

Creating a Technical Library

Welcome to Lab Notes! This new *QST* feature comes to you from the staff of the ARRL Laboratory. Every day the Lab receives numerous requests for technical assistance. Some inquiries are truly unique and challenging. The vast majority, however, are just variations of the same fundamental questions. With this thought in mind, we decided that *QST* would be an effective forum to address the most common problems that are brought to our attention.

In Lab Notes we'll concentrate on the most popular subject areas. At the same time, we'd like to know which topics you'd like to see discussed. Lab Notes will appear every other month as space permits. We appreciate your comments and encourage you to share what you know—and what you learn—with others. Collective efforts are usually more productive—and more fun!

In our first installment, Senior Laboratory Engineer Ed Hare, KA1CV, and I describe some of the steps you'll need to take to start a technical reference library. In our next installment, Ed will discuss some common RFI problems and solutions—RFI being the subject that generates—by far!—the most calls to the Lab. In the following months you'll be hearing from Lab Engineers, ARRL Technical Advisors, Technical Coordinators and Technical Specialists. You'll also hear from outside experts who have valuable knowledge to share. Now, let's get to the questions!—*Jon Bloom, KE3Z, Laboratory Supervisor*

Q: My club just approved a motion to start a technical library. I was out of the room when the vote was taken and I returned to discover that I had been appointed to head up the project. How do I begin? Help!

A: Never, ever, leave a club meeting when a motion is up for a vote. Anyone who is out of earshot is fair game when new committees are being formed. A warm chair is the same as a warm body when it comes to finding a victim...I mean, volunteer. Besides, you should be honored to serve in such an important capacity! A technical library is a valuable resource for you and your fellow members. When you're in the middle of a sticky problem or you're trying to find a rare component, it sure helps to have those resources at your fingertips.

Q: There are so many technical publications to choose from. How can I decide what we need?

A: You can't do it alone. Start by putting together a list of what you think should be in the library. It's usually more effective to ask for additions to a complete list. If you ask the club members to compile their own

lists, they'll probably suggest a few well-known amateur magazines and leave it at that. When you solicit their opinions, however, you may be fortunate enough to get a few offers of help—or find someone willing to donate their collection of *QST*'s going all the way back to 1920!

Q: Amateur radio magazines sound like the first items to acquire. Which ones should I get? I'm only familiar with QST. What else is available?

A: The ham magazines you select for your library will depend on the interests of your members. Here's a list of the most popular publications:

73 Amateur Radio Today, Subscription Services, PO Box 50330, Boulder, CO 80321-0330, tel 303-447-9330 (\$24.97/year US, Canada \$31.97, all other countries \$43.97 surface or \$61.97 air mail).

CQ, CQ Communications, Inc, 76 North Broadway, Hicksville, NY 11801, tel 516-681-2922 (\$22.95/year US, Canada and Mexico \$25, all other countries \$27 surface or \$80 air mail).

World Radio, 201 Lathrop Way, Suite D, Sacramento, CA 95815, tel 800-365-7827 (\$14/year US).

Q: What about general-interest electronics magazines?

A: Good point! There are magazines that cater to nearly every facet of hobby electronics. You'll want to include a couple in your library:

Popular Electronics, Subscription Department, PO Box 338, Mt. Morris, IL 61054-9935, tel 800-435-0715, (\$21.95/year US, Canada \$28.84, all other countries \$29.45).

Radio Electronics, Subscription Service, PO Box 51866, Boulder, CO 80321-1866, tel 800-999-7139 (\$17.97/year US, Canada \$25.65, all other countries \$26.97).

Q: What specialty magazines should we choose?

A: Once again, it depends on the interests of your club members. Be aware that interests may change suddenly, especially if your club gets an influx of new members. The best advice is to obtain as many specialty periodicals as possible. Some examples are:

RTTY, AMTOR and packet

RTTY Journal, 9085 La Casita Ave, Fountain Valley, CA 92708 (\$15/year US, Canada and Mexico, \$18 first class; all other countries \$22 surface, \$30 air mail). Published 10 times per year.

