaking the rules and constructing wickedly fun games that you can tweak and customize to suit your needs! In *Programming Video Games for the Evil Genius*, programming wunderkind Ian Cinnamon gives you everything you need to create and control 57 gaming projects. You'll find easy-to-follow plans featuring Java, the most universal programming language, that run on any PC, Mac, or Linux computer. Illustrated instructions and plans for an awesome mix of racing, board, shoot 'em up, strategy, retro, and puzzle games Gaming projects that

vary in difficulty-starting with simple programs and progressing to sophisticated projects for programmers with advanced skills An interactive companion website featuring a free Java compiler, where you can share your projects with Evil Geniuses around the globe Removes the frustration-factor-all the parts you need are listed, along with sources Regardless of your skill level, Programming Video Games for the Evil Genius provides you with all the strategies, code, and insider programming advice you need to build and test your games with ease, such as: Radical Racing Screen Skier Whack an Evil Genius Tic-Tac-Toe Boxing Snake Pit Space Destroyers Bomb Diffuser Trapper Oiram Java Man Memory Ian Says

## 22 Radio and Receiver Projects for the Evil Genius

**McGraw Hill Professional** Projects include: FM radios, aircraft radios,VHF ham radio receivers,VHF public service radio, old-time radio tubes, shortwave receivers, and free energy receivers Covers early radio models such as crystal radio as well as more contemporary options Appeals to skill levels from novice to advanced

## The Evil Genius

**BoD - Books on Demand** *Reproduction of the original: The Evil Genius by Wilkie Collins*

## PICAXE Microcontroller Projects for the Evil Genius

**McGraw Hill Professional** WHIP UP SOME FIENDISHLY FUN PICAXE MICROCONTROLLER DEVICES "Ron has worked hard to explain how the PICAXE system operates through simple examples, and I'm sure his easy-to-read style will help many people progress with their PICAXE projects." --From the Foreword by Clive Seager, Revolution Education Ltd. This wickedly inventive guide shows you how to program, build, and debug a variety of PICAXE microcontroller projects. PICAXE Microcontroller Projects for the Evil Genius gets you started with programming and I/O interfacing right away, and then shows you how to develop a master processor circuit. From "Hello, World!" to "Hail, Octavius!" All the projects in Part I can be accomplished using either an M or M2 class PICAXE processor, and Part II adds 20X2-based master processor projects to the mix. Part III culminates in the creation of Octavius--a sophisticated robotics experimentation platform featuring a 40X2 master processor and eight breadboard stations which allow you to develop intelligent peripherals to augment Octavius' functioning. The only limit is your imagination! PICAXE Microcontroller Projects for the Evil Genius: Features step-by-step instructions and helpful photos and illustrations Allows you to customize each project for your purposes Offers

*all the programs in the book free for download Removes the frustration factor--all required parts are listed, along with sources Build these and other devious devices: Simple mini-stereo jack adapter USBS-PA3 PICAXE programming adapter Power supply Three-state digital logic probe 20X2 master processor circuit TV-R input module 8-bit parallel 16X2 LCD board Serialized 16X2 LCD Serialized 4X4 matrix keypad SPI 4-digit LED display Countdown timer Programmable, multi-function peripheral device and operating system Octavius--advanced robotics experimentation platform L298 dual DC motor controller board Each fun, inexpensive Evil Genius project includes a detailed list of materials, sources for parts, schematics, and lots of clear, well-illustrated instructions for easy assembly. The larger workbook-style layout and convenient two-column format make following the step-by-step instructions a breeze. Make Great Stuff! TAB, an imprint of McGraw-Hill Professional, is a leading publisher of DIY technology books for makers, hackers, and electronics hobbyists.*

