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Resources for Licensing Instructors

www.arrl.org/resources-for-license-instruction

Resources for Teachers

www.arrl.org/amateur-radio-in-the-classroom

Education & Technology Program:

www.arrl.org/education-technology-program

Teachers Institute on Wireless

Finally, a New Instructor Manual for Tech Instruction!

The new, revised instructor manual written to coordinate with the 2nd edition of ARRL's Technician student study manual, *The Ham Radio License Manual*, is now available. This edition authored by Jeff Cantor K1ZN includes lesson plans and Power Points closely coordinated to the presentation of material in the study manual. It also includes a revised supplement from Pete Kemp KZ1Z with suggestions for class organization and teaching tips. You'll want to take advantage of the advice shared by this very experienced radio amateur and professional teacher.



ARRL registered Instructors and Teachers receive a 25% discount on license instruction materials purchased from ARRL. To register with ARRL as an instructor or classroom teacher visit: www.arrl.org/license-instructor-registration or www.arrl.org/teacher-registration.

Special offer: If you order a copy of **The ARRL Ham Radio License Manual**, with new practice exam software now...ARRL will send you **The ARRL Instructor's Manual** FREE. Be sure to use Coupon Code **INST** when you place your [order online](#) (please log in to the ARRL website to receive the savings), or telephone 1-888-277-5289 Mon-Fri from 8 AM to 5PM Eastern time. This special offer expires February 11, 2011.

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It's Time to Apply for the Teachers Institute!

We've just announced the schedule for the professional development workshops on wireless technology we'll be offering this summer. The February 2011 issue of QST carries the story of the Teachers Institute and the schedule for the five sessions. Read the recent announcement on our website at www.arrl.org/news/arrl-teachers-institute-now-accepting-applications-for-2011-sessions.



A teacher at the 2010 Teachers Institute in Roswell, NM programs a microcontroller.

For the schedule, application and all the details go to our website at www.arrl.org/teachers-institute-on-wireless-technology. You'll find a

Technology:
www.arrl.org/teachers-institute-on-wireless-technology

ARISS Program

www.arrl.org/amateur-radio-on-the-international-space-station

Continuing Education Program

www.arrl.org/cep/

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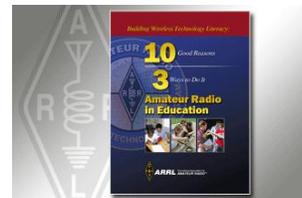
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downloadable brochure, or contact us at etp@arrl.org if you'd like printed copies.

It's a perfect time to recruit a fellow teacher or reach out to a local school to talk about the opportunities for hands-on learning with Amateur Radio. To prepare for the conversation you might want to review the tips on outreach to teacher and schools available on our website at:



www.arrl.org/outreach-to-teachers-and-schools. Brochures on "10 Good Reasons, 3 Ways to Do It" are available. On that page, you'll find links to information about the Education & Technology Program, the Teachers Institute and a form to order the brochures.

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ARISSat Is On Its Way!

Another milestone for the ARISS program is the expected launch of ARISSat-1. This satellite has been delivered to the ISS via a Progress rocket. Astronauts are expected to launch it during a space walk in mid-February. The satellite is a project of AMSAT and the ARISS program partners, replacing the SuitSat project.



AMSAT engineers prepare ARISSat-1 for vibration testing.

Read more about ARISSat-1, its capabilities and its history in the news stories posted on our ARISS program Web page at www.arrl.org/amateur-radio-on-the-international-space-station.

Educators will want to take advantage of the opportunities this satellite presents for exploring satellite communications—receiving messages, voice telemetry and television pictures—and related topics in physics, astronomy and space exploration. Licensed hams will be able to communicate via the satellite's transponder.

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2010 Especially Exciting for ARISS

Astronaut Doug Wheelock KF5BOC conducted 17 of the 48 scheduled program contacts with schools and over 1,500 contacts with individuals besides. Doug's level of activity created a buzz and many media postings, in news, on YouTube and on Twitter. Read reports of educational activities surrounding ARISS contacts with the ISS at schools in Bardstown, KY, Windsor, New York and Azle, Texas and a scouting event in St. George, Utah on our website at: www.arrl.org/ariss-contact-stories and www.arrl.org/listen-to-watch-ariss-contacts.



