



# Capers

October 2012

Candlewood Amateur Radio Association - Post Office Box 3441 - Danbury, CT  
Visit us on the Web at [www.CaraRadioClub.org](http://www.CaraRadioClub.org)

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**Friday, October 12, 8 p.m. @ Stony Hill Fire Station**

## CARA Minutes...

### ***CARA Meeting September 14, 2012***

The meeting was called to order by CARA President Roger Strong, KB1NYY, with 19 members and guests present.

Before going on to the program for the evening, Roger reported on several contacts he and other club members made with the 2012 London Olympics Special Events Station, 2 Oscar 12 London (2O12L). A rather interesting call sign with its use of "O" for zero but it was, after all, a "Special Event Station". Essex Ham was referenced on one of Roger's graphics and from there I found the website for the Chelmsford Amateur Radio Society. Take a look; they have a very active club.

The program for the evening was *Introduction to Digital Modes with FLDIGI* presented by CARA Digital/Packet Committee Chairman Sander Pool, W1SOP. He put the slides on line at:

<http://carpephoton.com/files/IntroductionToDigitalModes-W1SOP.pdf> .

Sander has been running what amounts to an on-line class in digital mode radio communications on the CARA reflector, so stop by and find out what can be done in this branch of Amateur Radio.

Digital modes are playing an increasing role in emergency communications as replacements for verbal transmissions. The ARRL Radiogram has served us well for years and will continue but as standards are developed, digital modes will find increasing use where speed and accuracy are critical.

Our thanks to Sander for a very timely presentation.

After a short break we went on the business part of the meeting.

Hamfest Chairman Joe de Groot, AB1DO, reported that once again we had a successful event. For months he has reported that "plans were on track" and now, because of the hard work of Joe and all the members of CARA, that "track" came into the station with a final net of \$2,233.06. Once again the batteries were a large part of the total.

Our thanks to Joe for his effective leadership of something that hams and other techies in the area look forward to each year.

The Treasurer's report of \$10,092.53 was accepted.

CARA Vice President John Will, KB1LYP, is putting together a crew to remove radio equipment and antennas from a packet installation that is no longer in use. At some point it may be reinstalled somewhere but for now the equipment will be put into storage.

The CARA Constitution was revised in October of 2006 and I am now reviewing it again. Please contact me with any suggestions for changes and I will add them to my presentation to the membership. Thank you.

Repeater Committee Chairman Steve, W1SMS, was unable to attend the meeting so he sent the following report by e-mail:

*"Regarding a repeater committee report:  
1) Bill N1PJG has fabricated the coaxial lightning arrestor panel. The entire grounding system is now ready to install.  
2) Harlan W1QH and Dan W1QK are working on the cabinet panels."*

A safari will be organized to transport this and other equipment to the repeater site.

Our thanks to those who are working to keep the CARA repeater on the air.

Membership Chairman Carl, W1ZGZ, is working to contact area Hams who may not know there is an active club in the area.

The meeting was adjourned at 10:00 PM.

*Bill Thoren, N1TIW, Secretary*

## ***Nets!***

- CARA Weekly Net:  
Sunday nights at 7:30 p.m. 147.30+ (PL100)
- Connecticut Phone Net (CPN)  
Monday through Saturday, 6 p.m., on 3.973 and Sundays at 10 a.m. on 3.965...
- K1ARC American Red Cross Net, on  
1<sup>st</sup> Wednesday of each month, 8 p.m., on 3.965Mhz, voice LSB, + or - 5Khz.
- CW Connecticut Net, Nightly at 7  
p.m., 3.533 Mhz
- WestConn Net: Nightly at 8:30 p.m. 147.18+ (PL 141.3). Linked repeater system: 148.850 and 145.410 (both PL 141.3.)
- R-Com Weekly Net: 145.47- (PL100)  
Thursday Evenings, 8 p.m.

