Lab Notes

Prepared by the ARRL Laboratory Staff

You've Got Questions? Here's How to Find the Answers!

This month's column features Mike Tracy, KC1SX, ARRL Technical Information Service (TIS) coordinator. TIS is one of the many valuable benefits that League members enjoy. Mike prepares information packages, maintains the ARRL's Internet e-mail Info-Server, and helps members find technical information.

Q: I just got my license in the mail yesterday and I have a million questions! Can you help me?

A: The best place to start looking for answers is right in your own shack. If you make an investment in a few "general- coverage" books, you'll create a reference library that can put most of the answers right at your fingertips.

Q: But I'd rather spend money on gear. Can I buy the books later?

A: I'm not suggesting that you spend a bundle at once! If you build your home reference library slowly, you'll have a better chance to become familiar with the books you purchase. A gradual investment will allow you to build up a substantial collection of books without depleting your bank account.

Although there is a great temptation to buy a lot of gear for your shack when you start out, try to resist the urge. If you take the time to thoroughly enjoy each new purchase, you'll derive more pleasure out of your new hobby. The same principle applies to learning and building your bookshelf.

Q: So where do I start?

A: There are a number of places (including the ARRL) that offer good introductory and advanced books about all of the popular aspects of hamming. They're terrific resources for information on proper operating techniques, antennas, feed lines, station installation, grounding, kit building, home-brewing and the fine art of equipment shopping.

Start by purchasing books that you're likely to use often. If you already know what kind of operating you are interested in, pick up a book or two about it (such as one of the ARRL *Companion* series) and you'll feel much more confident when it comes time to get on the air.

The ARRL Operating Manual will provide you with all kinds of information about the countless ways hams communicate. If you overhear someone on a repeater or at the local club meeting discussing "working the RS-12 satellite" or "last night's traffic net," simply look in your handy *Operating Manual* to learn all the details.

Q: Where do I find information on what radio to buy?

A: The best source for information on new radios and equipment is right here in the pages of *QST*. Every year you'll find dozens of Product Reviews of transceivers, antennas, tuners and station accessories. These reviews give you the hard facts as well as hands-on operating impressions.

You can obtain an electronic copy of the list of Product Reviews published in *QST* from the ARRL *Hiram* BBS and Internet sites, which I will tell you about a little later on (individual Product Reviews are only available as reprints).

If you're hunting "preowned" gear, check out *The Radio Buyer's Sourcebook* and *The Radio Buyer's Sourcebook, Volume 2*. These books contain collections of *QST* Product Reviews, as well as other worthwhile information. They're considered the "bibles" of the used-equipment market.

Q: I want to know more about setting up my shack. How do I install a proper grounding system? What kind of accessories do I need?

A: The answers to these questions and many more can be found in a general technical reference, such as *The ARRL Handbook*. This book has been a staple of the ham community for decades. It is also a respected reference in the professional communications world.

The *Handbook* was extensively revised in 1995 and features a wealth of new material including chapters on operating, circuit

theory, antennas, equipment, construction, RFI and troubleshooting, just to name a few. Each chapter is nearly a book in its own right! Most chapters have construction projects, too.

Although the size of this book may seem daunting at first, keep in mind that the *Handbook* is not something that you should sit down and read cover to cover. It is a reference that you'll come back to time and time again.

Q: What if I want to do something out of the ordinary? For example, let's say I want to set up a solar-powered station. Where can I find the equipment?

A: These types of specialized questions are more common than you might think. Fortunately, the best resource for hard-to-find information is in the *Handbook*'s References chapter. And in the new 199*6 Handbook* there's something special: software!

One of the programs included on the 1996 *Handbook* diskette is a *Windows* program called, *TIS FIND*. This software was prepared by the Technical Information Service as a way of expanding on the *Handbook*'s References chapter. *TIS FIND* is a database of companies, individuals and organizations who can help you find the things you need to enjoy your hobby to the fullest. In addition to the software, the References chapter has names and addresses for companies that offer all kinds of products and services.

The 1996 *Handbook* diskette includes other useful software. Nearly every program mentioned in the book is on the disk, including software for a neat slow-scan TV interface!

Q: A friend of mine bought the 1996 *Handbook*, but he doesn't have a computer system. Since he can't use *TIS FIND*, is there another comprehensive supplier list available?

A: Tell him to pick up a copy of the *Amateur Radio Mail Order Catalog and Resource Directory*. It's an extensive list of companies and products related to ham radio, all arranged nicely in book form. The book is available from your favorite dealer or directly from ARRL Headquarters (see the *ARRL Publications Catalog* in this issue).

Q: My boss asked me to locate a company that sells 10,000-W power-line filters. Where can I buy one of those?

A: The Technical Information Service is limited to finding answers for questions about Amateur Radio. We *do* get questions like yours from time to time, however. A good resource for this type of material is the *EEM* buyers guide, published by Hearst Business Publishing (645 Stewart Ave, Garden City, NY 11530, tel 516-227-1300).

