

Debra Johnson K1DMJ, Editor

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Resources for Licensing Instructors

www.arrl.org/es/instructor-resources/

Resources for Teachers

www.arrl.org/FandES/ead/teacher/

Education & Technology Program:

www.arrl.org/ETP

Teachers Institute on Wireless Technology:

Welcome New ETP Teachers!

Ninety-four teachers participated in Teachers Institute workshops this past summer. We're delighted to welcome those of you who are new to the Education & Technology Program (ETP) and add you to our list of ARRL registered teachers.

Several stories reported the activities in this summer's workshops. You can read those reports at the following links:

["First 2009 Teachers Institute in the Books"](#)

["It is Elementary, It Is Advanced, It Is Something for Everyone"](#)

["The ARRL Teachers Institute Wraps Up Successful Summer Sessions"](#)

TI-2 Debuts

We piloted a new advanced Teachers Institute, the TI-2, this past summer. It was a specialized workshop focused on the topic of satellite communications that was offered to previous TI graduates. Six teachers participated and took away a treasure trove of ideas from the jam-packed curriculum. You'll find the full story in the November issue of QST.

2010

We're currently making plans for next year's Teachers Institutes and another offering of a TI-2. The details will be available by February. Meanwhile, if you want to add your name to the contact list for the announcement of workshops being offered next year, please contact us at etp@arrl.org.

Recent ETP Grant Awards

In July the Education & Technology Program granted resources to eight schools in the form of radio station equipment and resources for classroom instruction. [Read about](#) the schools that received those grant awards. Deadlines for grant applications are May 1 and November 1 each year. A total of 19 schools have applied for resources during the most recent application period ended 11/1/2009. Application forms can be found at www.arrl.org/ETP.

Send us news!

We'd love to hear what you're doing with Amateur Radio in the classroom and resources we've provided through the Education & Technology Program, so send us an email to tell us what's happening in your

www.arrl.org/TI

ARRISS Program

FAQs:

www.rac.ca/ariss/faqariss.htm

Application:

www.rac.ca/ariss/arissapp.htm

Continuing Education Program

www.arrl.org/cep/

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classroom. Or, even better, ask students to tell us about their projects and discoveries!

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Important Clarification of Rules on Commercial Use of Amateur Radio

In our October 2008 newsletter, Dan Henderson N1ND ARRL Regulatory Information Manager, reported that the ARRL would be sharing with membership a clarification on the proper use of Amateur Radio in emergencies. This is an important topic for anyone giving licensing instruction, since every ham needs to be very clear about these issues. In particular, new licensees who have intentions of using Amateur Radio for emergency communications need to be clear about the FCC rules outlining its proper use.

I'm including a link to the news release that discusses the publication of guidelines on this issue provided by the ARRL Board of Directors. If you haven't already done so, I hope that you will read the guidelines carefully so you can handle questions on this topic in your licensing instruction. This issue will be addressed in the next revision of the *Ham Radio License Manual*.

[Click here](#) for the news story describing the need for clarification of the guidelines.

[Click here](#) for the document that provides the guidelines.

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Changes Coming to Technician Question Pool

The Question Pool for the Technician License is currently being revised and updated by the Question Pool Committee elected by the National Conference of Volunteer Examiner Coordinators (NCVEC). A new pool of questions will be announced early in 2010, to be effective for FCC Technician License exams given July 1, 2010.

According to Perry Green, WY10, of the ARRL Volunteer Examiner Coordinator (VEC) and a member of the Question Pool Committee, the Technician exam question pool is undergoing significant reorganization. New questions are being introduced and existing ones revised. Changes could affect as much as half of the pool of questions. These anticipated changes will require revisions to self-study and instructional materials, including ARRL's *Ham Radio License Manual*. When all changes are finalized, the ARRL will provide a cross-reference between the old and new pools to assist instructors and students with the transition.