Students at Walnut Creek Elementary School talk to astronaut Soichi Noguchi on the ISS.

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Recent Education & Technology Program Developments

Mark Spencer WA8SME Departs as ETP Coordinator. Last fall Mark Spencer WA8SME resigned as ETP Coordinator to work on a Department of Defense contract where he will be utilizing the wireless technology knowledge that he has been so brilliantly nurturing through the curriculum materials he's developed for the ETP and the Teachers Institute. Talk about validation of our curriculum! Though we feel the loss of his leadership and creativity, one of our experienced instructors, Nathan McCray, K9CPO has stepped up to take on some of the responsibilities as interim ETP Coordinator, while also working full-time as an elementary school principal and continuing to develop an amateur radio program in his school district. With the continuing contributions of Nathan and Miguel Enriquez, KD7RPP and the addition of two additional instructors we're able to offer 5 sessions of the Teachers Institute this year. Later this year we'll be looking for an experienced ham and teacher to take on all responsibilities as ETP Coordinator, which includes responsibilities for future curriculum development.

Survey of Teachers Institute Participants is Complete. Thanks to all 103 of the TI 2004-2009 participants who completed the survey we conducted with the help of Penn State University. The results are in and provide us with some very positive feedback about the utility of this professional development opportunity offered through our Education & Technology Program. Participants who requested a "thank you" gift should have received their selection by now—if you haven't received yours, please let us know!

Over the next few months, we'll be sharing a report on the information the survey has provided with our Board, our donors and with the educational community. We're hopeful that the information will help us build a case for future grant proposals and new sources of funding for the TI.

ETP Grants. The Executive Committee of the ARRL Board of Directors awarded grants to five schools in the November 2010 round of grant applications. Grants were awarded to schools that defined specific and realizable goals for the use of the equipment and resources requested. Teacher participation in the Teachers Institute is a strong indication of interest and willingness to utilize the materials. The next deadline for applications to the grant program is May 1, 2011. You'll find applications and more information on our website at: www.arrl.org/etp-grants.



Frankie Moirao, KI6QYS (left), and Sylvie Fournier, KI6WZB, operate from their solar powered station.

For recent reports on ETP school activities visit: www.arrl.org/Reports-on-classroom-activities. Read about Pell City High School's (AL) balloon launch using Amateur

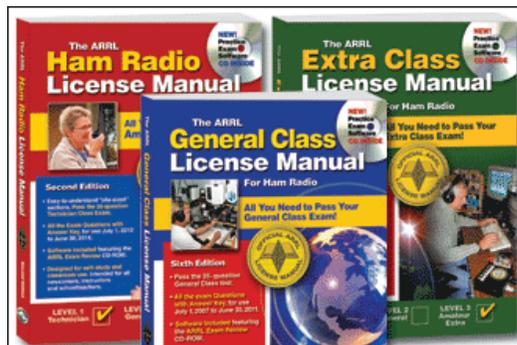
Radio for tracking, and the solar power system designed by students at Granite Bay Montessori (CA) to run their station, Tarleton State University's (TX) application of the ETP's radio telescope to learn hands-on skills and collect data, and Nelson County (KY) Area Technology Center's plans for a curriculum focused on careers in space science. Their curriculum will include astronomy, meteorology, satellite communications and solar radiation.

You can also read about and watch a video of the recent ARISS contact with Foster Elementary School (KY) that the students at Nelson County Area Technology Center sponsored from their station at www.arrl.org/listen-to-watch-ariss-contacts.

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Update on ARRL License Study Publications

New printings of the 2nd edition of the *ARRL Ham Radio License Manual* and the 6th edition of the *ARRL General Class License Manual* have been released including a CD-ROM with new exam practice software developed



specially to meet ARRL's specifications. This software gives students options to review exam questions in question pool sub-element groups or in groups that relate to the ARRL study manual content. Features to flag missed questions, track history and print practice exams are also featured.

