

W5YI

America's Oldest Ham Radio Newsletter

REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable.

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FCC Issues NPRM Errata, Restructuring Comments Pour in!

On August 31st, the Commission released a 13-page *Errata* of their *Notice of Proposed Rule Making* (WT Docket 98-143) which looks toward restructuring the Amateur Service. The *Errata* corrects the proposed rules in the appendix which were released on August 10, 1998.

The Commission said "The purpose of the correction is to conform the proposed rules to the proposals discussed in the text of the *Notice*. In addition, the proposed rules in the released document, in some instances, included rule sections where there was no proposed change. In the interest of clarity, we have deleted those rule sections and have included in this erratum only those rules where a change in the rules is proposed."

The birth of the NPRM

To understand what happened, it is important that you know how FCC rule making takes place. Even though the FCC Commissioners release proposed rulemaking, the actual job of preparing the document falls to their staff which is divided into several Bureaus. In the case of Amateur Service rules, the "staff" comes from the *Wireless Telecommunications Bureau* and more specifically, their *Public Safety and Private Wireless Division*.

The FCC's intention to restructure the Amateur Service has its roots in three *Petitions for Rule Making* filed by the American Radio Relay League.

In RM-9148, ARRL requested additional opportunities for volunteer examiners (VEs) to prepare

and administer license examinations. In RM-9150, the League proposed to create a private sector complaint procedure for resolving cases of malicious interference in the Amateur Service. And in RM-9196, ARRL wanted the Morse code waiver procedures changed that lead to high speed telegraphy examination credit for the handicapped.

The Commission elected to address these petitions as part of their *1998 Biennial Review* of regulations that no longer serve the public interest.

What follows here is what we believe happened. It is based on information received from highly placed ARRL and FCC officials. And some of this account we pieced together.

The ARRL filed their proposal to make it more difficult for handicapped amateurs to obtain telegraphy waivers a year ago (On September 23, 1997) It was two months later before the FCC assigned it a rulemaking file number (RM-9196) and asked for preliminary comments which closed on December 29th.

The ARRL petition requested a provision in the Part 97 Rules which would change the procedural requirements in Part 97 covering the way Morse code exam exemptions for severely handicapped applicants are handled prior to granting examination credit.

The League wanted a supposedly disabled candidate to be required to attempt the CW test -- with any and all necessary accommodations -- before being granted an exam waiver based on a

physician's certification. Also, Volunteer Examiner Coordinators (VECs) would be required to request and review medical information pertinent to an applicant's handicap from the certifying physician and had to have the medical records on file before the application was forwarded to the FCC for processing.

In support of their petition, the League made four arguments. The ARRL (1) characterized these two changes as minor which (2) would stem abuses of the higher speed telegraphy examination waiver system, (3) limiting its use only to severely handicapped individuals and (4) without putting an unreasonable burden on examinees or the VEC System.

The VECs were aware that the ARRL would be making this request since earlier in the year, the ARRL Executive Committee had adopted a position (later confirmed by its Board) precluding VEs who had not passed a regular code exam from administering code examinations to others.

At their 1997 Conference, the VECs discussed the proposal and did not endorse the League's position. One of the questions raised was "What were the VECs going to do with the medical information once, and if, they got it." The VECs tabled the ARRL proposal without action or vote.

On February 5, 1998, the FCC released a list of 31 initiatives that would be explored as part of the 1998 biennial regulatory review. The review, mandated by the Communications Act, requires the FCC to review all of its regulations applicable to its licensees in every even-numbered year to determine whether certain rules are overly burdensome and no longer necessary.

One of the initiatives listed was amending the Part 97 Amateur Service rules "...to privative further the administration of the Amateur Radio Services and to simplify the licensing process." This, it turned out, referred to the three ARRL petitions seeking privatization of Amateur Service enforcement, changes to VE/VEC matters and a general streamlining the Amateur Service.

Shortly thereafter, a high level meeting between the FCC's Private Wireless Division's staff and top ARRL leadership — including League president Rod Stafford, W6ROD — took place in Washington, DC. One of the things discussed was the ARRL petition on telegraphy waiver handling. League leadership came away from that meeting with the opinion — or were told — that the FCC was considering or would be reducing all code speed requirements to 5 words-per-minute as a way around the need for telegraphy waivers.

At the Dayton HamVention in mid-May, FCC staffer Bill Cross talked about the FCC biennial proposal. He said "There seems to be a consensus that our structure has too many classes of licenses, relies too heavily on code proficiency, and may be unnecessarily complicated." That was more or less the tip-off as to what was coming.

By summer, amateurs became very curious and concerned about what the FCC specifically had in mind and rumors were rampant that 5 wpm would indeed be the top code speed tested for any amateur license.

There was a general belief that the NPRM would be released before the VEC Conference scheduled for early July since we had heard that the rulemaking had been forwarded to the Commissioners for approval and release. The VECs wanted to discuss the rumored Amateur Service remodeling at their conference and how it impacted them. Just before the conference, I telephoned the Commission to determine if the NPRM would indeed be released in time for us to consider. I was told that it would not be available since the document had been returned to the staff "...for additional work."

FCC Division Chief, D'wana Terry was limited in what she could say about the NPRM at the VEC Conference, since the Commissioners had not yet released it. She did tell the VECs, however, that one of the things the FCC was looking at was a reduction in the Morse code examination speed as a way around the need to grant code waivers.

The ARRL Board of Directors meeting took place the week following the VEC Conference. Apparently they saw the handwriting on the wall and voted to seek reduced telegraphy proficiency and fewer license classes. A letter proposing 4 license classes with reduced telegraphy speed requirements was written by the ARRL's attorney to the FCC before the NPRM could be released.

The "work" that the FCC staff had to do turned out to be a major overhaul. The NPRM was hastily revised into a combination proposal and inquiry containing a list of questions. We still feel certain that the original proposal was to reduce the code speed to a maximum of 5 wpm.

But now, instead of specifying lower code speeds, the FCC asked questions ...such as: "Should we continue to have three different levels, or should these be reduced to one or two — and if so, what should be the required speed?"

The revised document was sent back to the Commissioners and was released on August 10th. But many errors, omissions and unnecessary wording crept into the NPRM during the revision phase.