TAPR Status Register (membership jour-

nal), Tucson Amateur Packet Radio, PO Box 12925, Tucson, AZ 85732 (\$15/year US, Canada and Mexico \$18, all other countries \$25). Note: Many local packet organizations publish newsletters. Contact your local packet SYSOPs to find out what's available in your area.

Satellites and space communications

The AMSAT Journal (membership journal), PO Box 27, Washington, DC 20044 (\$30/year) Published 6 times per year.

OSCAR Satellite Report, R. Myers Communications, PO Box 17108, Fountain Hills, AZ 85269-7108 (\$29/year US, Canada \$32, all other countries \$40). Published twice each month.

Amateur television

ATV Quarterly, 1545 Lee St, Suite 73, Des Plaines, IL 60018 (\$15/year US, Canada \$20, all other countries \$25).

SPEC-COM, PO Box 1002, Dubuque, IA 52004-1002 (\$20/year US, Canada and Mexico \$25, all other countries \$30). Published six times per year.

Experimenter's magazines

QEX, ARRL, 225 Main St, Newington, CT 06111 (members: \$12/year, US/Canada/Mexico, first class \$25, all other countries \$48; non-members \$24/year, US/Canada/Mexico first class \$37, all other countries \$60). Monthly.

Communications Quarterly

CQ Communications Inc, 76 North Broadway, Hicksville, NY 11801 (\$29.95 US, all other countries \$39.95).

QRP

The Five Watter (newsletter), Michigan QRP Club, PO Box 80804, Lansing, MI 48908-0804 (\$5 US plus \$2 initiation fee, \$10 international). Quarterly.

QRP Quarterly, QRP Amateur Radio Club International, Mike Kilgore, KG5F, 2046 Ash Hill Rd, Carrollton, TX 75007 (New members \$12 US, \$14 international; renewals \$10 US, \$12 international). Quarterly.

Antique/vintage radio

Electric Radio, 145 CR-123, Hesperus, CO 81326 (\$20/year US, \$30 first class, \$32 Canada, all other countries \$55). Monthly.

Antique Radio Classified, John V. Terrey, 498 Cross Street, PO Box 2, Carlisle, MA 01741 (\$27/year US, \$40 first class, Canada/Mexico \$43, all other countries \$75). Monthly.

Microwave:

Feed Point, North Texas Microwave

Society, c/o Wes Atchison, WA5TKU, Rt 4 Box 565, Sanger, TX 76266 (\$12). Published six times per year.

Q: OK, now I know some magazines to consider. Where can I get them?

A: You may be able to get them from club members. Believe it or not, quite a few people throw away their technical magazines right after they read them! These folks will probably be willing to help by donating their unwanted issues periodically (all puns intended) to the club library. (If you find that you have located more than one donor for a particular magazine, you might suggest they bring their issues to the club anyway for distribution to newly-licensed members. An alternative would be to donate them to your local library.)

If you can't find anyone willing to donate current subscriptions or back issues, it's time to perform the most difficult aspect of your assignment: asking the club for money! If you get a club subscription to several magazines of interest, you can be sure that you'll receive a "mint" copy every month. (If not, you can at least blame the post office!) You may also need to allocate funds to purchase particular back issues that you want to keep on file. At almost every hamfest you can find *someone* peddling old Amateur Radio and general interest electronics magazines. They'll be delighted to sell them to you at bargain-basement prices.

There are a few more tricks you can try. Posting a request for library material on a few local packet or telephone bulletin boards may unearth a gold mine of literature. Check the classified ads in ham magazines as well. With any luck you'll find someone who is advertising an extensive collection of publications for sale. Although they are usually a bit more expensive than flea-market bargains, the shopping is a lot easier!