## Fuel Cell Projects for the Evil Genius

**McGraw Hill Professional** *FUEL YOUR EVIL URGES WHILE YOU BUILD GREEN ENERGY PROJECTS! Go green as you amass power! Fuel Cell Projects for the Evil Genius broadens your knowledge of this important, rapidly developing technology and shows you how to build practical, environmentally conscious projects using the three most popular and widely accessible fuel cells! In Fuel Cell Projects for the Evil Genius, high-tech guru Gavin Harper gives you everything you need to conduct practical experiments and build energizing fuel cell projects. You'll find complete, easy-to-follow plans that feature clear diagrams and schematics, as well as: Instructions for fascinating sustainable energy projects, complete with 180 how-to illustrations Explanations of how fuel cells work and why the hydrogen economy will impact our lives in the near future Frustration-factor removal-all the needed parts are listed, along with sources Science fair project ideas that are on the cutting edge of the latest technological developments Fuel Cell Projects for the Evil Genius gives you complete plans, instructions, parts lists, and sources to: Understand how hydrogen could meet our energy needs in a post-carbon economy Build a fuel cell car to race against your friends Build an intelligent fuel cell car which autonomously drives Build a simple fuel cell using adhesive bandages Hydrogen fuel your iPod Have a hydrogen barbecue-cook your food with zero carbon emissions! Discover how the amounts of hydrogen supplied to fuel cells affect the amounts of electricity produced And much more!*

## Solar Energy Projects for the Evil Genius

**McGraw Hill Professional** *FOLLOW THE SUN TO MORE EVIL FUN! Let the sun shine on your evil side - and have a wicked amount of fun on your way to becoming a solar energy master! In this guide, the popular Evil Genius format ramps up your understanding of*

powerful, important, and environmentally friendly solar energy - and shows you how to build real, practical solar energy projects you can use in your home, yard - even on the road! In *Solar Energy Projects for the Evil Genius*, high-tech guru Gavin Harper gives you everything you need to build more than 50 thrilling solar energy projects. You'll find complete, easy-to-follow plans, with clear diagrams and schematics, so you know exactly what's involved before you begin. Illustrated instructions and plans for 30 amazing pretested solar energy projects that assume no prior experience with energy science Explanations of the science and math behind each project Projects that progress in difficulty - from simple ones that may inspire science fair entries - all the way to converting a real home to solar energy Frustration-factor removal-needed parts are listed, along with sources-plus all the tools you'll need *Solar Energy Projects for the Evil Genius* provides you with complete plans, instructions, parts lists, and sources for: Crushed berries solar cell Solar "death ray" Solar powered hot dog cooker Solar furnace Sun-powered refrigerator Camping shower, oven, and more Hot recipes for solar cooking Water purifier Flashlight Garden lights Solar vehicle Environmentally friendly robot Much more!

## 30 BeagleBone Black Projects for the Evil Genius

**McGraw Hill Professional** *Fiendishly Fun Ways to Use the BeagleBone Black!* This wickedly inventive guide shows you how to program and build fun and fascinating projects with the BeagleBone Black. You'll learn how to connect the BeagleBone Black to your computer and program it, quickly mastering BoneScript and other programming tools so you can get started right away. 30 BeagleBone Black Projects for the Evil Genius is filled with a wide variety of do-it-yourself LED, sensor, robotics, display, audio, and spy gadgets. You'll also get tips and techniques that will help you design your own ingenious devices. Features step-by-step instructions and helpful illustrations Provides full schematic and breadboard layout diagrams for the projects Includes detailed programming code Removes the frustration factor—all required parts are listed along with sources Build these and other clever creations: High-powered LED Morse code sender RGB LED fader GPS tracker Temperature sensor Light level indicator Web-controlled rover Plant hydration system Sentinel turret 7-segment clock Display for sensor information Internet radio Imperial march indicator Intruder alert using Twitter API Lie detector Auto dog barker

## Recycling Projects for the Evil Genius

**McGraw Hill Professional** *Have some thoroughly green evil fun!* This wickedly inventive guide explains how to create a variety of practical, environmentally friendly items you can use for yourself or resell for profit. *Recycling Projects for the Evil Genius* is filled with detailed directions on how to successfully complete each green project and discusses important safety issues. Using easy-to-find

