

NUTS AND VOLTS

www.nutsvolts.com
August 2017

EVERYTHING FOR ELECTRONICS

Build A Home Brew Geiger Counter

and monitor a

RADIOACTIVE CAT'S ^{9 1/2} lives

Projects Using
✓ Arduino Uno
✓ ESP8266
Wi-Fi Module

SOLAR INTENSITY MONITOR
fun DAQ project with minimal
hardware, and a great learning
experience.

MERGE WI-FI AND X-10
in a "bi-lingual" approach
to home light and appliance
control.



assignment or discussion question. Normally in electronics textbooks, readers would find a number of questions to test their understanding of the topic. The interactive nature of the EPTSOFT courses means they can take a much more exciting approach with a broader assignment, encouraging students to explore the topic further and learn by testing their own inputs/measurements within the apps. As these courses are self-evaluated, users do not have to satisfy an instructor — only themselves that they fully understand the topic before moving on.

Businesses can purchase these courses as an employee benefit or around which to develop their own trainees and apprentices. Parents wanting to provide a little extra help to their children can buy the course as a gift.

In addition to the online course content, EPTSOFT is giving a free PC based app ('Electronics, Mechanics, Maths & Computing,' worth around \$150 and available on Amazon). First published in 1992 as PC based Educational Software, these apps have since been developed and installed on thousands of computers by individuals, schools, and colleges worldwide.

For more information, contact:
EPTSOFT Limited
www.eptsoft.com

MONTHLY KIT SERVICE

Thimble — a monthly subscription service and learning platform — is now shipping learn-and-build electronics kits. The kits are a part of a direct-delivery monthly service to empower kids (as well as adults) to understand the fundamentals of electronics including building, embedded programming, and advanced manufacturing design techniques.

Each kit includes step-by-step instructions for the maker to code, build, and hack a DIY electronic device. Kits build in level of difficulty

the longer an individual continues to subscribe, enabling the maker to always feel challenged and to encourage them to constantly learn and innovate.

Thimble is the invention of two young Buffalo entrepreneurs: a computer engineer and a former college admission officer who came together to share their passion for STEM (Science, Technology, Engineering, and Mathematics) education and to make it more accessible to the masses. The company started as a grassroots Kickstarter campaign, and offers the kits both through individual sale and monthly subscriptions. The first kit received comes with a reusable Arduino-compatible microcontroller and the option to purchase a toolkit that will help novices to hit the ground running.

"Through Thimble, we hope to inspire all individuals — from budding hackers to semi-professional hobbyists — to fulfill their curiosity and interest in building electronics," says Oscar Pedroso, CEO and co-founder of Thimble.

Individual kits are available for \$89 or can be as low as \$39 each when they are part of a 12-month subscription. Pricing includes US shipping.

For more information, contact:
Thimble
www.thimble.io

PROGRAMMABLE DC ELECTRONIC LOAD

RIGOL Technologies, Inc., announces an expansion of its Power Analysis test portfolio. The new DL3000 series of DC electronic loads gives engineers evaluating power, optimizing power efficiency, and maximizing battery life as a new powerful and affordable solution to quickly determine their power needs, debug their designs, and reduce their time to market.

Starting at just \$499, the DL3000

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DL3000 loads can draw max power up to 150V, and 60A, providing the performance required for most current mainstream designs. What differentiates the DL3000 is its industry leading 5A/us slew rate, 30 kHz dynamic frequency, unique 4.3 inch TFT display, as well as LAN and remote control capability.

Whatever a user's power analysis requirement, the DL3000 will provide a measurement mode that meets their needs by delivering four constant modes (Current, Voltage, Power, and Resistance) as well as four more advanced transient modes (Continuous Pulse, Timed Pulse, Toggle, and List) and three applications modes. When combined with the high resolution, fast slew rate, and high frequency capabilities, the DL3000 will allow customers to build advanced power consumption models, determine power budgets, and optimize battery life.

For customers integrating batteries into mobile or IoT designs,

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