



Chattanooga Amateur Radio Club
P.O Box 23121
Chattanooga TN 37421

January 2010
Volume XXIII Issue 1

NCVEC to Release New Technician Question Pool to Public in January 2010 by ARRL

The Question Pool Committee ([QPC](#)) of the National Conference of Volunteer Examiner Coordinators ([NCVEC](#)) is due to release the [new Technician class \(Element 2\) question pool](#) to the 14 VECs on December 1, 2009; it will be released to the public in January 2010. Each question pool for the three Amateur Radio license classes -- Technician, General and Amateur Extra -- is reviewed on a four-year rotation. This new Technician class pool will become effective on July 1, 2010.

According ARRL Assistant VEC Manager Perry Green, WY1O, the QPC reviews the three question pools every four years to ensure that the questions are kept current with the latest amateur practice and technology, as well as addresses information relevant to that particular license class. "In the case of the Technician pool, the question set should provide for the new Technician licensee to be able to establish his station and operate it legally, courteously and safely. The Technician question pool and exam are intended to be the beginning of the journey into the Amateur Radio Service. It prepares the person for the enjoyment of operating, and that of preparing to learn electronics, the cornerstone of the education needed to obtain the further enjoyment that can come with the higher license classes." Green is a member of the NCVEC's Question Pool Committee. Other members of the QPC include Chairman Roland Anders, K3RA (Laurel VEC), Larry Pollock, NB5X (W5YI VEC), Jim Wiley, KL7CC (Anchorage VEC) and Tom Fuszard, KF9PU (Milwaukee VEC).

Green said that earlier this year, the QPC solicited input from Amateur Radio operators concerning the new question pool, accepting input for new question topics and new questions, as well as suggestions for changes or deletions: "The QPC must rely on members of the Amateur Radio community to suggest questions and answers in a responsible manner to preserve a high level of legitimacy for our radio service, so the NCVEC QPC seeks input from the amateur community concerning a revision."

The new question pool will become effective for all examinations administered on or after July 1, 2010, and it will remain valid until June 30, 2014. The current Technician question pool that became effective July 1, 2006 will expire June 30, 2010. The new Technician pool contains approximately 400 questions, from which 35 are selected for an Element 2 examination. This question pool will contain graphics and diagrams, something new for this element.

The current [General class question pool](#) was effective July 1, 2007 and is valid through June 30, 2011. The current [Amateur Extra class pool](#) was effective July 1, 2008 and is valid until June 30, 2012.

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Hints & Kinks : PL-259 Connector Tool for Coax Cables

Tired of using pliers to screw on the PL-259 connectors when you are preparing cables? Pliers always seem to do some damage by the amount of force this task requires. I use an inexpensive 1/2 inch PVC female to male coupler. Simply use a step drill and ream out the female end (see the arrow in the photo). This works for most half inch coaxial cables. PL-259s do vary in diameter. Be sure to measure yours before you ream out the PVC adapter. It will not take a lot of reaming for the connector to fit snugly. The outer part of the PL-259 that fits into the connector is 0.55 inch diameter. This makes a secure fit. If you wear out the adapter, purchase another, as they are inexpensive. This works for me. -- 73, Paul Marsha, K4AVU, 200 Garden Trail Ln, Lexington, SC 29072-7341

Now You Know!: It's All Greek to Me

Ask any high school physics student and they'll tell you that electrons govern pretty much everything we do. We call electrons in motion an electrical current, and those radio waves that we hams are so fond of are the result of high frequency electrons traveling in our antenna conductors. Think of a 40 meter wave as an accidental tourist who wants to go somewhere (somewhere nice and warm, maybe a rare DX station). But how to get there? It needs some mode of transport -- think of electrons as the transport providers.

We use our transmitters to move the electrons in our antennas to-and-fro to produce radio waves, hopefully to that rare DX destination. When the radio waves get there, they set electrons in another antenna in motion. That current -- electrons in motion -- is amplified and detected at the receiving location and a QSO is made.