*components and tools, this do-it-yourself book shows you how to brew up green cleaners, transform all types of paper into building materials, safely rid your home and yard of pests, and much more—all on the cheap! Recycling Projects for the Evil Genius: Features step-by-step instructions and helpful illustrations Covers essential safety measures Reveals the scientific principles behind the projects Removes the frustration factor—all required parts are listed, along with sources Make your own green: Household cleaners Laundry soap Citrus oil extract Pest and weed control solutions Recycled plastic lumber and landscape blocks Recycled asphalt shingle paver bricks and road patch compound Concrete paper mache blocks, garden walls, stepping stones, and structures Solar-powered composter Garden-friendly charcoal And more Each fun, inexpensive, and slightly wicked Evil Genius project includes a detailed list of materials, sources for parts, schematics, and lots of clear, well-illustrated instructions for easy assembly. The larger workbook-style layout and convenient two-column format make following the step-by-step instructions a breeze.*

## 50 Model Rocket Projects for the Evil Genius

**McGraw Hill Professional** *Plans, diagrams, schematics, and lists of parts and tools for model rocket projects.*

## Beginning Artificial Intelligence with the Raspberry Pi

**Apress** *Gain a gentle introduction to the world of Artificial Intelligence (AI) using the Raspberry Pi as the computing platform. Most of the major AI topics will be explored, including expert systems, machine learning both shallow and deep, fuzzy logic control, and more! AI in action will be demonstrated using the Python language on the Raspberry Pi. The Prolog language will also be introduced and used to demonstrate fundamental AI concepts. In addition, the Wolfram language will be used as part of the deep machine learning demonstrations. A series of projects will walk you through how to implement AI concepts with the Raspberry Pi. Minimal expense is needed for the projects as only a few sensors and actuators will be required. Beginners and hobbyists can jump right in to creating AI projects with the Raspberry Pi using this book. What You'll Learn What AI is and—as importantly—what it is not Inference and expert systems Machine learning both shallow and deep Fuzzy logic and how to apply to an actual control system When AI might be appropriate to include in a system Constraints and limitations of the Raspberry Pi AI implementation Who This Book Is For Hobbyists, makers, engineers involved in designing autonomous systems and wanting to gain an education in fundamental AI concepts, and non-technical readers who want to understand what AI is and how it might affect their lives.*

# Programming Arduino Next Steps: Going Further with Sketches

**McGraw Hill Professional** *"In this practical guide, electronics guru Simon Monk takes you under the hood of Arduino and reveals professional programming secrets. Featuring coverage of the Arduino Uno, Leonardo, and Due boards, Programming Arduino Next Steps: Going Further with Sketches shows you how to use interrupts, manage memory, program for the Internet, maximize serial communications, perform digital signal processing, and much more. All of the 75+ example sketches featured in the book are available for download"--*

## Audio Electronics

**Newnes** *Audio Electronics provides information pertinent to the fundamental aspects of audio electronics. This book discusses the parallel development in the various transducers and interface devices used to generate and reproduce electrical signals. Organized into nine chapters, this book begins with an overview of the basic method of digitally encoding an analog signal that entails repetitively sampling the input signal at sufficiently brief intervals. This text then examines the major attraction of the FM broadcasting system to allow the transmission of a high quality stereo signal without significant degradation of audio quality. Other chapters consider the conventional practice to interpose a versatile pre-amplifier unit between the power amplifier and the external signal sources. This book discusses as well the requirements for voltage gain stages in both audio amplifiers and integrated-circuit operational amplifiers. The final chapter deals with the significance of the power supply unit. This book is a valuable resource for professional recording and audio engineers.*

