

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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November 15, 1996

Amateur Service Retains Access to 13-cm Band

The FCC has finally "nailed down" Amateur access to the 13 cm band. On October 18th, the FCC released a Fourth Report and Order in ET Docket No. 94-32 (Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use) in which the Amateur Service continues its co-secondary status in the 2300-2310 MHz segment (at least for now.) New language was also added to Part 97 elevating the Amateur Service 2390-2400 and 2402-2417 MHz segments to primary status.

The FCC also determined that the existing technical rules governing use of these bands are adequate and that no additional rules are needed. Thus, the Commission adopted their earlier tentative conclusion that the Amateur Service, unlicensed Data Personal Communications (Data-PCS) devices, and other unlicensed Part 15 devices can share their respective bands under existing rules without additional requirements.

What is all the spectrum fuss about?

It is really about money ...and financing the Government through spectrum sales. The *Omni-bus Budget Reconciliation Act* of 1993 (the same legislation that authorized sale of "Vanity" call signs) required the Secretary of Commerce to identify and transfer at least 200 megahertz of Federal Government spectrum to private sector use.

Congress also wanted fast action! The Reconciliation Act required the Secretary of Commerce to identify the potential reallocable bands of

frequencies and to have specific spectrum recommendations in place within 18 months (or by Feb. 1995.) The first 50 megahertz had to be reallocated to the private sector almost immediately.

How is the Amateur Service involved?

On Feb. 10, 1994, the Dept. of Commerce released a report identifying the first 50 megahertz. They were 2390-2400 MHz, 2402-2417 MHz, and 4660-4685 MHz. The first two bands were also shared by the Amateur Service.

A year later (Feb. 7, 1995) the FCC opened the 2390-2400 MHz band for use by Data-PCS devices; provided for continued use of the 2402-2417 MHz band by unlicensed Part 15 devices, upgraded the Amateur Service allocation for both of these bands from secondary to primary; and allocated the 4660-4685 MHz band to the fixed and mobile services

Data-PCS is a new class of unlicensed, low power Personal Communications Service "nomadic" digital transceivers. They include such devices as wireless LANs (local area networks), digital cordless telephones, electronic article surveillance equipment, utility metering devices, fire and security alarm devices and wireless bar code readers.

The FCC ruled that both Amateur and unlicensed Part 15 operations at 2402-2417 MHz would continue under the current rules pending an inquiry into whether any rule changes were necessary to facilitate more effective sharing.

Comments on the need for additional rules

Public comments on these two bands were generally filed by the Amateur community, parties with interest in unlicensed devices, and those interested in protecting space research operations at the National Astronomy and Ionospheric Center (NAIC). The FCC said the comments generally supported the allocation of these bands to the Amateur Service and state that no further regulation is necessary to facilitate sharing of the bands.

Most comments oppose permitting combined (analog/digital) use of the bands by unlicensed devices, although a few parties support this concept. Further, most parties argue that Amateur operations and unlicensed device operations will not cause significant interference problems to radio astronomy operations as long as airborne use of unlicensed devices is not permitted.

Several industrial firms with interests in unlicensed devices wanted the allocation status for unlicensed devices increased, which the Amateurs opposed.

Discussion on the reallocation

It was the FCC's view that Data-PCS and Amateur Service use of 2390-2400 MHz would generally be compatible and that additional sharing regulations were not needed. The Commission wanted to know if the public agreed with this conclusion, whether a need exists to restrict certain uses by either the Amateur Service or Data-PCS devices that might be disruptive and whether formal coordination procedures are necessary. The FCC also wondered if any additional rules might be necessary to facilitate use of the 2402-2417 MHz band by both the Amateur Service and Part 15 devices.

The majority of the comments opposed any rule changes and argued that additional regulations would be of limited benefit in facilitating sharing. The American Radio Relay League (ARRL), the Radio Amateur Satellite Corporation (AMSAT), and the Southern California Repeater and Remote Base Association (SCRRBA) all shared this view.

Apple Computer, Inc., Compaq Computer Corp., and Motorola, Inc. all agreed that adequate Data-PCS rules already exist, and no further regulation is needed. Compaq said that in the rare event of interference, it would affect the Data-PCS user and not the Amateur operation, because of the packetized nature of Data-PCS and the higher power of Amateur operations.

ARRL said that it has evaluated data provided by Apple Computer and determined that sharing between Data-PCS and the Amateur Service is possible. ARRL also points out that the primary status of the Amateur Service in both the 2390-2400 MHz and the 2402-2417 MHz bands should be sufficient to protect Amateur operations from interference. ARRL and AMSAT both asked that the FCC refrain from making further sharing or coordination rules for either band. Apple, Compaq and the ARRL all agreed that any interference problems could be resolved on a case-by-case basis.

