

# CRYSTAL SETS TO SIDEBAND

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## FOREWORD

Dear Radio Amateur,

I began writing this book when I realized that my homebuilt station was almost unique on the air. For me, the education and fun of building radios is more than half of the benefit of my radio hobby. It seemed to me that the best part of ham radio was disappearing, so I wrote articles on homebuilding for my local ham radio club newsletter. My ham friends liked the articles, but they rarely built anything. I realized that most modern hams lack the basic skills and knowledge to build radios usable on the air today. My articles were too brief to help them, but perhaps a detailed guide might help revive homebuilding.

I tried to write the book that I wish had been available when I was a novice operator back in 1957. I knew that rejuvenating homebuilding was probably unrealistic, but I enjoy writing so I pressed on. I thought of myself as Don Quixote battling the windmills of modern apathy toward the details of technology and science in general. It seemed to be a hopeless quest. But even if it turned out that no one else cared, I found the project satisfying and extremely educational.

Modern book publishers don't publish books that will have few readers. Because of its length and numerous color illustrations, this book would be expensive to print on paper. Not surprisingly, several publishers of electronics books had no interest in it. Fortunately, CDs cost no more than a postage stamp, so I began sending out CD copies with my QSLs to those radio contacts that showed an interest in my rig. It was great fun. I often got back thank-you letters and pictures of their homebrew stuff with their QSL cards.

### **The Internet invades ham radio**

One day Pete DeVolpi, K3PD, called me on the phone. He said he had a CD copy of the book and wanted to know if he could put it on his website. I instantly agreed. I didn't remember working him, so I asked where he had gotten his copy. He told me the name and call of the ham who gave it to him and I hadn't worked him either. Interesting! My book had a life of its own. Pete had an early "REV" of the book so I mailed him an up-to-date version and he put it on his website, [www.QSL.net/K3PD](http://www.QSL.net/K3PD). Three years later Pete and I still regularly rag chew by e-mail. It's ironic of course that we've only talked once by radio. The skip for sideband to Pennsylvania was rarely favorable during the period when we were trying.

Bill Meara, MØHBR, posted a testimonial about the book on a QRP website and I soon had dozens of new e-mails. Hans Summers, GØUPL, put it on his high speed website, [www.HansSummers.com](http://www.HansSummers.com). Next it was picked up by Juan Carlos Cucarella, EA5EXK, in Spain. Juan asked me if I would mind if the Spanish Radio Union translated the book into Español. Mind? I was honored! I never imagined this book would be read by anyone outside the United States. Juan recruited his friends to help him translate the book, chapter by chapter. Translating it accurately was a gigantic project. I am in awe of those talented fellows and greatly in their

debt. So, if you want to practice your Spanish, you can find it at [www.URE.ES](http://www.URE.ES). (And also [www.QSL.net/K3PD](http://www.QSL.net/K3PD)) Guys who are fluent in both English and Spanish tell me that the translators did a great job preserving the flavor of my American slang. On the other hand, I had an e-mail from a guy in Uruguay who told me the Spanish is awful. Apparently Spanish varies from one country to another. Recently the Spanish version has also become available at [www.ea2ry.com/libroradio](http://www.ea2ry.com/libroradio). If you don't have a high-speed connection, this site allows you to read it one page at a time.

Since the book has been on the Internet, hams in about a dozen countries have written me to praise, criticize, and offer suggestions about the book. I am delighted with all this feedback. This is the tenth revision of the book. Many of the changes over the past 4 years were the result of comments from readers. That's the beauty of Internet publishing. When errors are uncovered, they can be readily fixed.

The only factual changes in this 10<sup>th</sup> revision are a correction in a circuit diagram on page 23 of chapter 13. Two of the transistors had their emitters and collectors reversed in the cascode IF amplifiers. Also, on page 17 of chapter 5 the formula  $\omega^2 = 1/LC$  was written incorrectly. Other changes are corrections of typos and bad grammar. Also, I tried to improve the clarity of some sections. I added numerous photographs of components and drawings to show the pinouts of specific transistors. In a few places I added paragraphs to bring the text up to date or to add anecdotes that, I hope, will add interest.

We homebrewers are nearly extinct, but there are still hundreds of us scattered all over the world, even in the USA. Yes, there ARE American homebuilders! We homebuilders are rare, but we aren't extinct. Even if we don't change the world, I guarantee you will enjoy learning radio technology and making your own equipment. Someday I hope to meet you on the air.

73s, Frank Harris, KØIYE

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