85 Open Communication
The Latest in Networking and Wireless Technologies
Killer Wi-Fi Now Available
Do you really need even better wireless service, and what is its future? This article is an update on Wi-Fi, a closer look at the latest version, a summary of the problems, and a look at what's in store for you.

16 The Ham's Wireless Workbench
Practical Technology from the Ham World
Filter Basics
A casual observer might think that wireless systems consist primarily of filters connected by the occasional bit of circuit. Block diagrams of transceivers often include as many filters as any other function. This is true at the system level, just as it is at the circuit level — and many circuits behave in a filter-like way, whether intended to be a filter or not! That makes understanding filter basics important for wireless success.

92 Near Space
Approaching the Final Frontier
Raspberry Pi Zero Flight Computer — Part 2
The Raspberry Pi Zero has turned into a really different experience for me (I'm accustomed to using the PICAXE and BASIC Stamps). After a month, I've written complete flight code and even designed a camera system for the Pi. So, this month, I'll fill you in on how I got the Raspberry Pi flight computer to where you can start planning to build an airplane. Next step, near space!

44 Do Inductor Winding Have You Tied Up in Knots?
While resistors and capacitors are easily procured and stocked, most radio frequency circuits require inductors in a wide range of very specific values. In most cases, you need to create these yourself, by winding wire on ferrite rods or toroids of specific types and sizes. Is it possible to substitute another ferrite piece at hand and still get the right inductance value? How can a hobbyist measure inductance without buying a DSO? This article describes the principal tools inductance and presents some tricks that I've used to make my own inductors.

49 VINTAGE COMPUTING:
Amigo Color BASIC — The Missing Manual
The original documentation for the Amigo retro computer was intended to help readers mentor youngists on computer programming fundamentals. It also included an "overview of most Color BASIC commands." A couple of astute readers working beyond introductory mentoring have asked me about full command set. This article covers those "missing" commands, plus a couple of tips and tricks that Amigo owners may find helpful.

66 Get ASCII Data from PS-2
You can buy inexpensive PS-2 keyboards, but they don't produce ASCII values many applications need. To further complicate things, these keyboards have their own code-transmission protocol. I'll show you how to use a system-on-a-chip and a bit of software to convert PS-2 key codes to corresponding ASCII values.

72 Practical Ideas for Portable Magnetic Loop Antennas
With the popularity of magnetic loop antennas growing these days, I thought I'd share how I designed a convenient setup for myself.