One Amateur, (James S. Kaplan, KG7FU, of Hillsboro, OR) wanted the FCC to adopt strict non-interference rules to protect Amateur satellite operations at 2400-2410 MHz. Kaplan felt that Data-PCS should not be permitted in the 2400-2410 MHz and 2433-2438 MHz bands, and that other Part 15 devices should not be allowed to operate with more than 50 millivolts per meter in these bands.

The Northern California Packet Association wanted operators of Data-PCS and other Part 15 equipment to coordinate their activities with Amateur operations. NCPA said that business users of unlicensed equipment should file information identifying their locations and persons responsible for the equipment. Regarding potential Data-PCS interference to Amateur operations, Apple said Amateur concerns are based on a lack of understanding of the existing restrictions on Data-PCS.

AT&T recommended that a cooperative study be completed by the manufacturers of unlicensed devices and the Amateur community to determine if specific sharing procedures are needed. It believes that neither the Amateur Service nor Part 15 manufacturers can predict whether they will be able to share the 2402-2417 MHz band, because both Amateur operations and unlicensed device operations are still growing in the band. AT&T asked that the FCC defer decision on band sharing issues pending more study.

ARRL supported further testing to determine whether there are interference problems that should be addressed, but opposed AT&T's suggestion that the decision on sharing rules be deferred pending the outcome of further tests because such a deferral would discourage Amateurs from making use of the band.

The Northern California Packet Association argued that high-gain antennas should not be permitted for unlicensed device operations. Similarly, ARRL expressed concern that the Commission has issued waivers to allow the use of high-gain directional antennas by spread spectrum wireless Local Area Networks (LAN) devices operating above 2400 MHz. Such devices are capable of communicating to 25 miles, which increases their potential to cause interference. ARRL opposed issuance of such waivers, arguing that in no case should such systems be permitted to operate below 2400 MHz.

Decision on need for further 13-cm rules

The Commission agreed with the majority of commenters that "...changes to the service rules for Amateur, Data-PCS, and other Part 15 operations would be of limited benefit to these services. History and the record indicate compatibility between Amateur and unlicensed device operations. Additionally, the low power of Data-PCS and other Part 15 operations decreases the probability of interference to Amateur operations."

The FCC also acknowledged a desire by the parties involved to resolve interference problems informally, rather than having the Commission establish additional regulations.

Regarding KG7FU's request for strict non-interference rules for Data-PCS, the FCC said "We do not think that such rules are necessary, because we agree with ARRL that the primary allocation status of the Amateur Service in both bands is sufficient to protect Amateur operations from any rare cases of interference by Data-PCS. In addition, we defer consideration of NCPA's suggestion that restrictions be placed on the use of high-gain antennas by unlicensed devices to the Spread Spectrum Transmitter proceeding, in which we will address issues concerning the use of high-gain antennas."

The Commission said it does not believe that additional rules are needed for Amateur operations to share spectrum with unlicensed devices. "Such formal coordination procedures would increase costs and delay use of the spectrum. We agree with comments that Amateur and Part 15 devices currently share the 2402-2417 MHz band and that Data-PCS rules were designed to facilitate sharing. Therefore, additional sharing requirements are not necessary."

"At this time, we do not believe, as AT&T suggests, that the sharing issues raised ...should be deferred until a cooperative study can be completed by Amateur interests and Part 15 manufacturers. Several commenters indicate a desire to perform additional testing of the sharing potential of these bands, but most recommend that the Commission maintain its current rules and permit spectrum users to resolve spectrum issues informally. We do not believe it is necessary or in the public's interest to delay the use of these bands pending further study. Should further testing reveal an impasse between the interested parties, the issue could then be brought to the Commission."

Protection of Space Research

The FCC had earlier proposed to prohibit airborne use of unlicensed Data-PCS devices in the 2390-2400 MHz band, in order to protect space research operations at 2380 MHz. At the same time, it declined to prohibit terrestrial use of Data-PCS devices in the 2390-2400 MHz band in the vicinity of the National Astronomy and Ionospheric Center (NAIC, Arecibo, Puerto Rico), because the nomadic nature of these devices makes it difficult to enforce such a restriction, and because the low power of these devices should provide sufficient protection from interference from ground-based Data-PCS devices to space research operations. The FCC wanted to know if their assumptions were correct.

Cornell University and the Committee on Radio Frequencies of the National Academy of Sciences (CORF) supported the proposed prohibition on airborne use of unlicensed devices in the 2390-2400 MHz band and wanted further terrestrial restrictions.

Apple states that Data-PCS devices will not interfere with the NAIC unless they are operated in its immediate vicinity. The Part 15 Coalition asserts that no Part 15 rule changes are necessary to protect space research operations at the NAIC.