Many hams are under the misconception that ARRL is responsible for developing the exam question pools that are used for the FCC license exams. In fact, the ARRL has only one voice on the Question Pool Committee (QPC), the committee elected by the NCVEC to be responsible

for developing the official exam questions. Currently the QPC is comprised of the following members: Roland Anders, K3RA of the Laurel Amateur Radio Club VEC (Chairman), Larry Pollock, NB5X of the W5YI VEC, Jim Wiley, KL7CC of the Anchorage Amateur Radio Club VEC, Tom Fuszard, KF9PU of the Milwaukee VEC and Perry Green WY1O of the ARRL VEC. This committee was elected by the NCVEC at its annual meeting in July 2009.

The QPC accepts submissions of suggested questions for consideration for the various question pools from anyone in the amateur radio community. Though the deadline has passed for submitting questions for consideration for the Technician question pool currently under revision, questions for the General or Extra question pools may be submitted at any time. Correspondence with the QPC may be sent to gpcinput@ncvec.org.

The QPC expects to release the new finalized Technician question pool during the first week of January 2010.

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Education Outreach Impact!

We love to share stories about the impact of amateur radio educational outreach activities. Here are a few more.



Three students at Garfield Elementary School in Boise, Idaho play "Where's the Remote?" in preparation for a QSO with the International Space Station.

Garfield Elementary Learns about Wireless Communications and Talks with Astronaut Aboard the ISS

Rosalie White K1STO reports on an ARISS contact at Garfield Elementary School in Boise, Idaho that you'll want to read. With the help of the professional development resources provided through

the NASA WHEELs program and curriculum resources provided by ARRL's Education & Technology Program, this school

was able to integrate learning about wireless technologies along with a conversation with astronaut Michael Barratt KD5MIJ aboard the ISS.

[Read the full story.](#)

Jefferson Park Elementary Students Learn about Radio Satellite Tracking

Students in the Jefferson Park Panthers Radio Club at Jefferson Park Elementary School in Tucson, AZ are preparing for their license exam, as is 4th grade teacher Stuart Slonaker. Here is what Slonaker has to say about experiences at a recent club meeting:

"Today we observed the antenna move as Tiernan operated the manual controls, then we were able to auto-track four different satellites, though we didn't hear anything—they were all quite low, I don't know if that matters... the kids were very excited and some very quickly learned how to interpret the satellite table on Nova to figure out which was coming next... I was able to use the satellite guides to confirm frequencies... a few kids were excitedly tracking the trajectories on the white board in real time, and we left that data up to show my homeroom tomorrow... at the end we went to the computer lab and Tiernan guided us to the ARRL website where many kids were very interested in a news story about a ham operator assisting in a rescue on Catalina Island... We had some real excitement and lots of learning today!"



The student pointing to the screen is reading the azimuth and elevation of the satellite to the second student who is verifying the data.

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Ham Basics Workshop Offered

In the May newsletter we shared some ideas for getting new hams on the air. Apropos of that topic, this announcement came my way recently.

"The Clark County Amateur Radio Club and the Brush Prairie Repeater Association would like to invite one and all to a Ham Basics Workshop.

Whether you are new to the hobby or not, this is a great time to learn more. If you know a new or used ham who would like to learn about how to get on the air for the first time, learn about the care and feeding of your batteries or just want to learn more about any of the subjects, this is the place for you."

That's an invitation that's hard to refuse!

Ham Basics Workshop
FREE
SEPTEMBER 12, 2009 
9:00 AM - 1:00 PM

21720 NE 29th Avenue, Ridgefield, Washington
Ridgefield LDS Meetinghouse
From I-5, take WA exit 11, East on SR 502, South on NE 29th Ave, On west side of road

This is open to ALL who wish to learn the basics of "new to you" ham radio topics. Whether you already have an amateur license or just wondering about the hobby, this workshop is for you. There will be four 50 minute instruction periods. The first will be a general gathering, then off to one of four simultaneous classes for the next three sessions.