New proposed rules from the errata

Of particular interest was the restoring of the high speed Morse code examination waiver provision (Section §97.505(a)(10)) to disabled amateurs who, because of a handicap, were unable to pass the 13 or 20 wpm telegraphy examination. This section had been taken out of the original version of the NPRM. In the new version, the FCC invited comment on this issue and on the earlier ARRL proposal, RM-9196.

The following are now the only rules that the FCC proposes be changed. Everything else stays the same.

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THE NEW PROPOSED FCC PART 97 RULES

Section 97.9 is revised to provide for five classes. (Novice Class remains as a renewable license. Tech Plus does not.)

§ 97.9 Operator license.

(a) The classes of amateur operator licenses are: Novice, Technician, General, Advanced and Amateur Extra. A person who has been granted an operator license is authorized to be the control operator of an amateur station with the privileges of the operator class specified on the license.

(b) A person who has been granted an operator license of Novice, Technician, General or Advanced Class and who has properly submitted to the administering VEs an application document, FCC Form 610, for an operator license of a higher class, and who holds a CSCE indicating that the person has completed the necessary examinations within the previous 365 days, is authorized to exercise the rights and privileges of the higher operator class until final disposition of the application or until 365 days following the passing of the examination, whichever comes first.

Section 97.13 (paragraph "B") is amended by changing the term "EIC" (Engineer-in-Charge) to "District Director" and revising the footnote after the table in (c)(1) to clarify that transmitter power is:

* Power = PEP input to antenna except, for repeater stations only, power exclusion is based on ERP (effective radiated power).

Section 97.17 now provides for only four "new" (first time issued) licenses. New paragraph (c) states that no new Novice or Tech Plus licenses will be issued.

§ 97.17 Application for new license or reciprocal permit for alien amateur licensee.

- (b) ***
- (1) FCC Form 610 for a new Technician, General, Advanced or Amateur Extra Class operator/primary station license;
- (c) No application for a new Novice or Technician Plus Class operator/primary station license will be accepted for filing.

Section 97.21 now states that Technician Class licenses will be issued to Tech Plus operators when they renew. The last line in paragraph (a)(3)(i) and paragraph (b) prohibits the renewal of a RACES license.

§ 97.21 Application for a modified or renewed license.

- (a) ***
- (3) May apply for renewal of the license for a new term. Application for renewal of a Technician Plus Class operator/primary station license will be processed as an application for renewal of a Technician Class operator/primary station license.

- (i) **** No application for renewal of a RACES station license will be granted.
- (b) A person who had been granted an amateur primary, club or military recreation station license, but the license has expired, may apply for renewal of the license for another term during a 2 year filing grace period.*****

Section 97.301 is amended by removing the Technician Plus Class from the table of frequency bands. Paragraph (e) provides for current Novices or Technicians that have passed a code exam to operate on the Novice bands.

§ 97.301 Authorized frequency bands.

- (a) For a station having a control operator who has been granted an operator license of Technician, General, Advanced or Amateur Extra Class:
- *****
- (e) For a station having a control operator who has been granted an operator license of Novice Class or Technician Class and who has received credit for proficiency in telegraphy in accordance with the international requirements (Element 1(A), 1(B) or 1(C)):

Wave-length	ITU Reg. 1	ITU Reg. 2	ITU Reg. 3	Sharing Requirements
				§97.303 Paragraph
HF	Mhz	MHz	MHz	MHz
80 m	3.675-3.725	3.675-3.725	3.675-3.725	(a)
40 m	7.050-7.075	7.10-7.15	7.050-7.075	(a)
15 m	21.10-21.20	21.10-21.20	21.10-21.20	
10 m	28.10-28.50	28.10-28.50	28.10-28.50	
VHF	Mhz	MHz	MHz	
1.25 m	---	222-225	---	(a)
UHF	Mhz	MHz	MHz	
23 cm	1270-1295	1270-1295	1270-1295	(h) (i)

Section 97.313 is amended by revising paragraph (f) to change the term "EIC" (Engineer-in-Charge) to "District Director" read as follows:

§ 97.313 Transmitter power standards.

(f) No station may transmit with a transmitter power exceeding 50 W PEP on the UHF 70 cm band from an area specified in footnote US7 to § 2.106 of this Part, unless expressly authorized by the FCC after mutual agreement, on a case-by-case basis, between the District Director of the applicable field facility and the military area frequency coordinator at the applicable military base.

Section 97.407 is revised by changing the word "frequencies" to "frequency segments."

§ 97.407 Radio Amateur Civil Emergency Service (RACES).

- *****
- (b) The frequency bands and segments and emissions

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authorized to the control operator are available to stations transmitting communications in RACES on a shared basis with the amateur service. In the event of an emergency which necessitates the invoking of the President's War Emergency Powers under the provisions of Section 706 of the Communications Act of 1934, as amended, 47 U.S.C. § 606, RACES stations and amateur stations participating in RACES may only transmit on the following frequency segments:

	4	1	6	4
(7) Practical circuits employed in amateur station equipment.	3	1	10	4
(8) Signals and emissions transmitted by amateur stations.	4	2	6	4
(9) Amateur station antennas and feed lines.	6	4	5	4
(10) Radiofrequency environmental safety practices.	10	5	0	0

Section 97.501 is amended by revising the introductory text and paragraphs (a) (b) (c) and (d). Applicants will no longer be able to qualify for a Novice or Technician plus license.

§ 97.501 Qualifying for an amateur operator license.

An applicant must pass an examination for a new amateur operator license grant and for each change in operator class. Each applicant for the class of operator license grant specified below must pass, or otherwise receive examination credit for, the following examination elements:

- (a) Amateur Extra Class operator: Elements 1(C), 3(A), 3(B), 4(A) and 4(B);
- (b) Advanced Class operator: Elements 1(B) or 1(C), 3(A), 3(B) and 4(A).
- (c) General Class operator: Elements 1(B) or 1(C), 3(A) and 3(B);
- (d) Technician Class operator: Element 3(A).

Section 97.503 paragraphs (b) and (c) provide that Element 3A will now contain 65 questions.

§ 97.503 Element standards.