The ARRL said that Amateur operations will not cause interference to the NAIC, but if such interference were to occur, reliance can be placed on the successful history the NAIC and Amateurs have of solving interference problems. KG7FU (Kaplan) felt that Amateurs should not be prohibited from airborne or space-to-earth operations in order to protect astronomy operations.

The FCC banned the use of unlicensed devices in the 2390-2400 MHz band from aircraft while airborne to protect space research operations at the NAIC but said it will consider waiver requests on a case-by-case basis.

"As to Amateur operations, we will not impose a formal restriction on airborne usage. We believe such a restriction would serve no useful purpose, given that airborne usage by Amateur operators in the 2390-2400 MHz band is extremely rare, that the NAIC has not indicated that such a restriction is needed, and that Amateur operators and the NAIC share a highly successful history of informal cooperation in resolving interference concerns. We also decline to adopt limitations on the terrestrial use of these bands by Data-PCS devices, other Part 15 devices, or Amateur operations."

Amateur Service primary allocation status

Several industrial parties requested that the allocation for unlicensed devices be upgraded to "primary" or that these devices receive some sort of additional rights to the spectrum. Some Amateur comments requested that guard bands be established around their operations in order to protect Amateur stations from interference caused by unlicensed devices. And one commenter expressed concern that electronic equipment that can eavesdrop on the operation of wireless telephones and other data communications devices might be outlawed.

As a general rule, the electronics industry supported an increased allocation status for unlicensed device operations. Motorola argues that the market has a negative perception of unlicensed Data-PCS devices because its non-allocated, at-sufferance status does not protect the service. Motorola contends that an alternative to a primary allocation for Data-PCS would be to define a parameter under which Data-PCS devices are presumed not to cause interference. Motorola argued that this would permit Data-PCS to operate without the threat of an Amateur licensee requesting cessation of such operations.

AT&T believes that Part 15 operations may need to be made co-primary in order to ensure their right to share with Amateur operations. AT&T said that if the FCC is not now prepared to increase the allocation status of unlicensed devices, it should leave itself open to such a change in the future.

The Part 15 Coalition also supported the creation of a "Part 16" which would provide unlicensed devices the protection of primary status. The Part 15 Coalition argued that the creation of "Part 16" would provide a long-term stable regulatory environment for unlicensed operations. It believes that this protection becomes increasingly

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important as Part 15 devices become more sophisticated and widespread.

The ARRL opposed an increase in the allocation status of Part 15 devices in the 2402-2417 MHz band because significant interference to Amateur operations from ISM devices already exists in this band, and low power Part 15 devices are the only operations that can share the band with Amateur and ISM operations without increasing mutual interference to an unacceptable level. The Southern California Repeater and Remote Base Association (SCRRBA) said that giving Part 15 devices primary status would effectively eliminate the Amateur Service in this band. AMSAT is also opposed to the formation of a Part 16 operation on this spectrum.

In its reply comments, ARRL argues that supporters of primary status for unlicensed devices do not suggest that it is necessary for interference concerns; rather primary status is allegedly needed so that consumers of Part 15 devices perceive their devices as reliable and protected from interference. ARRL asserts that there is no evidence that Part 15 device consumers have developed a negative perception toward such devices under the current rules, nor is there evidence that Amateurs have arbitrarily claimed interference. ARRL argues that users of these devices benefit from their unlicensed status; in fairness they cannot at the same time request protection from interference or entitlement to interfere with licensed services.

AMSAT argued that although these devices do not have priority in the bands in which they are used, their users do benefit because the devices do not have to be licensed, can operate with some degree of frequency agility and bandwidth variability, and can be used for an infinite number of purposes without eligibility requirements imposed upon the user. AMSAT believes that entitling unlicensed operations to the benefits of licensed operations, without any of the obligations of licensed use, would increase the administrative burdens on the Commission.

ARRL believes that Part 15 operations cannot receive primary status under the current language in the Communications Act of 1934, as amended, because the only authority the Commission has to permit unlicensed devices is restricted to radio control devices and the Citizens' Band Radio Service.

A few Amateurs requested that a guard band be erected to protect Amateur satellite operations at 2400-2410 MHz. Both Kaplan and the Northern Amateur Relay Council of California, Inc. (NARCC) wanted the 2399-2400 MHz and 2410-2411 MHz bands to be designated as guard bands. AMSAT asked that the guard band cover the 2400-2410 MHz band or at least the 2400-2402 MHz band. NARCC said that it is uncertain how Data-PCS will effect Amateur operations and recommended that portions of the band be allocated exclusively for Amateur and Part 15 operations, and another portion could be opened to all three services: the Amateur service, Data-PCS, and other Part 15 devices.

The Northern California Packet Association said

they were concerned that Part 15 and Data-PCS manufacturers will seek to outlaw electronic equipment that can eavesdrop on the operation of wireless telephones and other data communications devices operating in the 2390-2400 MHz and 2402-2417 MHz bands. NCPA contends that Amateurs use such equipment to communicate in these bands and the equipment should not be prohibited. They urged the FCC to protect the right of any person to purchase equipment capable of receiving signals in the 2390-2417 MHz band.