But why do we call them electrons? The ancient Greeks noticed that amber attracted small objects when rubbed with fur; apart from lightning, this phenomenon is thought to be man's earliest known experience of electricity. Back in the year 1600, the English physician William Gilbert -- in his treatise [*De Magnete*](#) -- coined the [New Latin](#) term *electricus* to refer to this property of attracting small objects after being rubbed. Both *electric* and *electricity* are derived from the Latin *Ālectrum*, which came from the Greek word ἤλεκτρον, ἤλεκτρον (Ālektron) for amber. *Now you know!*



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12 Suggestions for Success Working AMSAT-OSCAR 51 (Echo) on a Handheld Transceiver

[This was originally posted as 8 suggestions in a post on the AMSAT-BB. Several people wrote to me and asked that I post it on the website, and a few were scratching their heads. It was late after a midnight AO-51 pass when I wrote it, and after reading my post the next morning I decided to add a few things and include a few graphics.]

I don't remember who told them to me (KK5DO perhaps) but I'd like to thank all my elmers - you know who you are.]

1. THE ONE TRUE RULE for HT success (and even for FM base station users) - keep your SQUELCH OFF. If you ignore every other rule in this list, don't ignore this one. Working satellites starts off as a process of finding weak signals, so don't expect the satellite to be anywhere as strong enough to break squelch like your local repeater. I know it's noisy, but that's part of the process. Noise can also be an aid in locating the satellite because when the frequency starts to exhibit QUIETING, that's a sure sign that you are hearing the satellite, and you should get ready.
2. LISTEN FIRST! Even though you only have 5 watts, it's still possible to jam other stations. Expect to hear other stations before you transmit. If you can't hear other stations and need to check your uplink, don't call CQ, just transmit your callsign. If others hear you, they will want to work you.
3. Use a good antenna for your HT. A good gain whip antenna like the AL-800 is very good. Using an [Arrow dual-band](#) handheld antenna is better, and if you prefer to homebrew your antenna, Alex Diaz XE1MEX has an excellent [Yagi-Uda design](#).
4. When you identify yourself, always say your CALLSIGN followed by "HANDHELD" - I've found most operators will give way to HT users if they identify themselves that way. "Portable" is also good.
5. Set up your radio so you can tune for DOPPLER. If your HT only has 5KHz tuning steps, start listening 5 KHz above the center frequency - you will hear the satellite sooner and clearer. When you hear the downlink signals get scratchy or fuzzy, tune down 5KHz and it should be clearer. Follow the signal down in frequency as the pass continues. (See the graphic to the right.) If your HT doesn't allow you to use split frequencies in VFO mode, consider programming a couple of memory channels in this way, then just move to the next memory channel. For 5KHz tuning step radios it's debateable whether or not tuning the transmit frequency is helpful. If you have 1KHz or finer tuning steps it definitely helps.
6. Don't hold your whip antenna upright. Vertical antennas are not good, and a HT held upright isn't either. The satellite isn't on the ground (which is what HT's and vertical antennas were designed for). TILT IT about the same amount as the satellites ELEVATION. This means that if you are FACING the satellite, tilt it down towards the ground from HORIZONTAL an equal

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amount. If the satellite is to your back, tilt it up an equal amount away from the satellites position off the vertical. You will be surprised at the difference.

7. Make sure you know where the satellite is. Even if you don't have a palm sized computer running a tracking program such as PocketSat or PetitTrack you can estimate this. If you know the AOS azimuth and the satellite pass time, you can just estimate how much to move until you find the satellite. On ASCENDING (South to North) with the satellite EAST of you or DESCENDING passes (North to South) and WEST of you, move your body anti-clockwise (counter-clockwise for people in the US). If the satellite is ASCENDING WEST or DECENDING EAST, move clockwise.
8. HEADPHONES are very important, especially if you are working full duplex. You are much better off listening with two ears than one. If you have a full duplex HT like a Icom IC-W32A you can listen to your own downlink (a good thing). Your brain is far better at discriminating signals than most expensive DSPs.
9. Know your gridsquare as that is a quick way of identifying your location. Saying CM87 is much quicker than saying "San Francisco, California". The ARRL and Icom have some dandy gridsquare maps, the latter of which are free at most amateur radio stores. You can download both from the respective websites.
10. Map out a strategy for contacts. This isn't rocket science, but close. So preparation and planning is important. Not every pass is workable with an HT, so don't go after the 10 degree passes. Pick your passes, and work the ones you know will give you the best chance. It's not a battleground out there, but it's not a walk in the park either. You are competing with other stations for a limited resource so it helps to plan. If there are population centers (bright spots on the map) to the east of you, work western passes. If they are south of you, listen north. If you live on the coast, try passes out over the ocean.
11. If you don't plan to write down your contacts, try to work out some way to record them. You can hook a MP3 or Cassette recorder into the headphone jack on the receive side to record your contacts so you can review it later. On many HTs you can just use a simple "Y" cable available from Radio Shack. Even if you don't make contacts, it helps to accustom yourself to the call-signs, voices and personalities of the other operators. When I first started out, I found it more valuable to know which contacts I missed rather than the ones I made.
12. Ask questions! Find an elmer or look up the AMSAT area coordinator for your area. You can [locate an Area Coordinator](#) on the AMSAT website. Posting specific questions on the AMSAT bulletin board will also help you find answers.