- (b) ***
 - (1) Element 3(A): 65 questions concerning the privileges of a Technician Class operator license. The minimum passing score is 48 questions answered correctly.
 - (2) Element 3(B): 30 questions concerning the privileges of a General Class operator license. The minimum passing score is 22 questions answered correctly.
 - (3) Element 4(A): 50 questions concerning the privileges of an Advanced Class operator license. The minimum passing score is 37 questions answered correctly.
 - (4) Element 4(B): 40 questions concerning the privileges of an Amateur Extra Class operator license. The minimum passing score is 30 questions answered correctly.
- (c) The topics and number of questions that should be included in each written examination question set are listed below:

Topics:	Element:	3(A)	3(B)	4(A)	4(B)
(1) FCC rules for the amateur radio services.		15	4	6	8
(2) Amateur station operating procedures.		5	3	1	4
(3) Radio wave propagation characteristics.		4	3	2	2
(4) Amateur radio practices.		8	5	4	4
(5) Electrical principles as applied to amateur equipment.		6	2	10	6
(6) Amateur station equipment circuit components.					

Section 97.505 is revised to show that Element 2 (Novice written examination) is now included in with Element 3(A). Existing Technician Plus operators receive credit for Element 1(A) (5 wpm code) and 3(A) (new combined Elements 2 and 3(A)). Existing Novices receive credit for Element 1(A).

§ 97.505 Element credit.

- (a) The administering VEs must give credit as specified below to an examinee holding any of the following licenses and documents:
 - (1) An unexpired (or expired but within the grace period for renewal) Advanced Class operator license: Elements 1(B), 3(A), 3(B) and 4(A).
 - (2) An unexpired (or expired but within the grace period for renewal) General Class operator license: Elements 1(B), 3(A) and 3(B).
 - (3) An unexpired (or expired but within the grace period for renewal) Technician Plus Class operator license (including a Technician Class operator license granted before February 14, 1991): Elements 1(A) and 3(A).
 - (4) An unexpired (or expired but within the grace period for renewal) Technician Class operator license: Element 3(A).
 - (5) An unexpired (or expired but within the grace period for renewal) Novice Class operator license: Element 1(A).
 - (6) ***
 - (7) ***
 - (8) An expired FCC-issued Technician Class operator license document (or proof of having held the document) granted before March 21, 1987: Element 3(B).
 - (9) An expired, or unexpired, FCC-issued Technician Class operator license document (or proof of having held the document) granted before February 14, 1991: Element 1(A).
 - (10) ***
- (b) ***

Section 97.507 paragraph (a) authorizes Advanced Class VE's to prepare the Element 1(B) (13 wpm code) and Element 3(B) (General written examination.) Note that preparing and administering license examinations are two different functions.

§ 97.507 Preparing an examination.

(a) Each telegraphy message and each written question set administered to an examinee must be prepared by a VE holding an Amateur Extra Class operator license. A telegraphy message or written question set may also be prepared for the following elements by a VE holding an operator license of the class indicated:

- (1) Elements 1(B) and 3(B): Advanced Class operator.

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Section 97.509 paragraph (a) adds the words "at least" to the number of VEs needed to conduct an examination session. Paragraph (b)(3)(ii) now provides for Advanced class VEs to administer General Class examinations.

§ 97.509 Administering VE requirements.

(a) Each examination for an amateur operator license must be administered by a team of at least 3 VEs at an examination session coordinated by a VEC. Before the session, the administering VEs or the VE session manager must ensure that a public announcement is made giving the location and time of the session. The number of examinees at the session may be limited.

(b) ***

(3) Be a person who holds an amateur operator license of the class specified below:

(ii) Amateur Extra or Advanced Class in order to administer a General Class operator license examination.

AMATEUR SERVICE RESTRUCTURING COMMENTS

More than 300 comments have already been filed electronically through the FCC's new Electronic Comment Filing System (ECFS). To determine what the Amateur community is saying, we randomly downloaded approximately 10% of those posted. Here are the results of my sampling:

■ We in the amateur community have long been forced to deal with unnecessarily complex level requirements and differences. This seems to have evolved due to the fear of change by existing licensees. An argument I hear from many is that passing code speed tests somehow proves one's operating skill. ...I am convinced that code proficiency at sending and receiving Morse code only demonstrates one's ability to send and receive code and has no relationship to any other operating practices. ...we do not test everyone on their keyboard skills even though many will use keyboards to create their emitted signals...

Clarence Zickuhr, NLTSG, Anchorage, AK

■ I am in favor of deleting the Novice portions of these bands and allowing all existing holders of the Novice Class license to operate with a 200W power limit, via Morse telegraphy throughout the 40m, 40m, 15m, and 10m CW subbands.

I believe a single speed requirement of 5 wpm is sufficient for maintaining telegraphy proficiency in the Amateur Service. I believe that ...cw telegraphy will continue to play a role in emergency communications. ...when propagation conditions are poor, when equipment is simple, when nothing else will get through, CW telegraphy makes the link possible. I believe VEs should continue to be allowed to administer tests for CW proficiency as they presently do. I do not believe that lowering the CW speed requirements should be accompanied by the introduction of testing for increased knowledge of digital circuitry. There are very few hams ...who could develop [or] repair a TNC or a computer at the component level. The current level of knowledge of digital techniques required in the various classes is sufficient to insure competent use of the digital modes.

...the ARRL proposal for Amateur Service restructuring suggests that the maximum CW speed requirement be 12 WPM. This does not seem consistent with continuing to restrict the bottom 25 kHz of the 80m, 40m, 20m, 15m [bands] for exclusive use of holders of the highest class license. ...if the highest code

speed one is required to attain is 12 wpm, the attainment of that code speed should provide one with full access to all CW subbands.

James M. Floyd, Jr., W9KID

■ I find the restructuring proposal submitted to the Commission by the ARRL ...to be preferable to WT 98-143. ...an expansion of high-frequency subbands should be undertaken. This would more accurately reflect the current pattern of operations in these bands, and would not jeopardize existing radiotelegraphy operations, given the increased selectivity of modern receivers.