NCPA also felt that the protection given to unlicensed users makes it difficult for Amateur operators to determine sources of interference problems because encrypted unlicensed signals are difficult to track. They argued that Amateurs are required to identify their transmitters, but no provision exists for unlicensed operators to identify themselves. NCPA requests that business users be required to transmit occasional unencrypted identification.

The FCC decision on the 13-cm band

The Commission said they did not believe that it is appropriate to address the issue of increasing allocation status or additional rights for unlicensed devices since the allocation status of the 2390-2400 MHz and 2402-2417 MHz bands had already been determined earlier. The FCC also chose not to grant additional spectrum rights to Part 15 devices.

Regarding Amateur requests for the establishment of guard bands, the FCC believes that "...such requests would effectively change the allocation and would effectively preclude unlicensed device operations from spectrum that was allocated for such purposes."

On NCPA's concern that Part 15 and Data-PCS manufacturers will seek to outlaw electronic equipment that can eavesdrop on the wireless operations, "...we note that it is already unlawful to eavesdrop on wireless telephone and similar communications devices. Additionally, we will not require that unlicensed device users transmit an identification signal because we find such actions unnecessary. The record in this proceeding demonstrates that unlicensed device interference to Amateur operations is the exception, not the norm, and unwarranted changes to Part 15 is not in the public interest."

The new Part 97 rules

Section 97.303(j)(2) is revised to read as follows:

§ 97.303 Frequency sharing requirements.

(2) In the United States, the 2300-2310 MHz segment is allocated to the Amateur service on a co-secondary basis with the Government fixed and mobile services. In this segment, the fixed and mobile services must not cause harmful interference to the Amateur Service. The 2390-2400 MHz and 2402-2417 MHz segments are allocated to the Amateur service on a primary basis. No Amateur station transmitting in the 2400-2450 MHz segment is protected from interference due to the operation of industrial, scientific, and medical devices on 2450 MHz.

■ GATE 2 VANITY CALL SIGN

UPDATE - Hopefully, by the time you read this - more than 4,500 Vanity Amateur station call signs will have been granted by the FCC. These represent the Gate 2 applications from the first filing day, September 23rd. We will have more to say about this in our next Report.

Applicants were not aware that the FCC would be taking so long to process their call sign receipts and many have grown anxious. Some have had second thoughts and have unsuccessfully tried to cancel their Vanity call sign. They will have to pay another \$30 to get their original call sign back.

The long wait became necessary when the FCC reacted to amateur complaints charging that some filing methods gave applicants an unfair advantage in getting a specific call sign. The FCC decided to wait until they had manually keyed in all applications from the first day twice. The double-keying is to verify the first entry. This has now been completed and the FCC told us that on/about the first week in November they would handle the call signs in random order.

Now comes word that this may or may not happen, since the FCC's computer has been "down" lately and no processing of "anything" - not even sequentially issued call signs - is taking place.

There also has been several rumors floating around stating that the FCC would further hold up issuing the call signs because of a Petition filed by a California amateur, but this is not true.

■ **LATE BULLETIN!** A front cover story in the October 28th issue of industry publication, *Communications Week* tells how "The FCC is preparing to auction off a 30 megahertz chunk of radio spectrum for a new breed of wireless services." Successful bidders will be able to determine how the 2.3 gigahertz band should be used.

"The bandwidth - 2.305 to 2.320 GHz and 2.345 through 2.360 GHz is currently allocated to unlicensed digital satellite radio and mobile radio applications." The article makes no mention, however, of the Amateur Service's co-secondary status at 2300-2310 MHz. (See story on Page 1.)

The article goes on to say that "Communications experts agreed that these frequencies would be perfect for nationwide wireless data service - particularly Internet access - where they could significantly improve transmission quality over current cellular service."

"The 2.3 GHz band could yield clearer, less error-prone transmission at up to 9.6 kilobits per second. This higher bandwidth could allow faster and cheaper wireless data services to rival dial-up modems. People could effectively access the Internet from remote areas like the park, sidewalk sales, even schools..."

The article quotes government officials as being worried that "Every time the Congressional Budget Office wants to meet some budget numbers, it decides to sell some spectrum." Rep. Rick Boucher (D-Va) said "...Congress is being unrealistic. Spectrum decisions ought to be made in the telecommunications arena, not by the budget office."

■ **Club Call Signs are being assigned in huge numbers!** The FCC reinstated issuing club call signs on March 25, 1995. We have noticed lately that a large number of club call signs are going to a single trustee ...including multiple calls to a single club.