Classes

- Simple VHF/UHF Antennas
- Connectors and Grounding
- Care and Feeding of Batteries
- Getting the Most from Your Handheld
- Operating Mobile and Portable
- Operating in a Contest
- Getting Started with HF Communications
- Digital Communications
- Using your Radio for Community Service
- Station Types from Handheld to HF
- Communications During an Emergency
- Simple HF Antennas

Instructors

- Dave Pheemister, WB7ESV
- Dave Pheemister, WB7ESV
- Dean Wagstaff, KC7IQW
- Delvin Burton, N7QMT
- Kevin Bier, K7VI
- Kevin Bier, K7VI
- Allen Lewey, K7ABL
- Rob Haller, K7JAO
- Don Young, N7DY

Steve Mathis, KE8NUE

(Classes and/or instructors are subject to change.)

To register, send an email to HamBasics@iinet.com

Sponsored by the Clark County Amateur Radio Club and the
Brush Prairie Repeater Association



Kevin Bier, K7VI, provides instruction on "Operating Mobile and Portable."
(photo by Delvin Bunton, N7QMT)

Delvin Bunton N7QMT, one of the organizers of the workshop, posted an entry on our website *Education Activities Forum* explaining how the club went about organizing the project. You'll want to [read that article](#) for the details.

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Publicize your License Class on the ARRL Website!

David Haycock KI6AWR copied me in on a communication between himself and ARRL Director Bob Vallio W6RGG of the Pacific Division. The subject of the email was communicating information about upcoming licensing classes and test sessions.

Here's what David had to say:

"When I hold a class I find that most students live in the immediate area, but I always find someone coming from afar, even a ridiculous distance away. When that happens, I always like to ask why they would travel so far, and the answer is always the same. They find out about the class because we advertised it on the ARRL web site. We appear to be the only team (or at least one of very few) that takes the time to use that service. I reduced the overall length of the class this time by running two classes each week (total of four classroom sessions). I was astonished to find that one of the students drove down each time from Sacramento - a 2 hour drive each way (for a 3 hour class). In reality he must have driven by many clubs who are putting on classes, but he just didn't know.

Jim Latham does an excellent job of putting information in the East Bay Newsletter, and I know that actually does work as students tell me that they found the information that way. However people who don't already receive the newsletter (or know someone who does) won't get the information.

The point of all of this is to say that clubs may well advertise, but if they only to places that only Radio Amateurs know (like HRO, or club newsletters) they will miss a section of the public that would be interested. Obviously some of those interested search the web and find the ARRL web site, but I don't believe clubs are seeing the value to putting the information on the site. Obviously that isn't true as it works for me!"

Delvin Bunton N7QMT wholeheartedly agrees and reports that the "ARRL License Class database works!"

"Our current class, which started Oct 16, 2009, had 43 at the first of four class sessions. We passed out a questionnaire (home brew) that asked how each student learned about the class, ham radio interests, and age group in decades. After class when we had a chance to review the questionnaires, we were pleasantly surprised to find that nine of the 43 students learned about our class from our posting on the ARRL class database. Previous classes usually had 2-3 students from that source, but to find over 20 percent from a simple database listing was nice! Most of us who instruct talk with many people to find those who are interested in a class, but we cannot talk with everyone. I highly recommend that instructors post their classes at least a few weeks before their class so those who find the ARRL might also find the class. One other observation: 25 percent of our students came from Oregon (I live in Washington across the Columbia River from Portland) because they could not find any classes listed there. I know there are classes taught in Oregon, but if the classes do not appear in the database, interested folks will not learn about the class. Because we advertise our classes, we have students who drive many miles for each class. Instructors: register your classes, and you just might be amazed at the results. We need more interested students to increase the number of hams in the country."

Haycock sums it up like this, "It's great fun to get people involved in Amateur Radio, but the easier we make it the more effective our efforts will be." We couldn't agree more.