## **FCC Seeks to Change Amateur Radio Licensing Rules...**

**(Editor's Note:** The following is excerpted from the Notice of Proposed Rulemaking and is not the entire content. Some paragraphs have been deleted that elaborate on these proposed changes. Readers are encouraged to visit the ARRL.ORG website for the complete text or to visit the FCC site. In most cases, the FCC also

notes that it is seeking and will accept comments on these proposed rule changes.)

These are significant rule changes that, if adopted, will affect each of us.

On October 2, the FCC released a *Notice of Proposed Rulemaking (NPRM)* in WT Docket No. 12-283 that seeks to change the Amateur Radio licensing rules, especially as they concern former licensees. Acting upon an [April 2011 Petition for Rulemaking filed by the Anchorage VEC](#) to give permanent credit to radio amateurs for examination elements they have successfully passed, the FCC proposes to revise Section 97.505 to require that Volunteer Examiners (VEs) give examination credit to an applicant who can demonstrate that he or she formerly held a particular class of license. In addition, the Commission seeks to shorten the grace period during which an expired amateur license may be renewed and to reduce the number of VEs needed to administer an amateur license examination. In response to a [Petition for Rulemaking filed by the ARRL in March 2011](#), the FCC looks to amend the Amateur Service rules to allow amateur stations to transmit additional emission types in order to permit Time Division Multiple Access (TDMA) in the Amateur Service. But in doing so, it denied the League's request for a blanket waiver pending the resolution of the rulemaking proceeding.

## Licensing Issues

### ***Examination Credit***

To be issued a new or upgraded amateur operator license, a person must pass an examination or otherwise receive credit for the examination element(s) required to qualify for the relevant license class.

Applications for new or upgraded licenses must be filed through a volunteer-examiner coordinator (VEC), which obtains the applicant information from VEs, who in turn administer examination sessions and issue a certificate of

successful completion of an examination (CSCE) to an examinee who scores a passing grade on an examination element. A person also receives credit for an examination element if he or she presents either a CSCE for that element that was issued within the previous 365 days or an unexpired (or expired but within the grace period for renewal) amateur operator license for a license of a class that required passage of that element.

In its *Petition*, the Anchorage VEC asserted that it was unfair that after the grace period for renewal of an Amateur Radio license ends, a former licensee "loses all credit for any elements passed, and must start all over if they want to continue their Amateur Radio activities. Does the passage of time somehow invalidate a person's knowledge? We think not. We believe that any applicant who can demonstrate that they have passed certain elements at some previous date or who have held a license grant for a particular class of license, again on or before various applicable dates, should not have to be re-examined on those elements before a new license can be granted. It seems unfair to allow some applicants to claim element credit for items previously passed and not others."

The FCC stated in the *NPRM* that it recognized that the rules treat a former licensee differently than a licensee who passed the same examination(s) but who continuously renewed his or her license: "We also agree with Anchorage VEC that the fact that an individual allowed his or her license to expire more than two years ago does not necessarily mean that the person no longer possess [*sic*] adequate knowledge of the subject. That a license was continuously renewed does not establish that the licensee remained active in the Amateur Service, for amateur licensees are not required to operate their stations in order to remain licensed."

With this in mind, the FCC is proposing to revise [Section 97.505](#) to require that VEs give examination credit to an applicant who can

demonstrate that he or she formerly held a particular class of license.

With one narrow exception -- expired Technician Class operator licenses granted before March 21, 1987 -- element credit is *not* given for an Amateur Operator license that has expired *and* is beyond the grace period for renewal. The grace period for renewal of an Amateur Operator license is two years, which is also the period of time after which the call sign associated with an expired Amateur Operator license becomes available for reassignment through the vanity call sign system. "We seek comment on whether we should retain this rule," the FCC stated.

The FCC is also seeking to eliminate the element credit distinction between a person who passed an examination and kept his or her license current, and a person who passed the same examination but let his or her license expire. "Arguably, we should also eliminate the element credit distinction between a person who passed an examination and applied for a license within a year and a person who passed the same examination but did not apply for a license in that time, on the grounds that the passage of a year does not substantial [*sic*] affect the latter examinee's knowledge," the FCC maintained.