## Brilliant LED Projects: 20 Electronic Designs for Artists,

# Hobbyists, and Experimenters

**McGraw Hill Professional** *LET YOUR CREATIVE SIDE SHINE WITH THE COMPLETE DIY GUIDE TO MAKING EXCITING LED DEVICES*  
*Brilliant LED Projects presents 20 hands-on, step-by-step projects for you to make using inexpensive, commonly available components. Projects range from simple, functional devices, such as a "green" LED flashlight and a flashing rear bike light, to more complex designs, including color-changing disco lights and persistence-of-vision (POV) gadgets--all featuring easy-to-follow instructions, highlighted with detailed illustrations. Build with confidence using this book's expert guidance and practical information, including overviews of various LED components, comprehensive listings of tool and supplies, sample clock and driver circuit building blocks, and more. A companion website gives you access to exclusive content, including downloadable assembly codes and programming codes (for the projects powered by the PIC 16F628 microcontroller). Plus, every chapter spotlights key concepts and techniques that make it easy and enjoyable for you to produce eye-catching LED displays. Great for first-timers and expert hobbyists alike All projects can be built with stripboard--no need to translate complicated schematics, or purchase special PCBs Includes extensive guidelines for safe assembly Learn the basic principles of every project component--from LEDs to dot-matrix displays and various integrated circuits Create your own designs using building blocks and assembly techniques from the book's projects*

## Electrical Engineering 101

### Everything You Should Have Learned in School...but Probably Didn't

**Elsevier** *Electrical Engineering 101 covers the basic theory and practice of electronics, starting by answering the question "What is electricity?" It goes on to explain the fundamental principles and components, relating them constantly to real-world examples. Sections on tools and troubleshooting give engineers deeper understanding and the know-how to create and maintain their own electronic design projects. Unlike other books that simply describe electronics and provide step-by-step build instructions, EE101 delves into how and why electricity and electronics work, giving the reader the tools to take their electronics education to the next level. It is written in a down-to-earth style and explains jargon, technical terms and schematics as they arise. The author builds a*

*genuine understanding of the fundamentals and shows how they can be applied to a range of engineering problems. This third edition includes more real-world examples and a glossary of formulae. It contains new coverage of: Microcontrollers FPGAs Classes of components Memory (RAM, ROM, etc.) Surface mount High speed design Board layout Advanced digital electronics (e.g. processors) Transistor circuits and circuit design Op-amp and logic circuits Use of test equipment Gives readers a simple explanation of complex concepts, in terms they can understand and relate to everyday life. Updated content throughout and new material on the latest technological advances. Provides readers with an invaluable set of tools and references that they can use in their everyday work.*

## 25 Home Automation Projects for the Evil Genius

**McGraw Hill Professional** *Computer technology has caught up with home automation, and it's now easy and inexpensive to automate everything in a house--including lighting, security, appliances, entertainment, and environmental conditions--and here's how to do it! This well-illustrated resource offers 25 complete home automation projects that require only basic household tools and the instructions found within its pages. - Publisher.*

## Democracy and Education

**Read Books Ltd** *This antiquarian volume contains a comprehensive treatise on democracy and education, being an introduction to the 'philosophy of education'. Written in clear, concise language and full of interesting expositions and thought-provoking assertions, this volume will appeal to those with an interest in the role of education in society, and it would make for a great addition to collections of allied literature. The chapters of this book include: 'Education as a Necessity of Life'; 'Education as a Social Function'; 'Education as Direction'; 'Education as Growth'; 'Preparation, Unfolding, and Formal Discipline'; 'Education as Conservative and Progressive'; 'The Democratic Conception in Education'; 'Aims in Education', etcetera. We are republishing this vintage book now complete with a new prefatory biography of the author.*

## Electronics for Kids

# Play with Simple Circuits and Experiment with Electricity!

**No Starch Press** *Why do the lights in a house turn on when you flip a switch? How does a remote-controlled car move? And what makes lights on TVs and microwaves blink? The technology around you may seem like magic, but most of it wouldn't run without electricity. Electronics for Kids demystifies electricity with a collection of awesome hands-on projects. In Part 1, you'll learn how current, voltage, and circuits work by making a battery out of a lemon, turning a metal bolt into an electromagnet, and transforming a paper cup and some magnets into a spinning motor. In Part 2, you'll make even more cool stuff as you: -Solder a blinking LED circuit with resistors, capacitors, and relays -Turn a circuit into a touch sensor using your finger as a resistor -Build an alarm clock triggered by the sunrise -Create a musical instrument that makes sci-fi sounds Then, in Part 3, you'll learn about digital electronics—things like logic gates and memory circuits—as you make a secret code checker and an electronic coin flipper. Finally, you'll use everything you've learned to make the LED Reaction Game—test your reaction time as you try to catch a blinking light! With its clear explanations and assortment of hands-on projects, Electronics for Kids will have you building your own circuits in no time.*