Q: I'm going to be building a big stack of magazines! Can I get an index for our collection?

A: There is no single comprehensive index to all Amateur Radio and electronics literature. The best thing you can do is check the year-end issues. If there is an index for the magazine, you may find it there.

The ARRL Technical Department also maintains topical bibliographies of *QST* articles. These bibliographies can help you find articles on specific subjects. Send an SASE to the Technical Department Secretary and ask for the Bibliography List. Once you've received the general list, you can order copies of any bibliographies you desire.

You can also purchase a bibliography computer program called *From Beverages Thru Oscar*, published by Didah Publishing. By entering a key word in the article description, you can search for articles on nearly every subject and locate the issue you need. The database is very comprehensive, covering many Amateur Radio general-interest and specialty magazines. Didah also publishes smaller, less-expensive software

packages for each of most popular ham magazines. Some of their bibliographies are available in printed form, too. Contact Didah Publishing at PO Box 7368, Nashua, NH 03060, tel 603-878-3628. You can buy the complete *From Beverages Thru Oscar* software package (for IBM PCs or compatibles) from ARRL Headquarters for \$79. A printed *QST* index is also available for \$19.

There is a trend among the more sophisticated packet bulletin boards to include bibliography files among the services they offer. Check in your area and see if such a system exists. Also, the N8EMR telephone BBS offers *QST* bibliographies. Set up your telephone modem and call 614-895-2553.

Q: That's enough magazines. What books do I want to include?

A: Let's start by talking about ARRL books. These are the ones we know best! You'll want to be sure your collection includes the *ARRL Handbook* (\$25), the *ARRL Antenna Book* (\$20) and the *ARRL Operating Manual* (\$18). These three publications are the mainstays of Amateur Radio operators throughout the world. In most cases, your club members can save telephone charges and postage stamps by digging into one of these books *before* contacting the Lab for assistance.

I'd strongly encourage you to stock the latest editions in your club library. If this isn't possible, at least get your hands on older copies. Each of these books has evolved over the years and many of the projects from the past are still popular with hams today. The newest editions can be found at your local ham store, or ordered by mail from ARRL Headquarters. You can order by telephone (203-666-1541) or use the order form in this issue.

Q: While we are on the subject of ARRL books, what else should I include?

A: That's a tough one! Our other books tend to be more specialized than the "Big Three." Your selections should be based on the needs and financial resources of your club. You might consider some of the beginner books for newcomers, or perhaps books dedicated to packet radio or satellites. A complete ARRL book catalog appears in this issue of *QST*. Look it over. If club funds are tight, why not purchase them piecemeal? You could occasionally offer the club a list of two or three to choose from and call for a vote on the selections.

Q: What about books that are published by other companies? Surely the ARRL can't be the only source of good radio books.

A: Blasphemy! Having expressed my righteous indignation, however, I must admit that there are many good sources of ham-radio and electronics books. There are so many it isn't practical to use what limited space we have in this column to pick one or two. I would rather list the publishers names and addresses instead. If you give them a call I'm sure they'll be happy to send you a catalog, or at least refer you to a local

dealer or bookstore.

CQ Bookstore, CQ Communications, Inc, 15 Main St, Greenville, NH 03048, tel 603-878-1441

Howard W Sams Company, 2647 Waterfront Parkway East Dr, Indianapolis, IN 46214-2012, tel 800-428-7267

McGraw-Hill Publishing Company, 11 West 19th St, New York, NY 10011, tel 212-337-5945

TAB Books, PO Box 40, Blue Ridge Summit, PA 17214, tel 800-822-8138

Uncle Wayne's Bookshelf, PO Box 3080, Peterborough, NH 03458, tel 603-924-4196

Q: A few club members have suggested that we get data books covering ICs, transistors, tubes and so on. Where do I find these?