...if the Novice license is eliminated, the code speed requirement for the General Class license should be reduced to 5 wpm. I see the value of telegraphy not as a "filter" for potential licensees, nor as a mode with much particular technical value in the 21st century. It is, however, a source of common social experience for amateurs, and so far has greatly contributed to the sense of identity, fraternity, and comity that is most definitely a strength of the Amateur Service. It can still do so. It is also one of a number of supposedly obsolete activities, such as archery, horsemanship or calligraphy that, despite their antiquity, still have an inherent value and provides much personal satisfaction.

As to the issue of disability waivers, ...what I suspect happens in some cases is that the physician, eager to help a patient and buried in an unimaginable pile of forms to sign, gives a perfunctory nod and signs off.

William M. Klykylo, M.D., WA8FOZ

■ I am a member of the ARRL and an ARRL accredited VE. I am not in favor of nor do I support the proposal that was submitted by the ARRL... I do support restructuring ...as proposed by the FCC... I am not sure if enforcement procedures can be privatized, however, one solution to correcting violations ..would be to try and prevent them from occurring in the first place. This could be accomplished by requiring candidates pass a more rigorous Amateur Radio exam.

I support keeping the telegraphy requirements unchanged. ...when an individual has to work harder for something they tend to appreciate that something a little more and won't abuse it. The topics covered in ...written examinations should continue to be mandated by the FCC. ...a passing score on written examinations should be increased from 70 to 90 percent.

Another change which would improve the service would be to require Radio Amateurs seeking license renewal to retest and pass all exam elements required for their license class.

Vincent Fiscus, KB7ADL

■ The ARRL has quietly lobbied a licensing restructuring proposal to the FCC, and intimated, falsely, its approval by the amateur community. All this was done without the knowledge and consent of the amateur radio community. The ARRL has no authority to speak, act, or initiate on my behalf. I am not an ARRL member. At no time have I authorized them or any other amateur radio entity to represent me in any way. They are only a membership club. Claiming to represent me directly or indirectly, constitutes oppression and usurpation of my rights...

ARRL is not entitled to favored status with the FCC, nor is any other group. This ARRL proposal has no approval by any majority, other than that of their own closed "board." Even their membership was given no chance to vote on it. The ARRL itself does not constitute a majority; less than 24% of amateur radio operators belong. ARRL is selling the downgrading of licensing standards under the guise of "simpler structure." The benefits of Amateur Radio are already available to all people. As with any vocation or interest, there are standards which one must meet to secure a privilege.

Continued on Page 8, Comments

CUTTING EDGE TECHNOLOGY

■ **Mountains don't move much every day, but it's still enticing for geologists to track them.** On May 20, two climbers reached the summit of Mt. Everest, the world's tallest peak at 29,028 feet, and placed a GPS receiver on it. It is one of four GPS devices placed at various points on the mountain to precisely monitor its geologic activity.

■ **Large backyard satellite-TV dishes are giving way to pizza-pan size.** DirecTV — the direct broadcast satellite (DBS) service — now has 4 million subscribers. The number of C-band satellite TV users has dropped below 2 million ...the lowest figure in more than 5 years. PrimeStar, the DBS service promoted by cable operators, now has more subscribers than C-band.

DBS-TV viewers are generally pleased with the service. PrimeStar, EchoStar's DISH Network and DirecTV outperformed cable operators according to the J.D. Power and Associates 1998 Cable/Satellite TV Customer Satisfaction Study.

■ **There is a minimum wire-bending radius for wires carrying high voltages.** That is, you can't bend them beyond a certain amount without generating too much heat.

EMERGING COMMUNICATIONS

■ **Three of the largest telecommunications companies in Japan want to lay a 13,000-mile fiber optic cable between Japan and the United States.** Two cable projects that were already in the works merged to form this project, called the Japan-U.S. Cable Network. More undersea cable projects are underway, driven by the need for more data throughput because of expanding Internet use worldwide.

■ **With today's NTSC television broadcast standards, there is enough breathing room between the video and audio carriers to use a wireless microphone system.** High-Definition TV, however, uses everything evenly within a 6-MHz channel, so there's no room for anything, much less a wireless mike. This is just one of the many myriad minor problems that TV stations throughout the U.S. will have to face when it comes time to switch over to HDTV.

■ **Unlike most commercial television stations, which use only one transmitter, KITV in Hawaii must reach viewers scattered all over the Hawaiian islands.** To do that, they must use several transmitters on the same frequency.

■ **Some spectators at IndyCar races bring along radio scanners to listen to the drivers communicating with their pit crews.** Since the idea of any race is to be the first across the finish line, crews don't want other crews listening in on their strategy. That's why many drivers also carry digital pagers for secure messages. The alphanumeric displays (easily visible) can tell the driver when to enter the pit area, what to watch out for, and other secret information.

COMPUTER INFO

■ **Authorities are really cracking down on counterfeit software.** Police seized \$5.6 million worth of it in California back in March. A raid occurred at the First Saturday Sidewalk Sale in Dallas a few months ago, raking in not only bogus Microsoft programs but also copied certificates that claimed the software was genuine! Burglars recently broke into a factory in Scotland and made off with thousands of pre-printed certificates meant for commercial software packages. Now thieves are even copying hardware! So many fake Microsoft mice are flooding the market that the real manufacturer is going to build a hologram into the mouse shell. Rotate the hologram and it reads "GENUINE."

■ **The mobile telephone industry grew large by basically giving away the phones to customers and making money on service.** Some see the personal computer industry as heading in the same direction. Many of the popular web browsers are given away by the companies that produced them. Hardware prices continue to drop. Microsoft would no doubt love for everyone to have hardware, so they can continue to sell Windows and other systems that every computer requires.

■ **You've probably noticed those little logos in the corner of your television screen during network shows.** Ever wonder how they're generated? A dedicated device called a logo inserter performs all the work. An artist generates the artwork on a computer graphics package, then uploads that image into the logo inserter. It automatically mixes that image into the video feed before it's transmitted to the world. Logos can have different

levels of intensity. Local time and temperature can also be provided. You may even sometimes see one logo on top of another, as one station rebroadcasts another's program.