#### **Reduction of Two Year Grace Period**

[Section 97.21\(b\)](#) provides that a person whose amateur station license grant has expired may still apply for renewal of the license during a two year grace period. According to the FCC, this allows individuals who forget to renew, or experience unforeseen difficulties in renewing their license, a period of time during which they may renew. The FCC noted that a principal reason for providing this grace period "is to allow amateur licensees to restore their operating privileges without sitting for reexamination."

Given that the FCC is proposing to amend the rules to give former licensees examination credit for the element or elements they passed to obtain their expired licenses, it stated that

that a two year grace period may no longer be necessary and proposed to reduce the grace period for renewal to six months (180 days), "which we believe is a sufficient period of time for individuals who forget to renew or experience unforeseen difficulties when renewing their licenses. Licensees who do not renew during the grace period would be able to obtain a new license under the rule changes proposed above and could then request their former call sign through the vanity call sign system if the call sign had not already been assigned to another licensee under the vanity call sign system."

The FCC also wondered whether instead of amending the rules to allow element credit for expired licenses, it "should simply extend the renewal grace period for a substantial length of time (such as a 10 year grace period). Extending the grace period would provide former licensees with the same relief -- permitting them to reenter the Amateur Service without retesting -- with fewer administrative burdens on former licensees, VEs and VECs; however, extending the grace period could affect the vanity call sign system (see below)."

#### **Reduction in Waiting Period for Vanity Call Signs**

When the vanity call sign system was implemented, the FCC concluded that call signs should not be available for reassignment for two years following the death of a licensee, or expiration or termination of the license for that call sign; close relatives of a deceased licensee are exempt from this rule, following the licensee's death. The FCC stated in the *NPRM* that it set the waiting period at two years "in part because it corresponds with the renewal grace period. Because we propose above to shorten the grace period to six months, we also propose to reduce the time before a call sign becomes available for reassignment to six months."

The FCC also noted that correspondence with the grace period was not the only reason identified by the Commission for a two year waiting period: "Other reasons were 'to avoid confusion in over-the-air station identification, to

maintain accuracy in the licensee data base, and to accommodate QSL bureaus' and to 'preclude trafficking in licenses,' where a licensee, in exchange for some type of consideration, vacates a desirable call sign so that another licensee could immediately apply for it before its assignability becomes known generally." In addition, the FCC pointed out that the two year waiting period "provides ample time for a close relative of a deceased licensee to obtain the same class of license as the deceased held, in order to be eligible to hold the deceased's former call sign. While the vanity waiting period should not be shorter than the renewal grace period due to the possibility of conflicting license grants, there is no practical reason why the waiting period could not be longer than the grace period."

#### **Administration of Amateur Radio License Exams**

Currently, there must be three VEs at an exam session and they must observe the examinee(s) throughout the entire examination. The VEs are responsible for the proper conduct and necessary supervision of each examination. The VEs must grade the examinee's answers immediately upon completion of each examination. When the administering VEs determine that the examinee has passed the examination elements required for the operator license sought, they must certify that the examinee is qualified for the license grant and that they complied with the administering VE requirements.

"Questions regarding whether three VEs are necessary to administer an examination sometimes come before the Commission in the context of claims that three VEs are not available at a particular location or time that an examinee would like to take an examination, or that an examinee must travel a great distance to a location where three VEs are available," the FCC stated in the *NPRM*. "This requirement can also cause VEs to incur travel expenses that amateur examinees may have to reimburse. We note that unavailability of examination opportunities compromises one of the bases and purposes of the Amateur Service

rules: To expand the existing number of trained operators, technicians and electronics experts."

We tentatively conclude that the required number of administering VEs can now be

#### **Emission Types**

##### ***Emission Designators***

Part 97 of the Commission's Rules specifies the emission types that may be transmitted on amateur frequencies. For data (telemetry, telecommand and computer communications), emission types may have A, C, D, F, G, H, J or R as the first symbol, 1 as the second symbol and D as the third symbol [*Editor's note: See Footnote 53 in the NPRM: "Certain other data emission types are also permitted under particular circumstances."*]. For telephony (speech and other sound emissions), emission types may have A, C, D, F, G, H, J or R as the first symbol with 1, 2 or 3 as the second symbol and E as the third symbol.