Instructors can use the software for review in the classroom environment or use it to print practice exams. The next printing of the *ARRL Extra Class License Manual* to be released soon will also include the software.

Preparations for General Class Question Pool Coming in July

ARRL license study manual author Ward Silver, NOAX is hard at work on the next edition of ARRL's *General Class License Manual*, which is being revised to accommodate the changes in the General Class question pool that will be effective July 1, 2011. We've posted a spreadsheet showing the changes in the pool of questions for this license exam that will occur later this year on our instructor resource page at www.arrl.org/resources-for-license-instruction. ARRL currently has no plans to publish a revision to our General Class Instructor Manual. However, we will be making the illustrations and graphic files in our study manual available to instructors for use in developing their own instructional presentations.

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Shared Aids for License Instruction

Fred Benson, NC4FB has released new downloadable tools for use in 5-6 hour exam prep classroom sessions featuring electronic flashcards and practice exams. Another instructor support feature he's added allows instructors who sign up to receive exam scores by email every time one of their registered license candidates takes a sample exam. The support feature has an option to include license exam syllabus group descriptions to help instructors focus on areas needing attention. These tools can facilitate remote mentoring as well as support classroom instruction. A link to Fred's resources is provided under the "Shared Resources" topic on our instructor resource page at www.arrrl.org/resources-for-license-instruction, or you can go directly to Fred's website: http://www.nc4fb.org/wordpress/?page_id=1773.

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School Club Round-up Coming February 14-18!

What group of kids doesn't enjoy a contest? For the details on this biannual opportunity for on-the-air competition with other schools across the U.S., visit: www.arrrl.org/school-club-roundup-scr.

Photo: Control Operator, Doug Moore, K4WVS guides 7th grade student Aaron Britton as he operates K4WBM on PSK-31 at William Byrd Middle School (Roanoke, VA) during School Club Round-up. 6th grade student Winter Blake looks on. Photo by David Jones, N4JED



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2010 Statistics on Licensing Exams

Maria Somma, AB1FM, Manager of the ARRL VEC, reports that 27,528 new hams were licensed in 2010. This is a decline from the 30,000+ new hams licensed in 2009, and there is at least one explanation.

Licensing of new hams declined significantly during the last half of 2010 as compared to the first half of the year. A couple of factors help to explain that decline. Maria notes that the second half of the year is typically less busy—there is always a decline in the number of examinees in the second half of the year because of the summer travel months (July and August) and because of the holidays (in November and December), but it doesn't normally drop off as much as we experienced in 2010. Another factor at play, an anticipated change in the question pool creates a surge in testing before the change and a slump afterwards. In the first half of 2010, Maria noted that we were actually ahead of the 2009 new amateur 6-month totals. But by September, it was clear that we were lagging behind the 2009 totals and the number of new licenses being

issued thru the end of 2010 had dropped by 23% from the beginning of the year. Finally, Maria notes that there is always an adjustment period for teachers and examinees whenever a new pool is released. An indication of this adjustment is reflected in the pass rate. The pass rate for the previous Tech pool (expired June 30, 2010) was 87%. The pass rate for the new Tech pool (effective July 1, 2010) is 77%, also helping to explain the decline in new licensees.

The surge in upgrades to General and Extra that occurred in 2008 after the Morse code requirement seems to have stabilized, but at a significantly higher level than prior to 2007. Total number of upgrades during the past two years has averaged between 10,000 and 11,000. (Upgrades do not include those who sit for their first license and pass the Tech and General or Tech, General and Extra in a single sitting.) This is a dramatic increase over pre-restructuring upgrade totals per year, which averaged 6,200.

Here's the breakdown of exam activity for 2010 by license level.

FCC LICENSE ACTIVITY	2008	2009	2010
LICENSE TYPE	LICENSE COUNT	LICENSE COUNT	LICENSE COUNT
EXTRA CLASS LICENSE	6,108	3,579	3,534
GENERAL LICENSE	11,861	9,897	9,968
TECHNICIAN LICENSE	25,598	27,464	24,752
TOTAL	43,567	40,940	38,254

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