For example: On September 23rd, **Andrew M. Jensen, N5IA** (of Duncan, AZ) received KC7SRX, KC7SRY, KC7SRZ, KC7SSA, KC7SSB, KC7SSC, KC7SSD, KC7SSE, and KC7SSF. The call signs were for the Jacks Peak Amateur Radio Association which already holds the club call sign of WB5QHS. The additional call signs appear to be for different repeaters.

Kenneth M. Bourne, W6HK (of Orange, Calif.) got KF4LVS, KF4MFF, KF4MFG, KF4MFH, and KF4MFI on September 25th for the APCO International Amateur Radio Club of South Daytona, Florida. On October 8th, he received KF6GQS and KF6GQT for the Radio Club of America - Southern California

On September 9th, **James H. Roach, KD6VWK** (San Juan Capistrano, CA) received 11 different call signs for a single ham club! The Ortega Wireless League now holds 12 club calls: KF6GEY, KF6GEZ, KF6GFA, KF6GFB, KF6GFC, KF6GFD, KF6GFE, KF6GFI, KF6GFJ, KF6GFK and KF6GFL (in addition to previously issued KE6SWB.) In April he was issued KE6TEF, KE6TEG, KE6YZE and KE6UIL for various Southern California Radio clubs.

The clear cut winners, however, of the most club call signs are **Jerry P. Darby, Jr. N6UME** and **Dorothy C. Darby N6ZNC** of LaCrescenta, California. On September 10th, they were issued: KF6GFX, LaCrescenta Public Seismic Network; KF6GFY, S. Calif. Public Seismic Network; KF6GFZ, Los Angeles Public Seismic Network; KF6GGA, San Fern. Valley Public Seis.Network; KF6GGB, San Andreas Public Seismic Network; KF6GGC, Carrizo Plain Public Seismic Network

KF6GGD, San Fern. Valley Pub. Seismic Netwk; KF6GGE, Baldwin Hills Public Seismic Network; KF6GGF, Keller Peak Public Seismic Network; KF6GGG, Sunset Ridge Public Seismic Netwk.; KF6GGH, Duck Mtn. Public Seismic Network; KF6GGI, Snow Peak Public Seismic Network; KF6GGJ, Cerro Negro Public Seismic Network; KF6GGK, Mt. Disappointment Pub.Seis.Netwk.; KF6GGL, Santiago Peak Public Seismic Netwk.; KF6GGM, Monument Peak Public Seis. Netwk.; KF6GGN, San Clemente Is. Public Seis. Netwk.; KF6GGO, Hauser Peak Public Seismic Network; KF6GGQ, Lyons Peak Public Seismic Network; KF6GGR, Cuyamaga Peak Public Seismic Netwk; KF6GGS, Palomar Mtn. Public Seismic Network; KF6GGT, Saddle Peak Public Seismic Network; KF6GGU, Blue Ridge Public Seismic Network; KF6GGV, Palos Verdes Public Seismic Network; KF6GGW, Snow Peak Public Seismic Network; KF6GGY, Rose Hills Public Seismic Network; KF6GGZ, Mount Otay Public Seismic Network; KF6GHA, Johnstone Peak Public Seismic Netwk; KF6GHB, Magic Mtn. Public Seismic Network.

On August 22nd they were issued: KF6FWP, Oat Mountain Public Seismic Netwk; KF6FWQ, "Public Seismic Network"; KF6FWR, Mt.Lukens Public Seismic Network; KF6FWS, Flint Peak Public Seismic Network; KF6FWT, Pasadena Public Seismic Network; KF6FWU, San Augustine Public Seismic Club; KF6FWV, San Augustine Seismic Network; KF6FWW, "PSN"; KF6FWX, Seismic Public Amateur (sic) Club

■ **Ham Radio Outlet of Danville, Calif. has purchased the amateur radio assets of Tucker Electronics**, a Dallas area test equipment firm. All of the ham radio equipment has been transferred to other Ham Radio Outlet stores. Tucker's "800" order line (along with the "800" number of Oklahoma Comm Center whose assets were recently purchased by Tucker) are now being forwarded to HRO.

Tucker Electronics has discontinued operations of its retail store and consumer mail-order business. The sale of its amateur radio business will allow Tucker Electronics to focus on its core business, distributing new and reconditioned electronic test and measurement equipment. Tucker plans to market its vintage radios and any inventory not acquired by HRO on its website at URL <http://www.tucker.com>

It is the intent of Ham Radio Outlet to not occupy Tucker Electronics' current location but to use the assets to open two additional locations. The general area being considered is the midwest and southwest.

The substantial HRO purchase of ham gear from Tucker will allow even lower prices to its customers, from more locations closer to most customers.

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■ **Microsoft has apparently seen the light!** They are now working with Intel to develop a new family of lower cost PCS. And they will have plenty of company! While the NetPC will use Microsoft's Windows operating system and Intel chips, it will be a simpler, cheaper machine. The new PC standard is designed to dull the edge of new "web only" machines now being developed by Oracle, Apple Computer, Sun Microsystems, IBM ...and others.