One source of technical help that's often overlooked is your local library. In addition to having a selection of electronics books (if they don't have ARRL books, perhaps you can convince them to buy a few!), they'll have a reference section that may include buyers guides and a copy of the *Thomas Register*. The *Thomas Register* lists the addresses and telephone numbers of companies doing business in the United States. Most librarians are willing to research their materials to answer your questions, although you might get some unexpected answers to technical questions!

Q: Let's get back to my station. What's the best reference for antennas that I can put up quickly?

A: By far the most popular ham topics are antennas—which is why there are so many books written about them! The best book to start your collection is a broad-topic text such as *The ARRL Antenna Book*. When it comes to antennas, *The ARRL Antenna Book* picks up where the *Handbook* leaves off. It has chapters on antenna theory, propagation and nearly every type of antenna design you could imagine.

As with the *Handbook*, the *Antenna Book* is not something you'll sit down and read cover to cover. When propagation conditions are poor, the information in this book can change frustration into enjoyment as you discover new ways to beat the odds.

Q: I bought an older transceiver at a hamfest last week. How can I find out if there have been any articles published about it?

A: You need information that's a little more specific than what you'd find in a book. Although this means that you'll have to dig a little deeper, you should still be able to find the answers close at hand.

Amateur Radio is nearly 100 years old. What this means for technical questions is that (for the most part) there really isn't anything new under the sun. Chances are, no matter what your topic of interest is, there has been a magazine article or two (or two dozen!) published about it. You simply have to know where to look.

Fortunately, you can often find a collection of older ham magazines either at your local club or at the local library. An annual index of articles appears in each December issue of *QST* and other ham magazines. By searching these indexes, you can usually

find what you're looking for.

Q: I have a computer in my shack and I'd rather not spend several hours looking through December *QSTs*. Are there any indexes on disk that I can use?

A: Owning a computer will certainly make the task of finding articles much easier! The *QST* December indexes from 1977 through 1992 were converted into ASCII files (with a search program) by Don Shipley, WB2PKG (see September 1992 *QST*, page 55, for details). This program is available via the ARRL *Hiram* BBS (860-594-0306) as *QSTSEARC.ZIP*. It is also available on the Internet via FTP to **oak.oakland.edu** in the directory **/pub3/hamradio/arrl/bbs/programs**.

Another computer index tool that you can use is *From Beverages through Oscar* by Didah Publishing (PO Box 7368, Nashua, NH 03060). Although this program covers mostly technical articles, it does have listings for a number of other periodicals in addition to *QST*.

Q: I found the articles I was looking for, but now I have some questions about them. Can you help me answer them?

A: If you have a specific question about a magazine article (or book chapter), the author is the best person to contact since he or she would have the original project or notes for the article. Write the author a friendly letter and pose your questions. (As a courtesy, always include an SASE!) Most authors will send you a prompt reply. If you offer feedback to the article, try to be positive, even if you disagree with the author.

Q: I'm still not sure if I understand my HF rig's tuning procedure as described in its manual. Can you tell me who can help?

A: An often-overlooked source of technical help is the talent closest to you. The experience of veteran hams in your area can give you a real boost. You may even find that several of these local folks have encountered and solved the same kinds of problems you're having!

If you haven't yet joined a club in your area and you need to find one, we can help. Just send an SASE to ARRL Headquarters for a list of ARRL Affiliated Clubs in your state.

Q: I tried contacting the nearest club, but they're a repeater group and can't help me. Is there anyone else I can turn to?

A: Certainly! As an ARRL member, you also have access to the vast resources of the ARRL Field Organization. Nearly every League section has a Technical Coordinator (TC) and one or more Technical Specialists (TS). These volunteers can offer hands-on assistance and personal advice for technical questions about antennas, station installation, interference problems or other questions that require personal attention. Your ARRL Section Manager, listed on page 8 of *QST*, can refer you to your nearby TC or TS.

Q: My Grandpa, who has been a ham since the early '30s, told me about a neat *QST* article that helped him when he first started out. He doesn't remember the title and he isn't sure what issue it appeared in, but he does remember some of the details of the article. Can you help me locate it?

A: Of course! ARRL Headquarters can do article research and answer technical questions, too. Our friendly Technical Information Service staff can help you locate older *QST* articles, or research technical topics.

The TIS staff can even help explain the details of complex technical issues and provide photocopies of out-of-print *QST* or *QEX* articles when you can't find them at your club or library. You can contact the ARRL Technical Information Service by Internet e-mail (**tis@arrl.org**), telephone (860-594-0214) or letter.

In addition, TIS has information packages and bibliographies to answer many technical questions. TIS information packages are available electronically via the ARRL BBS, Internet FTP (at the site mentioned previously), and from our Internet e-mail Information Server (Info-Server).

The Info-Server sends text files as e-mail messages in response to commands it receives. To use it, send an e-mail message to **info@arrl.org** with the word HELP on a line by itself in your message text (the Subject line is ignored). Add a line with the word QUIT at the end of your message. The Info-Server will respond within minutes or hours, depending on the level of network activity.

These information packages are also available by mail from the ARRL Technical Department Secretary, 225 Main St, Newington, CT 06111. There is a modest fee for each package requested by mail ($2 for ARRL members and $4 for nonmembers, postpaid).