■ **Omega Engineering, a Connecticut-based electronics firm, recently fell victim to a "logic bomb."** According to their investigation, a disgruntled employee planted a computer program into Omega's internal network that was designed to eliminate every piece of data it could find. The logic bomb was set to go off only if its designer did not deactivate it within a certain amount of time. No one else knew of this, of course. The destruction began ten days after the programmer was fired. It erased all of the company's R&D projects and also the backups. The programmer was arrested, but Omega says it will take years and millions of dollars to repair all the damage.

■ **Fiber optic cables can degrade over time, just as RF wire cables do.** If an optical-based computer network suddenly fails, it's up to optical power measurements to find out why. Professional optical cable installers measure the amount of light loss in the cabling system when they first install the network, and use that as a reference for any future maintenance.

■ **The Boeing 777 aircraft was designed on a mainframe computer, eliminating as many paper-based blueprints as possible.** Now Chrysler is doing the same thing for designing cars. Computer-assisted drafting (CAD) software shows on a video screen exactly how all the pieces will fit together before a single part is actually manufactured. This greatly shortens design time and reduces errors.

■ **Many software companies are finding themselves buried in lawsuits because of the Year 2000 problem.** Why? Because customers don't want to pay for the program upgrades, they want the companies to provide them free of charge. Customers claim that the programmers should have seen the problem earlier.

INTERNET NEWS

■ **Apple Computer is having a hard time keeping up with iMac demand!** Stores and dealers are now on a waiting list. Many are worried that they will not have it in time for Christmas selling. The iMac, which features simplified Internet access, is now available in Europe and Japan. Estimates are that Apple will ship 450,000 iMacs this year.

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■ A study by Forrester Research says that one-quarter of all online homes will be using high-speed broadband connections by 2002 and that cable companies will capture at least 80% of the market! Driven by falling cable modem prices, the report (entitled "Broadband Hits Home!") predicts that more than 2 million homes will have high speed Internet access by the end of next year. America Online is already pressuring the FCC to force cable companies to lease high speed access.

■ **StampMaster and E-Stamps, Inc. have been approved by the U.S. Postal Service to offer computer-based postage-metering.** StampMaster is Internet based. E-Stamp (which is partially owned by Microsoft) requires additional hardware. Market leader, Pitney-Bowes is also developing an Internet-based postage system.

■ **Households with Internet connections watch 15% (or 8 hours) less TV weekly than the U.S. average.** So says a Nielsen Media research study for America Online.

WASHINGTON WHISPERS

■ **The long disputed, long resisted and long delayed move by the FCC's Washington DC headquarters will soon be underway.** It begins on October 23rd and will be completed by March 1999. The objective is to consolidate several FCC Offices scattered around the downtown area just north of the White House. The new headquarters will be located on the waterfront at the "Portals II" in southwest Washington, DC. A major controversy erupted when it was discovered that the developer of the complex paid a \$1 million legal fee to President Clinton's 1996 campaign manager for work that included amending the FCC's lease. The annual lease will cost about one-third more than is currently being paid. Unless Congress can come up with an additional \$9 million in rent which is not in the FCC's budget, commission staffers could be furloughed.

AMATEUR RADIO

■ **The FCC has issued a new Fact Sheet on the Amateur Station Vanity Call Sign System.** It points out that up to 25 call signs may be requested in order of preference with the first one being available assigned. RACES and military recreation stations are not eligible for a

vanity call sign. Requests must be filed on either the interactive electronically-filed or the paper document Forms 610-V and 159. Both are available at the FCC website: <http://www.fcc.gov/wtb/amateur>

Electronically filed Forms 610-V for which the filing fee and Form 159 have been received will be processed first followed by document Forms 610-V and 159.

The fee for a vanity call sign is now \$13.00 for a ten year period. Payment is accepted by check (payable to "FCC"), bank draft, money order or credit card.

The following call signs are not available for assignment:

- KA2AA-KA9ZZ, KC4AAA-KC4AAF, KC4USA-KC4USZ, KG4AA-KG4ZZ, KC6AA-KC6ZZ, KL9KAA- KL9KHZ, KX6AA-KX6ZZ;
- Any call sign having the letters SOS or QRA-QUZ as the suffix; any call sign having the letters AM-AZ as the prefix;
- Any 2-by-3 format call sign having the letter X as the first letter of the suffix;
- Any 2-by-3 format call sign having the letters AF, KF, NF, or WF as the prefix and the letters EMA as the suffix;
- Any 2-by-3 format call sign having the letters NA-NZ as the prefix;
- Any 2-by-3 format call sign having the letters KP, NP or WP as the prefix and the numeral 0, 6, 7, 8 or 9;
- Any 2-by-2 format call sign having the letters KP, NP or WP as the prefix and the numeral 0, 6, 7, 8 or 9;
- Any 2-by-1 format call sign having the letters KP, NP or WP as the prefix and the numeral 0, 6, 7, 8 or 9;
- Call signs having the single letter prefix (K, N or W), a single digit numeral 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 and a single letter suffix are reserved for the special event call sign system.

IMPORTANT: Note that the paperwork is now mailed to one of two addresses. If you initiated your request for a vanity call sign using the paper document Form 610-V and Remittance Advice Form 159, these forms and fee must be submitted to:

**Federal Communications Commission
Wireless Bureau Applications
P. O. Box 358130
Pittsburgh, PA 15251-5130**

If you requested your vanity call sign using the interactive (electronically filed) system, you must submit the paperwork to a different address. The Form 610-V and Form 159 must be printed out and mailed together with the fee to:

**Federal Communications Commission
P. O. Box 358994
Pittsburgh, PA 15251-5994**

The Form 159 and the fee must be

received within ten (10) days of electronically filing your Form 610-V or your application will be dismissed.

■ **The VECs Question Pool Committee (QPC) has put further changes to all amateur radio question pools on hold** until a decision is made by the FCC concerning restructuring the service. The QPC is the group that develops and revises the questions used in the written examinations for all ham licenses. That means that in all probability, the scheduled new Advanced Class question pool will not be released this year. The current Element 4(A) pool will continue to be used.

Previously, all new question pools were released in December so that license preparation material publishers could have the new material at bookstores by the following May 1st. The decision to hold off on further question revisions was agreed upon by the majority of the VECs who did not want to place new questions in circulation ...only to have them made instantly obsolete by new rules.

