



# THE DIY MAGIC OF AMATEUR RADIO

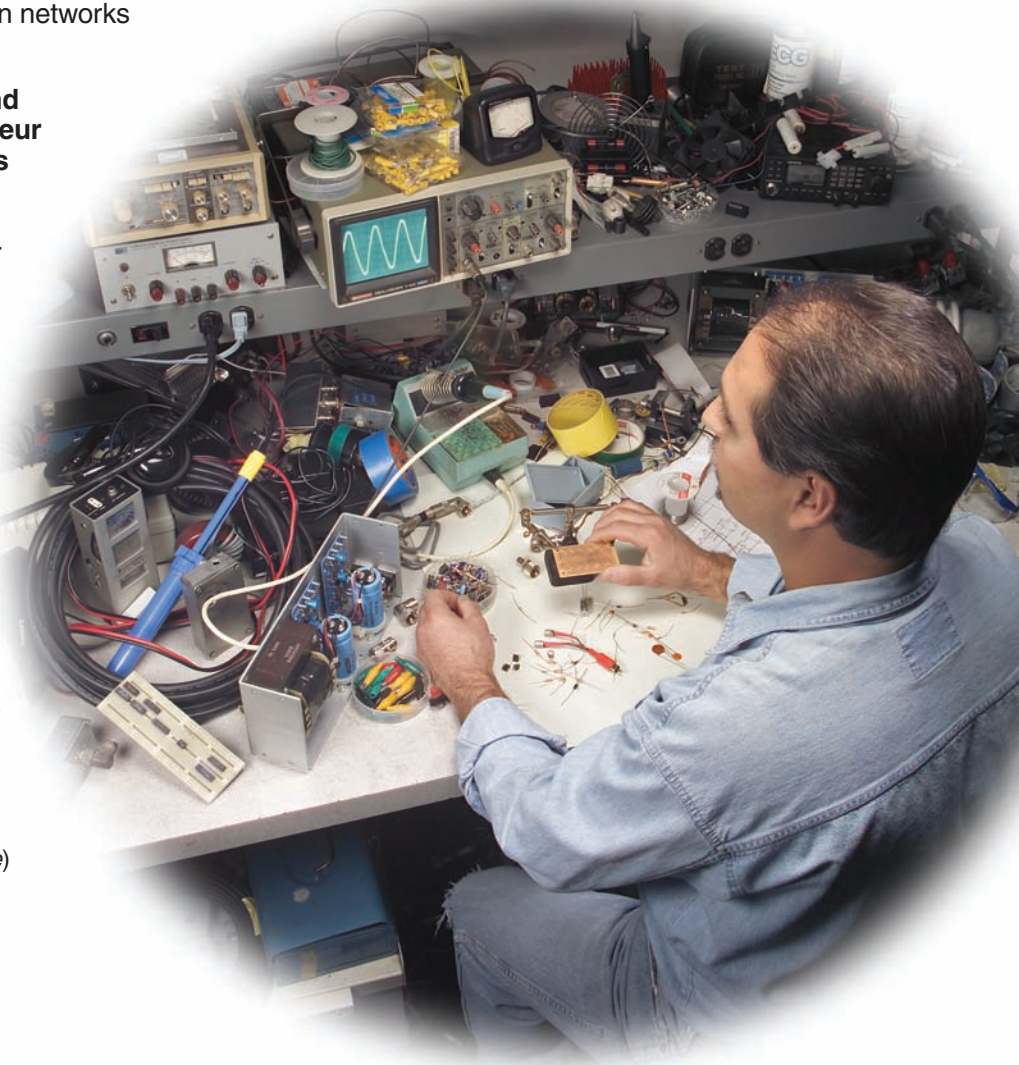
**The Do It Yourself or “DIY” movement is nothing new to Amateur Radio. For just over a century, “hams” have been working in basements and attics, taking things apart and putting them back together in new ways for the fun of it.** The enjoyment of seeing your own creation work, or even if it fails, always surpasses being a mere user of corporate products. The joys of making and modifying things for themselves run deep in the ham community. Today’s hams continue to use technologies in new and creative ways that can become the consumer products of tomorrow and, in the meantime, they have FUN doing it!

**Hams were the original Makers and Hackers,** using new, used and scavenged parts to make transmitters, receivers, and antennas capable of communicating with other hams anywhere on Earth—and beyond. In this hobby, communicating is the keyword. And, when computers came along, they fit right into the ham’s wide world. Using their technical skills and imagination, hams put together advanced communication networks connected by radio waves instead of wires.

**From microchips and robotics to time and space itself, the Makers within the Amateur Radio ranks build and explore new ways to play with the radio spectrum** such as bouncing VHF signals off a meteor trail or sending email without the Internet—just for fun. They can contact astronaut hams on the International Space Station or set world distance records for communications using microwaves. Hams are even developing whole new systems where a computer IS the radio. If you want a new radio, you’ll be able to download it!

**There are over 7000 active Amateur Radio clubs in the US and almost 700,000 people.** Many of their radio clubs are affiliated with **ARRL—the national association for AMATEUR RADIO.** These radio clubs are similar to hacker groups, but with a communications attitude. This IN-PERSON aspect of the hobby helps new people learn, share, build ideas, interests and hands-on skills.

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## How can I get started?

Amateur Radio is a licensed radio service. So the first thing you need to do is earn your FCC license. The initial license is called a Technician Class license. This is not that hard to do, but it takes some study and passing a test. The FCC Technician License exam is 35 multiple choice questions and covers basic regulations, operating practices and electronics theory, with a focus on VHF and UHF applications. Knowing Morse code is no longer required. With a Technician Class license, you will have all ham radio privileges above 30 MHz plus 10 meter HF.

[www.arrl.org/getting-licensed](http://www.arrl.org/getting-licensed)

## How do I study for the test?

Some people study in a group, some study at home on the Web and some like to have a book.

The **ARRL**—the national association for Amateur Radio, helps you get ready in whichever way is most comfortable. You can find help at [www.arrl.org/studying-for-a-technician-license](http://www.arrl.org/studying-for-a-technician-license).

## What can I do with a Technician Class license?

Automatic Position Reporting Systems (APRS), satellite communications, digital communications, hybrid systems using both radio and Internet links, thousands of repeater systems, robotics and remote commands, signals bounced off the moon—all these and much more become possibilities just waiting for you to explore.

## Where do I find the parts to build things?

There are many kits and parts you can buy on the Internet, but most hams have fun finding pieces and equipment at area “hamfests.” To visit one near you, go to [www.arrl.org/hamfests-and-conventions-calendar](http://www.arrl.org/hamfests-and-conventions-calendar).

To learn more about what hams are doing and how you can use Amateur Radio in your own projects, go to: [www.WeDoThat-Radio.org](http://www.WeDoThat-Radio.org) or find a local group near you at [www.arrl.org/find-a-club](http://www.arrl.org/find-a-club).



**ARRL** The national association for  
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