## Arduino Project Handbook

### 25 Practical Projects to Get You Started

**No Starch Press** *Arduino Project Handbook is a beginner-friendly collection of electronics projects using the low-cost Arduino board. With just a handful of components, an Arduino, and a computer, you'll learn to build and program everything from light shows to arcade games to an ultrasonic security system. First you'll get set up with an introduction to the Arduino and valuable advice on tools and components. Then you can work through the book in order or just jump to projects that catch your eye. Each project includes simple instructions, colorful photos and circuit diagrams, and all necessary code. Arduino Project Handbook is a fast and fun way to get started with microcontrollers that's perfect for beginners, hobbyists, parents, and educators. Uses the Arduino Uno board.*

# Programming Arduino Getting Started with Sketches

**McGraw Hill Professional** Program Arduino with ease! Using clear, easy-to-follow examples, *Programming Arduino: Getting Started with Sketches* reveals the software side of Arduino and explains how to write well-crafted sketches using the modified C language of Arduino. No prior programming experience is required! The downloadable sample programs featured in the book can be used as-is or modified to suit your purposes. Understand Arduino hardware fundamentals Install the software, power it up, and upload your first sketch Learn C language basics Write functions in Arduino sketches Structure data using arrays and strings Use Arduino's digital and analog inputs and outputs in your programs Work with the Standard Arduino Library Write sketches that can store data Program LCD displays Use an Ethernet shield to enable Arduino to function as a web server Write your own Arduino libraries In December 2011, Arduino 1.0 was released. This changed a few things that have caused two of the sketches in this book to break. The change that has caused trouble is that the classes 'Server' and 'Client' have been renamed to 'EthernetServer' and 'EthernetClient' respectively. To fix this: Edit sketches 10-01 and 10-02 to replace all occurrences of the word 'Server' with 'EthernetServer' and all occurrences of 'Client' with 'EthernetClient'. Alternatively, you can download the modified sketches for 10-01 and 10-02 from here: <http://www.arduinobook.com/arduino-1-0> Make Great Stuff! TAB, an imprint of McGraw-Hill Professional, is a leading publisher of DIY technology books for makers, hackers, and electronics hobbyists.

# Bike, Scooter, and Chopper Projects for the Evil Genius

**McGraw Hill Professional** CREATE RADICAL NEW RIDES WITH THESE OUTLANDISH PROJECTS! Want to take your evil talents on the road? *Bike, Scooter, and Chopper Projects for the Evil Genius* has everything you need to morph your old, unwanted wheels into fabulous, fully functional vehicles. Now you can fuel your artistic side, conserve energy, and get where you need to go with serious attitude! Dozens of pictures throughout the building process help you create these rad rides, some that you power yourself and some that will propel you for extensive distances with just the push of a button, running on inexpensive power obtained from a wall socket or the sun. Each project can be modified, mixed together, and customized, enabling you to create literally hundreds of new devices—the only limit is your imagination! Features illustrated instructions and plans for more than 13 highly detailed projects, all of which can be built using easily available parts and a few basic tools. Shows you how to completely dismantle a standard bicycle in order to twist it into something much more evil. Gives you alternative design ideas that leave room for you to mix or change the projects to suit your own evil agenda. Learn new skills and look cool - this book is for everyone with a desire to chop and create. Garage hackers unite!

*Regardless of your skill level, Bike, Scooter, and Chopper Projects for the Evil Genius will arm you with the skills you need in order to churn out your very own evil rides. Have a look at what is on our Evil Genius drawing board... Attitude and Style Gladiator Chopper Trike Old Skool Attitude The Whipper Snapper Speed and Comfort StreetFox Tadpole Trike DeltaWolf Racing Trike Little Warrior Trike Alternative Transportation Ucan2 HandCycle SpinCycle Vortex SkyStyle Tallbike Electric Power Sparky MiniBike LongRanger Bike Silent Speedster Kids Electric Trike*

## Hereditary Genius

### An Inquiry Into Its Laws and Consequences