QPC Chairman Ray Adams, W4CPA said an announcement will be made when question pool revision work will resume. "The action required by that decision could range from a simple resumption of rewriting of the question pools much in the same manner as we have in the past to issuing any necessary supplements containing the changes to each of the question pools in use ...to combining certain pools in whatever manner may be dictated by the Commission."

■ **We received an e-mail from the Union de Radioaficionados Espanoles (or URE) in Madrid** saying that Spain abolished the Morse code in the early 1980's - only to be forced into re-establishing it in 1986. URE is the national Amateur Radio society in Spain.

Here is what he said: [Quote] "For your knowledge we inform you that Spain was the first European country in abolishing the Morse testing requirements. This test was not mandatory between 1982 and 1986, but it was re-established due to pressures of some European countries, such as United Kingdom, who threatened to reject the applications for temporary licence from Spanish amateurs."

"In URE we are in agreement with the removal of the mandatory Morse test and, consequently, we have voted in this way the precedent years both in IARU opinion polls and IARU Region 1 Conferences of 1990, 1993 and 1996. [Signed:] Angel A. Padin, EA1QF, General Secretary, URE." [End Quote] In view of the ITU law, we have asked URE to explain how they were able to discontinue the code.

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Comments on WT 98-143, Continued from Page 5

ARRL gives no justification for reducing telegraphy standards. Amateur Radio relies on standards and the testing process to ensure quality. Stubbornness, laziness or personal dislikes are not valid reasons within any avocation, such as aviation, medicine or sports, to lower qualification or performance standards. CW testing is essential to the maintenance of quality of the Amateur Service, as it is based on learning by rote memorization and practice, actions that cannot be fabricated, thereby proving dedication and motive.

...Their proposal is not just a simplification of the licensing structure. It is a downgrading of licensing requirements. Further, the proposed four license classes are homogenized, insulting those who qualified under higher standards. I oppose any downgrading of licensing requirements, grandfathering of classes or expansion of the phone subbands. Retain all present CW requirements at present test speeds.

ARRL has tampered with the amateur licensing structure once before. It "solved" nothing. The "problems" concerning amateur Radio were imaginary. This ARRL licensing restructuring proposal only serves ARRL pecuniary interests, not Amateur Radio.

Raymond J. Laine, W0FRQ

■ Ignore the IARU (sic) Treaty as Japan does and do not test for any CW requirement. But if you determine that CW requirement is a must, the maximum speed for full HF access should be 5 wpm. Actually a speed of 1 wpm (yes, one!) would be quite adequate to meet the IARU requirements.

Although I am an ARRL member, I hold "no stock" in the survey they supposedly took on CW! I believe all amateurs (except the minority Extra Class) support the elimination or reduction of CW testing speeds to gain HF access. The IARU will drop the CW requirement in a few years anyway. I guess I should mention that I was "code tested" at an FCC Field Office at 13 wpm for 1 minute solid in 1964.

I believe the ARS could be further "streamlined" by going to only two classes: Technician ...a no-code class with full privileges above 30 MHz and a General Class ticket which could be 5 wpm maximum (only if necessary!) and have all the privileges of the current Extra Class ticket.

Enforcement ...is the most important issue facing the ARS today! In fact, the FCC does not have a 'secret agenda' to eliminate the ARS from within, enforcement must be returned to something akin to the FCC practices of the '50's and '60's.

...today, every amateur knows "there are no patrol cars on the road"... Please do not even consider privatizing this function. Things are bad enough as they are!"

Keith R. Schreiber, W8KTH

■ I agree with the FCC's statement that non-hobby use of Morse code has declined in the past few years. Like many modes of transportation (such as the horse and buggy), Morse code has had its time and served us well, but now new modern modes have taken its place. Morse code's current use in amateur radio testing procedure is being used as purely a filter, partly because of tradition, and partly because of an unwarranted fear of opening the amateur ranks to the masses. A potential licensee who has trouble learning the code has to be very determined and work extremely hard to achieve the goal of passing the code test, for which he may never use again. ...If the Commission feels it must, to satisfy our international agreement, make the requirement for all classes above Technician be five (5) words per minute. Although I think this would again be revisited after the ITU conference in 2001.

If the requirement for Morse code were either eliminated

or dropped..., the license structure could be simplified even more... My recommendations are as follows: Communicator Class: privileges on 2m, 1 $\frac{1}{4}$ m and 70 cm bands ...could not be the control operator of a repeater or other automated system. General Class: retain all privileges of the current General Class. New applicants for this class ...would have to hold a lower class of license for 6 months. Extra Class: incorporated from the current Advanced and Extra Class licenses. New applicants would have to hold a lower class of license for two years.

It would be prudent for the commission to utilize the Amateur Auxiliary to better enforce the regulations... Create a Amateur Auxiliary liaison Office with FCC Field Offices... Set up a review board of ARRL officials, FCC officials and Amateur Auxiliary volunteers to review cases.

Herbert W. Blair, Jr. K5IDX

■ Thought needs to be given to the appropriate 'entry' level to the world of HF... The Novice is used to provide a way for a new ham to get on the ham bands and learn through experience how to operate a radio and communicate with other hams.

Turning a new ham loose on the lower 25 MHz of 20 meters would be similar to letting a new driver loose on the Washington, DC loop. The new hams will be intimidated and the seasoned hams will be annoyed.

Richard E. Weingarten, N0SH

■ Without public input, the Federal Communications Commission has announced that it plans to ...simplify its own oversight job. I ask that you keep the current Morse code requirements. The stupidification of America has to stop. ...Please direct the FCC to set aside its own destructive proposal and instead get [the] active involvement of amateurs both to agree on problem statements as well as solution proposals. ...The FCC is probably under-funded and about to use that excuse to sidestep a major responsibility.

Joseph D. Carvalho, KR6NBA

■ I've read the ARRL's proposal and am convinced that they are trying to boost membership under the guise of attracting more people into the service/hobby. It's also a safe bet that the equipment manufacturers would like to see the Morse code requirement vanish. Both of these are lousy reasons. CW is not intended to prevent anyone from obtaining HF privileges. It is a way to ensure that the operator is proficient in both the most popular operating modes, phone and CW. I don't think anyone would like to be sending a distress call to a bunch of operators that couldn't even copy it at three or four words a minute. ...cheapening of the standards set forth to obtain an amateur radio operator license, would make it very difficult for us to perform the service for which we were created.