An emission designator describes an emission's characteristics. A minimum of three symbols is used to describe the basic characteristics of the radio emission. The first symbol designates the type of modulation. For example, F is used for frequency modulation. The second symbol designates the nature of the signal modulating the main carrier. For example, 7 is used for two or more channels containing quantized or digital information. The third symbol designates the type of information to be transmitted. For example, D is used for data transmission, and E is used for telephony.

In its *Petition*, the ARRL stated that Amateur Service licensees have recently established numerous narrowband UHF repeater facilities using multiple time-slot Time Division Multiple Access (TDMA) repeaters and single-slot TDMA handheld digital transceivers, principally in the 70 cm (420-450 MHz) band.

"Specifically, the ARRL notes that a Motorola system used by some Amateur Radio operators uses two-slot TDMA technology for the repeater and single-slot TDMA emissions for the

associated portable and mobile transceivers and that the system 'specifies emission designators 7K60FXE in voice operation and 7K60FXD for data,'" the FCC noted. "The present rules, however, do not appear to permit amateur stations to transmit single-slot TDMA emissions on Amateur Service channels above 30 MHz. Part 97 does not specifically authorize any phone or data emission designators with X as the second symbol. Consequently, the ARRL requests that the Commission amend its rules to revise [Section 97.3\(c\)](#) to include emission type FXE in the definition of a phone emission, and to revise [Section 97.307\(f\)\(8\)](#) to allow amateur stations to transmit data emission type FXD."

The FCC pointed out that one of the purposes of the Amateur Service is to contribute to the advancement of the radio art. "Allowing amateur stations to use communication technologies that are used in other radio services, such as TDMA technologies, allows Amateur Service licensees to experiment with and improve these technologies and, therefore, is consistent with the basis and purpose of the Amateur Service.

"Another purpose of the Amateur Service is to assist the public as a voluntary and noncommercial communications service, particularly with respect to providing emergency communications. Allowing amateur stations to use equipment that is in use in other radio services allows Amateur Service licensees to put, in this case, modern repeater systems on the air, thereby benefiting the public if these systems are needed to provide emergency communications."

*(Excerpted from the ARRL.ORG website)*

### The K7RA Solar Update

A coronal mass ejection (CME) hit the Earth on September 30, triggering a jump in geomagnetic indices. The planetary A index on October 1 was 31, and the K index jumped to 7, making aurora visible across the northern tier of

the United States. The northern latitude college A index was 23 (near Fairbanks, Alaska), about the same as the mid-latitude index -- which was 21 -- in Fredericksburg, Virginia. It is common during a geomagnetic disturbance to see indices go much higher in the far-northern latitudes.

The average daily sunspot numbers declined 8.3 points to 73, while the average daily solar flux was off exactly 1 point, to 128.7. Sunspot numbers for September 27-October 3 were 97, 77, 70, 95, 59, 55 and 58, with a mean of 73. The 10.7 cm flux was 133.2, 137.8, 136, 135.6, 128.1, 118.2 and 111.7, with a mean of 128.7. The estimated planetary A indices were 5, 2, 4, 10, 31, 5 and 5, with a mean of 8.9. The estimated mid-latitude A indices were 3, 2, 4, 9, 21, 5 and 5, with a mean of 7.

The latest prediction from NOAA/USAF has the solar flux on October 5-6 at 110, 105 on October 7, 100 on October 8-11, 115 on October 12-13, 120 on October 14-15, 130 on October 16, 140 on October 17-18, and then peaking at 145 and 150 on October 19-20. The same forecast has solar flux rebounding to 150 on November 16 after reaching a minimum of 110 on November 4-5. The predicted planetary A index is 5 on October 5-8, 10 and 8 on October 9-10, 5 on October 11-14, then 8, 12 and 10 on October 15-17, 5 on October 18-25, 10 on October 26, 5 on October 27-28, and reaching a peak of 15 on October 29.



(Courtesy ARRL.ORG)