A: If you'd like to get a current set of data books, I suggest you select a few manufacturers and contact them directly. Include manufacturers who make common linear and digital ICs, transistors and tubes. You'll also want to include one or more semiconductor cross-reference guides. You can find some of these data books at flea markets, or club members may be willing to donate their copies. Although you may want to avoid the very old data books, some of these tattered volumes are handy references for junkbox components. If any of your members work in the electronics industry, you may be able to snag the throwaways when their companies get new reference sets.

Here is just a *small* sample of the companies making or distributing electronic components:

National Semiconductor: For a complete set of National Semiconductor data books, contact CMC Publications, 565 Sinclair Rd, Milpitas, CA 95035-5470, tel 408-945-1557. If you only want a few selected data books, up to a total of four copies are available free of charge from their Customer Response Center, 2900 Semiconductor Drive, Santa Clara, CA 95052-8090, tel 408-721-5000. Call or write for details.

Motorola: Motorola Literature Distribution Center, PO Box 20912, Phoenix, AZ 85036, tel 602-994-6561.

Texas Instruments: Texas Instruments, Literature Response Center, PO Box 401560, Dallas, TX 75240, tel 214-995-6611.

Signetics: Signetics Company, 811 East Arques Ave, PO Box 3409, Sunnyvale, CA 94088-3409, tel 408-991-2000.

Philips ECG: The ECG replacement line is widely distributed by general-line electronic distributors. Consult your Yellow Pages to locate an electronics distributor near you. You can also contact Philips ECG, 1025 Westminster Dr, Williamsport, PA 17701, tel 800-526-9354. They'll direct you to dealer or distributor.

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stage of electronic detection on receive.

(I) Marine Mobile (and Maritime) entries will be listed separately as "Marine Mobile" in the listings and compete separately for awards.

(J) Participants are reminded that the segment 50.100-50.125 MHz should be used for intercontinental QSOs only, using 50.125 MHz as a calling frequency, then QSY after contact is established.

8) Reporting:

(A) Entries must be postmarked no later than 30 days after the end of the contest (February 20, 1992). No late entries can be accepted. Use ARRL January VHF Sweepstakes forms, a reasonable facsimile or submit entry on diskette.

(1) Official entry forms are available from HQ for an SASE with two units of First-Class postage.

(2) You may submit your contest entry on diskette in lieu of paper logs. The floppy diskette must be IBM-compatible, MS-DOS-formatted, 3½- or 5¼-inch (40- or 80-track). The log information must be in an ASCII file, following the ARRL Suggested Standard File Format, and contain all log exchange information (band, date, time in UTC, call sign of station worked, exchange sent, exchange received, multipliers [marked the first time worked] and QSO points). One entry per dis-

kette. An official summary sheet or reasonable facsimile with a signed contest disclaimer is required with all entries.

(B) Logs must indicate band, date, time in UTC, call signs and complete exchanges (sent and received), multipliers and QSO points. Multipliers should be marked clearly in the log the first time they are worked. Entries with more than 200 QSOs total must include cross-check sheets (dupe sheets).

9) Awards: Certificates will be awarded in the following categories.

(A) Single operator.

(1) Top single operator in each ARRL/CRRL Section.

(2) Top single operator on each band (50, 144, 222, 432, 902, 1296 and 2304-and-up categories) in each ARRL/CRRL Section where significant effort or competition is evident. (Note: Since the highest score per band will be the award winner for that band, an entrant may win a certificate with additional single-band achievement stickers.) For example, if WBØTEM has the highest single-operator all-band score in the Iowa Section and his 50- and 222-MHz scores are higher than any other Iowa single op's, he will earn a certificate for being the single-operator Section leader and endorsement stickers for 50 and 222 MHz.

(B) Top single-operator, QRP-portable

in each ARRL/CRRL Section where significant effort or competition is evident. Single-operator, QRP-portable entries are not eligible for single-band awards.

(C) Top rover in each ARRL Division and Canada where significant effort or competition is evident. Rover entries are not eligible for single-band awards.