Eric Sonnenwald, N2XSE

■ Although there have been vocal calls for the Commission to eliminate CW testing completely, it is still a useful mode of communications and our obligations under the ITU treaty require that proficiency be tested in order to gain access to HF operating privileges. Five words per minute has been the traditional accepted proficiency for entry level licenses with HF operating privileges. I see no compelling reason to change this. ...It is my opinion that CW is too fully ingrained into the traditions of the Amateur Radio Service to discontinue testing as part of the HF licensing requirements.

George J. McCouch, W3GEO

■ The ARRL and the FCC proposed simplified license structure both seem to be missing something. ...both new structures would require a 'Class C' license, the equivalent of the present General Class with code requirements possibly reduced to 5 wpm. This effectively bars newcomers from 10 meters, the most

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popular HF band in ham radio! ...Let's keep the Novice entry level just like it is, and call it 'Class F', for future of the hobby. Six license classes are too many? The FCC can't handle it? If so, how is the FCC doing vanity call signs, with thousands of hams eligible to change their calls? *John Abbott, K6YB*

■ I think it is very important to maintain the Morse code requirement... It is a basic part of ham radio. Ham radio is a hobby. A means to learn and use new skills. Morse code is a skill. It is important for ham radio to maintain the old with the new. It is part of our heritage, and history. It should always be part of Amateur Radio.

I would agree with doing away with the Novice license... The General Class license would be the entry level to operate in the HF bands. It is absolutely important that the entry to the General license require passing a 13 word per minute Morse code test. *Harvey L. Zion, Jr., K7VZ*

■ If the Commission drops the Novice license and has the Technician as an entry level license, the [FCC] should seriously consider a one or two year non-renewable type license so as to weed out those persons who do not have a genuine interest in the hobby. The Commission should also consider the present system of written examinations having a serious loop hole in that the answers are part of the published material and by having them so, many, many applicants are memorizing the answers in order to pass. I believe the Commission has gone too far in simplifying the Amateur Radio licensing system... Unless changes are made to protect the integrity of the exams, there will be large numbers of persons coming into the hobby that do not know anything about radio... *Howard P. Gould, W4VNF*

■ Since the Amateur Radio Service is the last remaining entity to utilize [Morse code] in routine communications, I am convinced that it should be retained as a requirement for licensing at HF as currently required by international treaty so that a pool of trained code operators will exist. If this pool does not exist within amateur radio, it will not exist elsewhere.

It is entirely appropriate to reduce the skill requirement to 5 words-per-minute for the General Class license and 12 wpm for the Advanced Class... To encourage those amateur operators who wish to advance their code skills, the Extra Class license would retain the 20 wpm level exam.

I am convinced that no effective enforcement is possible without the direct involvement of the FCC through an active enforcement arm, funded by license fees paid by amateur radio operators. I believe the Commission should request Congress to legislate law that mandates the cost of enforcement be borne by ARS licensees with license fees collected going directly to the FCC enforcement branch... *Richard S. Carroll, W0EX*

■ I stand for complete elimination of Morse testing as a criterion for all amateur licensing. I recognize that the United States, as a signatory to the ITU treaty, currently has an obligation to retain some unspecified level of Morse testing for licenses permitting operation on frequencies below 30 MHz.

[But] I see absolutely no justification for Advanced and Amateur Extra Class [licensees] to require a 13 and 20 wpm Morse test. [This commenter included the wording 'No Code International' which suggested three license classes with a top speed of 5 wpm which would automatically be eliminated when international law permits.]

Richard R. Plourde, N1SJM

■ I hold an Extra Class amateur radio license and am an

Electrical Engineer. I am also the coordinator/leader of a VE testing team (ARRL). I was originally licensed in 1964. I operate almost exclusively on CW.

What Morse code requirements should be required for the various licenses? Five wpm with twelve wpm for Advanced and Extra. I don't think a higher speed is required. If people want to work CW, they will. I do not want to see Amateur Radio become another Citizen's Band. Amateur radio is unique in that the licensees are allowed to build equipment and experiment. I don't think it is necessary to increase the numbers of people entering the Amateur Service. ...it is more important to keep them. *Craig B. Johnson, AA0ZZ*

■ I wholeheartedly agree with the ARRL concerning restructuring. Morse code has been outmoded for quite a while and continuing the requirement for licensing is keeping otherwise talented people out of our ranks. Until the international community removes the requirement for Morse for HF privileges, I think the ARRL proposal is a good compromise. [This commenter included the wording from the ARRL proposal letter to the FCC commissioners which suggested four license classes with a General Class code speed of 5 wpm and 12 wpm for Advanced and Extra.] *James R. Parsons, N5FYV*

■ The federal role in regulating amateur radio is primarily to allocate bandwidth, protect public health and safety and prevent interference to other users of the radio spectrum. There is no justification at the technical level for the government to mandate specific emission types or modes of operation, except for meeting specific needs in achieving the above role. There may be a few non-technical reasons for mandating certain modes (e.g., CW) due to international agreements, but such requirements should not be expanded beyond their original intent. In the case of code, 5 wpm is adequate for the purpose of handling emergency traffic, if it should ever be encountered. Clearly expanding the federal licensing requirement to 12 or 20 wpm is not justified based on any technical grounds. ...

When submitting recommendations to the FCC, the ARRL should make clear it is speaking only on behalf of its membership, which is limited to less than one-quarter of all licensed amateur radio operators. Further, the ARRL should explain that its membership comprises only a small fraction of all American citizens and potential licensees who would be affected by their recommendations, if they become law. The ARRL disclaimer should point out that these other groups have not been consulted in a comprehensive way, that in many cases they have been intentionally excluded in the process of developing ARRL recommendations and the ARRL has no way of knowing if their recommendations represent a majority opinion of all licensed amateurs.

In short, the ARRL should refrain from giving the impression it is speaking for the majority of hams, or is expressing a consensus of the majority of citizens on this or other amateur radio related issues, unless they can demonstrate otherwise.