Cost of the NetPC will be "under \$1,000." The new Microsoft NetPC specs are also being adopted by Compaq Computer Corp, Hewlett-Packard Co., Digital Equipment, Gateway 2000, Inc., NEC Corp. and Toshiba Corp. ...Just about everybody who is anybody in personal computers. Everyone, that is except IBM. They have their own proprietary "IBM Network Station."

■ **Tandy Company is apparently still having trouble with their Computer City operation.** They hired Matt Howard, a Sears, Roebuck and Co., executive to head up the operation just six months ago. He replaced Allan C. Bush who resigned amid sales losses. Now Matt Howard is gone "...for personal reasons." CEO John V. Roach is back running Computer City.

■ **The U.S. Postal System is experimenting with the World Wide Web.** You'll be able to buy postage stamps on-line next year. (Right now you have to call a toll free number.) The most popular feature on the USPS website is, by far, the ZIP code look up. Just enter the address and up pops the ZIP. And all of the postal regulations and manuals can now be downloaded. In the works is USPS electronic postmarking and guaranteed delivery of e-mail. URL is: <http://www.usps.gov>

■ As reported by the London-based *Morsum Magnificat*, a CW enthusiast's publication, the **Radio Amateurs of Canada, Inc. want to end the International Morse code testing requirement in the Amateur Service.** The RAC is the national ham radio society in Canada. Here is a quote from their comments on the IARU's FASC (Future of Amateur Service Committee) discussion paper.

"There is no more important subject than our vision of the future of Amateur Radio. The RAC ad hoc committee report to the IARU is a result of careful analysis and judgement. It is a major milestone en route to the 1999 World Radio Conference (WRC-99). Governments, preparing to review international Amateur Radio regulations, are looking to the IARU for sugges-

tions that are timely and realistic. Faced with needs for the future of Amateur Radio, RAC, as an IARU Member Society, recommends changes to international regulations that are practical and forward-looking.

"Questions concerning regulations over the 'Definition of The Amateur Services', 'The Banned Countries List', 'The Amateur Service As a Resource for Emergency Communications', 'Messages on Behalf of Third Party' and 'The Technical And Operational Qualifications To Be An Amateur' are examined and explored in a straightforward manner within the report. The issue of the 'Morse Code', however, took much time to consider.

"What to do about the Morse Code question is the most difficult to answer. It touches upon something which, for many, is sacred. The issue is charged by firm beliefs and deep emotional feelings. Yet, we know that radiocommunications authorities in many countries are moving to have Morse Code abandoned: not as a mode of operation, but rather as an international mandatory requirement to operate below 30 MHz. While administrations may continue to use the code in their licensing program, it is no longer viewed by some governments as a suitable international 'treaty' obligation.

"RAC is a solid supporter of the use of the Morse code 'mode'. We cannot, however, demand that it be kept as a 'mandatory' requirement in the HF licensing process. The original need, to be able to respond to government stations in CW, has disappeared. A large majority of amateurs use SSB. Many prefer modes which embrace the newer digital technologies. To suggest that the code be viewed as a 'filter mechanism', to exclude those unable or unwilling to learn the code, is discriminatory. A more appropriate and effective approach, in this regard, is to ensure that licensing examinations demand more in-depth knowledge of all modes of operation and also focus on operating procedures and on operating ethics.

"The RAC report to the IARU is just that, 'a report'. A set of proposals which will be considered, modified, adopted or rejected by the IARU. Over 150 Member Societies will be weighing the issues and presenting their recommendations to IARU over the next three years. IARU Region 1 (Europe and Africa) will address the same issues at the October conference in Tel Aviv, Israel. Region 3 (Asia and Oceania) will deliberate on it in 1997 and Region 2 (North and South America) at Caracas, Venezuela in 1989. IARU is working hard to ensure that the decisions taken at WRC-

99 impact favorably on the survival and growth of Amateur Radio in the '21st century." [Signed by: J. Farrell Hopwood, VE7RD, President and IARU Liaison Officer, On behalf of the Board of Directors, Radio Amateurs of Canada, Inc.]

■ **Application Procedure for Six Months Service Endorsement.** On October 23rd, the FCC released a *Public Notice* clarifying what it takes for ship radio officers to obtain the Six Months Endorsement. This Endorsement is needed when the radio officer is the only radioman on large U.S. cargo ships sailing the high seas.

Radio Officers holding First or Second Radiotelegraph Operator's Licenses must:

- (1) Submit a letter signed by the ship's master or owner certifying that the applicant has served at least 180 days onboard a large ship required to carry radio equipment. The name of the vessel, call sign, dates of service, total number of days served and the name and certificate number of the chief radio officer holding a Six Months Endorsement must be included.