This year there have been 613 license classes listed in our database. The database is searchable by location and the link is displayed at the top left side of the main page of our site just above the link for the exam site locator. Check them both out!

[Class locator](#)
[Exam locator](#)

If you haven't previously listed your classes on our website, please contact us at ead@arrl.org for instructions.

To list exam sessions, follow the instructions provided [here](#).

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Amateur Radio Instructors Make a Difference!

by Mary Hobart K1MMH, ARRL Chief Development Officer

When it comes to reaching radio amateurs there is no stronger link than to you, the instructor that helped them acquire or upgrade their Amateur Radio license. Now as the application period for ARRL Foundation



Scholarships is open (until February 1, 2010), and your link as a mentor and Elmer to the young students who are studying for a ham license is an effective and important tool to remind young hams that there are more than 50 scholarships to be awarded to FCC-licensed hams in the spring of 2010.

If you're conducting a class now or have in recent months, please remind them that the application period for the 2010 scholarship awards closes promptly on February 1, 2010. All the information about ARRL Foundation Scholarships, including application instructions and forms, can be found on the web at www.arrl.org/arrlf. Candidates should review the descriptions of all the scholarships and apply only those for which they qualify. Note that a recent transcript is required with all applications. Note that the William R. Goldfarb Memorial Scholarship is open only to high school seniors who must complete the application for that award and include a FAFSA or SAR based on the most recent family financial information, along with a full high school transcript.

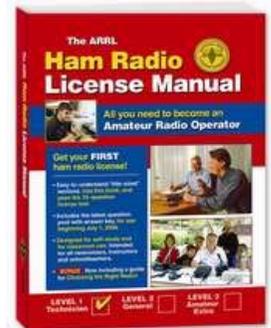
The ARRL Foundation is an IRS-designated 501(c)(3) organization holding tax id# 23-7325472. Contributions to the ARRL Foundation are tax-deductible to the full extent of the law.

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Revision Begins on ARRL's Ham Radio License Manual: Students /Instructors Surveyed

As noted in a previous article, the FCC Technician License Exam Question Pool is currently being reviewed by the National Conference of Volunteer Examiner Coordinators (NCVEC) and a revised pool of questions is expected to be released by the NCVEC's designated Question Pool Committee in early January. This new pool of questions will be effective for Technician exams given on July 1, 2010. ARRL is completing a review of our existing study guide, *The Ham Radio License Manual* (HRLM) as part of the preparation for its revision to address the new question pool. Both the *Ham Radio License Manual* (HRLM) and the *Technician Q&A* will be revised on an accelerated schedule to be available with plenty of time before the new pool goes into effect on July 1, 2010.

A number of additions, corrections and edits have been made to the *Ham Radio License Manual* during its re-printings since its initial release in 2006, not the least of which is the addition of the supplement on "Choosing a Radio" that was included in the 5th printing. And, we still are making efforts to improve the study manual with its next publication in 2010.



That is why we conducted two surveys recently: one to purchasers of the manual who intended to use it for self-study, and another to a group of instructors and teachers who use it as a resource for their classroom instruction. We received an excellent response to this last survey in particular and some good guidance for changes to the next revision of the manual. Though we won't have time or resources to incorporate all the good ideas we received we will do our best to make the improvements we can in the very limited time we have before the new publication must be released.

The current study guide was introduced in 2006 when the Technician

question pool last was updated by the NCVEC appointed question pool committee. The manual represented a significant departure from previous manuals that attempted to provide background information sequenced to the order of the questions as presented in the question pool. An advisory group tasked to make recommendations on the project determined that this sequence was not a logical sequence for presenting instruction on the background topics relevant to the questions presented by the licensing exam, and recommended a more pedagogically sound, building block approach to presentation of the information. Though we recognize that many instructors still prefer to tie their instruction directly to the question pool and its sequence and find this change in approach disconcerting, we have found that many have also found it helpful. In many cases it depends on what the students and instructors are trying to achieve through license preparation. When asked about this, 77% of our student sample of manual purchasers replied that their preferred approach for preparing for the licensing exam was to "try to understand as much background information as possible to be able to answer the questions", while 16% preferred to "study the questions and correct answers and get my license, then learn more later." We realize that people who purchase our study manual are probably biased toward the prior approach, and we try to meet their needs.