The actual portion of licensed amateur radio operators that support the fast code licensing requirement is far less than the ARRL survey would suggest. ...I believe the fast code requirement has been one of the major reasons why the hobby has stagnated over the past decades.

It should be sufficient, in so far as federal interests are concerned, that an amateur radio operator only be required to demonstrate his technical/regulatory knowledge and abilities to operate a transmitter of a certain maximum power and on certain frequencies in a safe and effective manner.

Much of the rest of what is mandated in federal regulations

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about incentive license classes, operating modes, emission types and so forth would seem to be not only unnecessary, but also unwise.

Alex Haynes, KW5D

■ I agree that the current license class structure contains redundant and overlapping licenses and should be simplified. I believe that this can be best accomplished by the re-establishment of just three (3) classes of Amateur Radio license: Technician, General and Advanced. ...I propose a blanket Morse code requirement of 5 words per minute for all amateur license classes permitting operation below 30 MHz. This requirement would be rescinded upon international agreement at a future World Radiocommunications Conference. There should be no possibility of obtaining a waiver of this requirement. ...this ...will eliminate current abuses in the obtaining of medical waivers for the high speed Morse code requirement. *Dan Karbginsky, W8DMI*

■ I feel that the public good and the needs of the Service would be better served by making the General Class license an entry-level HF license with no Morse code requirement and a very stringent written examination. ...should a codeless entry-level HF class of license fail to meet the Commission's approval, I feel that a minimum requirement of 5 wpm coupled with a stringent written examination would be perfectly sufficient for the entry-level General Class license. The written examinations should be more challenging. *Thomas R. Swisher, Jr., WA8PYR*

■ Three levels of telegraphy proficiency remain relevant today ...i.e. 5 wpm for General, 13 (or in the range of 10-13) wpm for Advanced, and 20 (or in the range of 15-20) wpm for the Amateur Extra. Clearly, when the required Morse code elements are reduced or eliminated, additional content should be added to the written examination to better ensure a working knowledge of the newer digital technologies and relevant procedures. ...I see no value in requiring a handicapped examinee to attempt a higher-speed telegraphy examination before credit is given pursuant to a doctor's certification. I do not support the ARRL's request that VECs be authorized to request medical information from the certifying physician pertaining to the examinee's disability. *Carl L. Morgan, K8CM*

■ The only reason I support [Morse code] ...is because of international regulations. If that regulation is removed, then I would support complete removal of the code requirement. *Christopher Salinas, N0TWW*

■ I favor most of the proposals, except for the reduction or elimination of code requirements. I would prefer to see Extra: 20 wpm, Advanced: 13 wpm [and] General: 5 wpm. I believe the code makes the difference between the ham bands and the CB bands. *Erik "Eki" Skyten, N1NT*

■ If the FCC would transfer the 27 MHz CB band to frequencies that are not ionosphere propagated, it would go a long way towards eliminating malicious interference found on all HF frequencies. Most of today's hams come from that totally lawless environment and bring the profanity, jamming, illegal call signs, illegal high power amps and 'anything goes' operating procedures with them. The FCC should have taken a portion of a VHF or UHF and given that to the CB service instead of the 27 MHz 11-meter band. It is not too late to do that. *Bryce A. Carr, KH6AT*

■ The proposal is a serious affront to all Amateurs who have worked diligently to earn their current licenses. Isn't it motivation enough under current Rules to become a member or licensee of

one of the most auspicious or 'Elite Clubs' in the nation and the world? The proposal denigrates all of the current license classes and those who have worked to achieve them and aspire to upgrade. Look at what happened to the Citizen's Band? The ham bands (2m) are bad enough as it is! *Dennis Brunning KC6NVX*

■ I am in favor of 4 classes. The General level code speed should be 5 wpm. The Advanced and Extra levels should be 10 wpm. ...the FCC should consider a no-code license at all levels. Each question pool should not exceed 200 questions. Each exam should not exceed 25 questions.

Charles M. Franer, W1CMF

■ I urge the FCC to return to a policy of enforcing its rules. Malicious interference is growing on the amateur bands as are other blatant violations of FCC rules. It is clear that FCC no longer takes firm, quick, effective action against violators who openly mock the FCC and its rules in the knowledge that no punitive action will be taken against them. *Gary H. Ritchie, W8OI*

■ Six classes of license are unnecessary and create needless amounts of paperwork (and expense) with no apparent advantage for either the FCC or the amateur community. Both parties would be well served by no more than three classes with limitation on power for the entry class and limited spectrum. ...Advanced Class should automatically become highest class by a new name and permitted to act as VEs for all classes of applicants. ...Morse code requirements are as obsolete as spark gap propagation. ...Morse beyond the most elementary level is meaningless. *Ralph E. Herzler, W8SAT*

■ Eventually phase out all code tests. For the present, lower the speeds. ...None of the services now use Morse code in a world of modern computer communication.

Russell M. Lockett, WA3IBE

■ I am an electrical engineer working as a digital designer. I feel that the Morse code requirement has outlived its usefulness and should be abolished or greatly reduced. I passed the 5 wpm code and found I have no interest in using the code at all. It is antiquated and should fall by the wayside as did AM when SSB came on the scene. Those who want to can still use Morse code but it should not be a stumbling block to use of the HF frequencies. I am greatly interested in using the HF frequencies for SSB but cannot as current licensing exists.

John W. Bunker, N7RSP

■ The anti-CW force aided by the FCC will drag anyone into Amateur Radio, qualified or not. The (so-called) written (multiple guess) exams are a joke because you can buy the questions anywhere. ...Adding more questions to the test will not take the place of the commitment needed to learn the code. If anything, you should keep the Novice and get rid of the no-code license...

Alex Haynes, KW5D

■ The days of needing Morse code as a reliable means of communications have been superseded by other means: satellite, digital, microwave; and with the advent of high speed computers and modems, even the Internet. This is not to say that use of CW as an approved mode should be eliminated, rather it should be allowed for those who choose to use it, for whatever reason. Years ago, the CW requirement was utilized to keep troublemakers out of the amateur ranks. Has it effectively done this? Given the amount of problems on 75 meters and other HF bands, the answer is an unequivocal, "No!."

Robert E. Williams, KB7BVL