(D) Top multioperator score in each ARRL/CRRL Section where significant effort or competition is evident. Multioperator entries are not eligible for single-band awards.

(E) Top limited multioperator in each ARRL/CRRL Section where significant effort or competition is evident. Limited multioperator entries are not eligible for single-band awards.

10) Club Competition: ARRL-affiliated clubs compete for gavels on three levels: unlimited, medium and local. Details are in January QST.

11) Condition of Entry:

(A) Each entrant agrees to be bound by the provisions as well as the intent of this announcement, the regulations of his or her licensing authority and the decisions of the ARRL Awards Committee.

12) Disqualifications: For excess duplicate contacts and call sign or exchange errors. See January QST for details. QST-

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Q: How about catalogs? Do I really need them in the library?

A: Yes! (How's that for a simple answer?) A common complaint heard in the Lab is that hams are not able to find the parts they need locally. Several mail-order companies have emerged to fill this gap, however. You'll find a list of electronic parts suppliers at the end of Chapter 35 of the *ARRL Handbook*. These companies are a good place to start. You'll also need to become a catalog collector. If you see an advertisement for a company you are not familiar with, write and ask for their catalog. Sooner or later, you'll be faced with a new problem—where to store all of the catalogs and deciding what to throw away!

Q: Once we've bought all the Amateur Radio books we want—and assuming we haven't busted our budget—are there other books we should look for?

A: You bet! There are several books that will help your club members find those elusive manufacturers of electronic components and instruments. These books are commonly found in commercial electronics labs and purchasing departments. Club members who work in the industry may be able to get donations of last year's copies, or even excess copies of current editions. (Of course, you can buy current editions—if you can afford them!) Four good engineering references are:

Electronic Engineer's Master Catalog (EEM), Hearst Business Communications Inc, 645 Stewart Ave, Garden City, NY 11530, tel 516-227-1300

Electronic Design's Gold Book, Hayden Publishing Company Inc, 10 Mulholland Drive, Hasbrouck Heights, NJ 07604, tel 201-393-6388

Electronic Industry Telephone Directory, Harris Publishing Company, 2057 Aurora Rd, Twinsburg, OH 44087-1999, tel 216-425-9000

IC Master, Hearst Business Communications, Inc, 645 Stewart Avenue, Garden City, NY 11530, tel 516-227-1300

There is also an Amateur Radio reference book available. It is *Ham Stuff* from GAI Systems Press, PO Box 5832, St. Louis, MO 63134. I have seen this publication at many ham stores. It's a buyer's guide and directory of ham radio products, people and vendors (\$19.95).

Q: Whew! This is going to be lot more work than I thought! Any further suggestions before I get started?

A: Be realistic when you set your goals. Your library won't spring up overnight. It will be a long-term commitment on the part of your club and all of its members. If you're looking for an assistant, I suggest that you turn to the nearest enthusiastic newcomer. This a great way to include a new member in club activities. You may even be fortunate enough to have a club member who is a librarian! If all else fails you can wait until someone else leaves the room and vote to make that lucky soul your new assistant. QST-

Strays



QST congratulates...

□ Frank Moore, WA1URA, president and general manager of WANE-TV in Ft Wayne, Indiana, on being named Sagamore of the Wabash by Governor Evan Bayh (a Sagamore was a term used by northeastern American Indians to describe a great man who advised a chief). The Sagamore title is a personal tribute to a person who has rendered a distinguished service to the state or the governor, and is the highest honor the governor can bestow upon an individual. Moore, of Grabill, Indiana, played a key role in relaying communications to and from Kuwait via AMTOR during Operation Desert Storm (see "Last Voice From Kuwait," May 1991 QST, page 18).



The award presentation was a surprise, as Moore (l) thought he was meeting with the governor (r) for a business matter. When he was ushered into the office, his wife, Dorothy, was there, as were their children.