I'll share some of the information we collected from the two surveys that we'll be using to guide our decision making, and that might also influence yours.

From students we learned:

- 29% also took advantage of some form of classroom instruction, and 55% of those who did rated the instruction as "excellent"
- After receiving their license, only 66% felt well-prepared to begin operating
- 53% indicated that "hands-on instruction with the help of someone who is experienced" would be the most helpful after receiving their license

Both students and instructors selected "radio and electronics circuits, components, Ohm's Law calculations as the most difficult topic to teach and understand. Are we surprised?

From instructors:

- 69% had instructed 3 or more classes since January 2007, while another 30% had instructed 1-2 classes during that period. 53% had instructed 26 or more students during the period, while 48% indicated that they had instructed 1-25 students.
- 55% of the instructor group is over the age of 60. 33% are 51-60 years of age.
- 53% have been licensed 20 years or longer
- The top reason for instructing a class was "enjoy amateur radio and want to share it with others (81%) and the next most chosen reason was "my club wants to grow and bring in new members (50%)."

- 67% indicated that they offer a traditional multi-week course, 15% weekend course format. Judging by the comments supplied, "Other" responses (14%) included many multi-day formats of a variety of configurations. Only 4% use a one day test prep format.
- 59% referred their students to the supplemental HRLM Web pages. Of those who referred students to the Web page, 45% found the resources there "somewhat useful" while 30% found the resources "very useful."
- Most helpful additions to the HRLM or to support instruction would be:
 - Print relevant exam questions for review at the end of each section (49%)
 - Video instruction on difficult topics (42%)
 - More/better illustrations and photographs (34%)
 - Tutorial on computations (34%)
- 52% of instructors have worked with students who have disabilities
- 62% of instructors conduct some form of end of course evaluation
- 46% of instructors/clubs offer assistance to new licensees upon request, and another 46% offer follow up instruction and activities to provide hands-on, on-the-air operating practice
- 77% of instructors are somewhat or very likely to make use of a Q&A online forum on the ARRL Website

Thank you to all of you who took the time to respond and provide your comments!

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Recent Statistics on Licensing Exams

Thus far in 2009, as of the end of September, 23,282 new hams were licensed by all VECs.

Here's the breakdown of year-to date (thru September) exam activity by license level.

FCC LICENSE ACTIVITY	Jan 1 to Sept 30, 2007	Jan 1 to Sept 30, 2008	Jan 1 to Sept 30, 2009
LICENSE TYPE	LICENSE COUNT	LICENSE COUNT	LICENSE COUNT
EXTRA CLASS	5013	5080	2779
GENERAL	18322	9513	7785
TECHNICIAN	18696	19659	21252
TOTAL	42031	34252	31816

*Effective February 23, 2007 the FCC changes the Amateur Radio Service Rules and no longer requires applicants to pass a Morse code exam. This creates a spike in the number of individuals seeking an upgrade to General.

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ARRL members first must register on the Members Only Web Site, <http://www.arrl.org/members/>. You'll have an opportunity during registration to sign up for e-mail delivery of this newsletter as well as others, including the ARRL Letter, W1AW bulletins, and other material. ARRL members may subscribe to the ARRL Instructor/Teacher Newsletter by going to the Member Data Page at: www.arrl.org/members-only/memdata.html?modify=1

Note that you must be logged in to the site to access this page. Scroll down to the section "Which of the following would you like to receive automatically via email from ARRL?" Check the box for "ARRL Instructor/Teacher E-Letter " and you're all set.

Past issues of this newsletter are available at www.arrl.org/FandES/ead/instructorNews.html. Issues are posted to this page upon publication.

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