- (2) A completed FCC Form 756, Commercial Radio Operator application.
- (3) A copy of the First or Second Class Radiotelegraph Operator's License.
- (4) Two small "passport type" photographs with name signed on left hand margin.
- (5) Copy of valid Radio Officer's license issued by the U.S. Coast Guard, and;
- (6) Certificate(s) of Discharge to Merchant Seaman.

Information goes to: FCC, 1270 Fairfield Road, Gettysburg, PA 17325-7245.

■ The October issue of *Mobile Radio Technology* (edited by Don Bishop, N0EA of Overland Park, KS) reports that the NTIA (National Telecommunications and Information Administration, an agency of the U.S. Dept. Of Commerce) has issued a wall chart defining radio spectrum uses from 3 kHz to 300 GHz.

The "1996 Spectrum Wall Chart" (Item No. 003-000-00652-2) is available at a cost of \$3.25 from the U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Inquiries and orders can be placed by telephone and fax: Tel. 202-512-1800; Fax. 202-512-2250.

■ Every year about this time (after the end of the Government's fiscal year) the VE community is advised of the maximum amount that an examinee may be charged to take an Amateur Radio license examination. **The maximum amount for 1997 is \$6.26.** This amount is based on the Dept. Of Labor's Consumer Price Index.

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DOMESTIC SHIP & AIRCRAFT RADIO LICENSING

On October 25th, the FCC released final rules that allow recreational boaters and aircraft radio stations operating domestic VHF radios to do so without a station license. For ship owners — this means you do not have to carry an FCC radio station license if you are not required to carry one by law and you do not travel to foreign ports or make international communications.

While you may use a marine VHF radio aboard your vessel without being licensed, you still must be licensed if you use single side-band marine MF/HF radio, marine satellite communications or radiotelegraphy. The FCC *Restricted Radiotelephone Operator Permit* is required for boaters having an MF/HF radiotelephone, for boaters with VHF radios traveling in foreign waters or where installation of a marine radio is required by law — such as on power-driven boats over 60 feet long (26 feet for tug boats.)

A *Marine Radio Operator Permit* is needed if the MF/HF transceiver's carrier power exceeds 100 watts; a *General Radiotelephone Operator License* if over 250 watts carrier power. Both the MROP and GROL require passing commercial radio operator examinations. Boats carrying 6 or more paying passengers -- including recreational fishing or touring vessels -- must be commercially licensed. All equipment used on Maritime frequencies must be type accepted for Part 80 operations. Amateur radio equipment may not be used -- except for emergency communications.

For aircraft owners — the new rules means you do not have to carry a radio station license to operate aviation-band VHF radio, navigation or emergency alerting equipment from your aircraft. That is, of course, providing you do not make international flights or communications. The FCC also expanded its original proposal to include all domestically operated aircraft, including air carriers, air taxis as well as general aviation aircraft.

Background

Parts 80 and 87 of the FCC Rules currently require all ship and aircraft radio stations to be individually licensed. Acting under new authority granted by the *Telecommunications Act of 1996*, the FCC proposed last April (in WT Docket No. 96-82) to remove the individual radio station licensing requirement for certain recreational vessels and small aircraft. The Telecom bill amended Section 307 to permit licensing "by rule" when the operators are not otherwise required to carry a radio station. Previous to the Telecom bill, the FCC only had the discretion to blanket license Citizens Band and Radio Control stations.

CB and R/C station licenses were abolished on June 3, 1983. The FCC said the removal of individual CB and R/C licensing was in the public interest because no individual testing was necessary, the existence of a licensee database did not assist in enforcement, and individual licensing was very costly and administratively burdensome. That same situation existed with small boaters and

private pilots. The Commissioners were also concerned that boaters might not be carrying VHF marine or air safety radios solely because of the \$75.00 ship station fee. In their comments, the U. S. Coast Guard agreed that "...fees have tended to act as a disincentive to carriage of ship safety-related communications and electronic equipment.

According to FCC licensing records, there are approximately 581,000 ship station licensees in the Maritime Services and 131,000 licensed aircraft stations in the Aviation Services that operate domestically that are not required to carry two-way radio capability by any statute or treaty. The FCC said that blanket ship and aircraft licensing would eliminate approximately 125,000 license applications filed each year for recreational ship and aircraft stations.

By treaty, marine and aviation radio stations used for international communications, vessels traveling to foreign ports, and aircraft making international flights must be individually licensed. The Communications Act also requires some commercial vessels and aircraft operated domestically to carry radio stations. No statute, however, requires recreational vessels and small aircraft to be so equipped.

