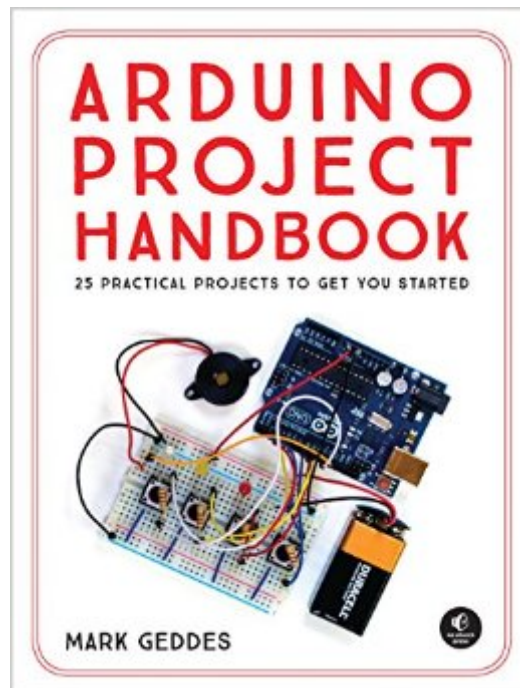# Arduino Project Handbook: 25 Practical Projects To Get You Started

Synopsis

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 micro-controllers that's perfect for beginners, hobbyists, parents, and educators.25 Step-by-Step ProjectsPushbutton-Controlled LEDLight DimmerBar GraphDisco Strobe LightPlant MonitorGhost DetectorArduino MelodyMemory GameSecret Knock LockJoystick-Controlled LaserRemote Control ServoLCD Screen WriterWeather StationFortune TellerReaction Timer GameElectronic DieRocket LauncherIntruder SensorLaser Trip Wire AlarmSentry GunMotion Sensor AlarmKeypad Entry SystemWireless ID Card Entry SystemRainbow Light ShowBuild Your Own Arduino

Book Information

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Customer Reviews

The Arduino has been one of the key elements in fueling interest in IoT among individual developers of all ages. It is an excellent way to get started with both electronics and programming and build fun little projects along the way, which could form the basis of future ideas. Often one of

the challenges that one faces with getting started with the board is that you need to understand what you exactly need in terms of hardware i.e. in addition to the Arduino, you will also need multiple other electronic components like sensors, resistors, wires, etc. In addition to that, you need to have sample code ready to make sure that you can see your little project come to light.This book, Arduino Project Handbook by Mark Geddes is an excellent resource that presents 25 fun projects that you can do with the Arduino. Early on in the book, you can easily note that the author has scouted through multiple resources for us and carefully prepared each project for the reader. Each project specifies clearly the components needed and also provides the code and detailed explanation along with circuit diagrams, so that you have a multiple ways that you can learn about the projects.The 25 projects are split into multiple categories like LEDs, Sound, Servos, LCDs, Numeric Controls and Security. Each of these categories has multiple projects in them starting with simple ones and growing in complexity. You can also jump into any project that interests you, which I found very valuable since it is perfectly possible that you might not have all the components for a specific project. I like the way the projects have been broken into categories and they start making a lot of sense since typically in most IoT projects- you sense/collect data, visualize data and maybe perform actions.

I teach a high school Applied STEM class, and one of the units I'm introducing this year is circuits and Arduinos. I bought an Arduino directly from the company for myself to mess with, and also a bunch of kits sold by Vilros for my students. First off, let me say that the book that comes with the Ardurino directly from the company is stellar. It does a nice job explaining projects, pieces, background, the code....I love it. The book that comes with the Vilros is pretty poor, on the other hand. Unfortunately, the Arduino book that comes with the kit from the company is not independently for sale anywhere, so I am always on the lookout for good books that I can bring into my classroom as resources for the kids who want to go beyond the few projects that we will do in class.So, how does this Arduino Project Handbook compare? There's some good background, and I love that the book is in color (super important for putting together circuits!). There are 22 projects (only 15 in the original Arudino book), so you definitely get some good variety with this Project Handbook. However, the book that comes from Arduino has some nice features that are lacking in the Project Handbook. The original book gives you a difficulty level for each project, the estimated amount of time each project will take, and really does an amazing job giving background and explaining what each part in the circuit is doing, along with the point of the code.

I happily accepted an advance copy of this book to read & review â " but I still haven't finished completing all 25 of the tutorials. Something to keep in mind if you're thinking of using this book â " a number of the setups require equipment & modules beyond the basic electronic components that most new Arduino hobbyists might have to experiment with. Which isn't necessarily a bad thing â " having an excuse to buy more modules is a plus to me. Parts are pretty easy to come by â " here in Austin we have a few specialty stores that stock electronic parts, and some of the Radio Shacks that are still around have some. You can also find pretty much every sort of Arduino modules you need here at too.I really learning a lot from the projects I've completed so far, and look forward to doing more of them as I can find the time and acquire the needed parts. The book starts out with a basic overview of the hobby â " explaining what the Arduino computer is and what basic tools and equipment that you need to get started. I already purchased one of the basic Arduino starter sets that came with the CPU module and the basic accessories (power supply, breadboard & jumper cables) as well as one of the starter sets of basic electronic components - Arduino Sidekick Basic Kit. Plus, I already had a good set of tools and a digital voltmeter. You are going to also need to use a regular computer for the programming of the Arduino, and access to download the software/code. The author makes the code used in the projects available for download from an internet website â " but all of the code is also in the chapters of the individual projects.

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