Most of all - [Join AMSAT](#)! It will help you get plugged in to a very good organization, keep you informed of the latest developments, and contribute to the success of the amateur satellite program.

*Contributed by Emily Clarke W0EEC,
AMSAT Area Coordinator, San Francisco Bay*

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Lakeway Amateur Radio Club Proudly Presents;
The 19th Annual Morristown Hamfest
Saturday, January 2, 2010
8:30 am – 3:00 pm
Talk-in Frequency: 147.030 +

Smoky Mountains Expo Center 1615 Pavilion Drive White Pine, Tennessee

VE Test Registration begins at 11:00 am
Pre-reserved Vendor tables (all 8 ft.) - \$15.00 or \$20.00 day of Hamfest
Food available – Free Parking – Great Door Prizes!
General Admission: \$6:00
Contact: June McClary, AI4SO – june.airso@gmail.com
(865) 322-0683
or write to: Lakeway Amateur Radio Club Convention Committee
P.O. Box 1138 Talbott, TN 37877

Directions to Hamfest: I-75 to I-40 in Knoxville. I-40 to I-81 (about 3 miles east of I-40, Exit 417). I-81 north to Exit 8. Turn left off exit ramp (US Hwy 25E) and go approximately one-half mile to Smoky Mountains Expo Center (on right side of US Hwy 25E).

9 Jan 2010
TechFest
Gwinnett Amateur Radio Society (GARS)
<http://www.gars.org>
Talk-In: 147.075 (PL 82.5)
St. Marguerite Church [85 Gloster Road NW](#) Lawrenceville, GA
Contact:
Norman Schklar, WA4ZXV 480 North Peachtree Street Norcross, GA 30071
Phone: 770-313-9410 Fax: 770-755-5411
Email: wa4zxv@arrl.net

27 Feb 2010
Dalton Hamfest #28
Dalton Amateur Radio Club
<http://www.daltonhamfest.com>
Talk-In: 145.230(-) No Tone
Contact:
[North Georgia Fairgrounds 500 Legion Drive](#) Dalton, GA
Harold Jones, N4BD 3033 Davis Road SW Rocky Face, GA 30740
Phone: 706-673-2291 Fax: 706-673-2436
Email: n4bd@windstream.net

Chattanooga Amateur Radio Club December 3, 2009 regular meeting

7:03pm the meeting was called to order by president Mark Rose.

Mark said our new radio room is being worked on.

The Christmas Party is at Ryan's on Hixson Pike at 6:00pm on December 16th.

D-Star meeting is the 15th in the community room at Memorial Hospital.

The minutes for November were approved as written in the WAVES.

Jim gave the Treasurer's report:

Checking	\$9055.94
Hamfest	9596.05
P.O.	135.00
Total	\$18,787.08

\$150.00 has been sent to the Stat for a lottery permit.

Dues for 2010 are due and payable to the Treasurer or can be mailed to the club P.O. box.
Dues are \$18.00

A duplication in the constitution was changed.

Tom Wolfe has developed an installation program for new officers and we will have a short ceremony to install officers at the January meeting.

Robert Berman declined the V.P. nomination after the votes were mailed.

Mark rose has appointed Rick Curtis to be interim Vice President.

New officers are :

President- Mark Rose

Vice Pres- Mark Curtis (interim)

Treasurer- Jim Knight

Secretary- susan Miller

Hamfest Chairman – Jim Bowman

Directors: Tom Morgan, Bill Dobbs

Respectfully Submitted,
Susan Miller , KI4RZJ
Recording Secretary