The FCC has now removed the individual radio licensing requirement for these vessels and aircraft. Members of the public are no longer required to hold an individual license to operate a marine or aircraft VHF radio station, any type of emergency position indicating radio beacon (EPIRB) and/or radar on board a recreational vessel. Also eliminated was individual operator licensing of VHF aircraft radio and/or any type of emergency locator transmitter (ELT) on board small private, general aviation and commercial aircraft. EPIRBs and ELTs are radio alerting devices that are activated to mark the location of a ship or aircraft in distress.

Addressing the station identification issue, the FCC said that this can be easily accomplished without the need for an FCC license document. In the case of recreational vessels, call signs are not necessary because the name of the vessel is usually used for domestic identification, and could readily replace the use of FCC-issued call signs. In the case of aircraft, the Commission's individual licensing duplicates that of the Federal Aviation Administration. The FAA assigns each aircraft an "N" identification number, which then becomes the FCC call sign.

In addition, all radio channels are shared by all licensees, so spectrum management occurs through channel sharing, in real time, or through control exercised generally by FAA or Coast Guard stations. Ship and aircraft radio stations would still be subject to the Commission's Rules including proper operating and enforcement procedures. For example, boaters voluntarily carrying VHF radios are still required to monitor Channel 16 (156.800 MHz) - the marine distress, safety and calling channel.

The Commission said they would rely on the cooperative efforts of informed radio users to distribute distress

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communications and safety information among operators. "We anticipate that recreational vessel and aircraft operators will continue to learn about the proper use of marine and aircraft radios through instructional courses and public forums established by various organizations such as the U.S. Coast Guard Auxiliary, the FAA, and the FCC."

Effective December 1, 1996, the Part 80 and 87 Rules are revised as follows:

Part 80 Maritime Services

§ 80.13 Station license required.

(a) Except for those excluded in paragraph (c), stations in the maritime service must be licensed by the FCC either individually or by fleet.

(b) One ship station license will be granted for operation of all maritime services transmitting equipment on board a vessel.

(c) A ship station is licensed by rule and does not need an individual license issued by the FCC if the ship station is not subject to the radio equipment carriage requirements of the Communications Act or any other treaty or agreement to which the United States is signatory, the ship station does not travel to foreign ports, and the ship station does not make international communications. A ship station licensed by rule is authorized to transmit radio signals using a marine radio operating in the 156-162 MHz band, any type of EPIRB, and any type of radar installation. All other transmissions must be authorized under a ship station license. Even though an individual license is not required, a ship station licensed by rule must be operated in accordance with all applicable operating requirements, procedures, and technical specifications found in Part 80.

The FCC said it did not initially propose to include commercial aircraft because they (1) usually carry extensive radio equipment, (2) often fly internationally, and (3) represent less than 10 percent of the aircraft population. As requested, however, the FCC deleted the word "private" to include general aviation and commercial aircraft as being exempt from the radio licensing requirement.

Part 87 - Aviation Services

A new Section 87.18 is added to read as follows:

§ 87.18 Station license required.

(a) Except for those excluded in paragraph (b), stations in the aviation service must be licensed by the FCC either individually or by fleet.

(b) An aircraft station is licensed by rule and does not need an individual license issued by the FCC if the aircraft station is not required by statute, treaty, or agreement to which the United States is signatory to carry a radio, and the aircraft station does not make international flights or communications. Even though an individual license is not required, an aircraft station licensed by rule must be operated in accordance with all applicable operating requirements, procedures, and technical specifications found in Part 87.

The FCC also said that anyone who received their ship or aviation station licenses after July 17, 1994, are eligible to request a partial refund for the remaining years of their authorization. A future Public Notice will detail the proper procedure. Individuals with pending applications will have them returned without action on their part.

AMATEUR RADIO STATION CALL SIGNS

...sequentially issued as of the first of November 1996:

Radio District	Group A Extra	Group B Advanced	Group C Tech/Gen.	Group D Novice
0 (*)	AB0DB	KI0ET	(***)	KB0YTW
1 (*)	AA1QS	KE1GH	N1YBG	KB1CAB
2 (*)	AB2CH	KG2JA	(***)	KC2AAL
3 (*)	AA3PC	KE3XV	N3YFO	KB3BQS
4 (*)	AE4YQ	KT4XF	(***)	KF4MVA
5 (*)	AC5KD	KM5EH	(***)	KC5WRC
6 (*)	AC6YD	KQ6KD	(***)	KF6HAW
7 (*)	AB7TB	KK7CJ	(***)	KC7TDM
8 (*)	AA8YJ	KG8ZK	(***)	KC8FDJ
9 (*)	AA9TN	KG9IH	(***)	KB9OTZ
N. Mariana	NH0A	AH0AW	KH0FL	WH0ABF
Guam	WH2Y	AH2DC	KH2QY	WH2ANR
Johnston Is.	AH3D	AH3AD	KH3AO	WH3AAG
Midway Is.		AH4AA	KH4AG	WH4AAH
Hawaii	AH7G	AH6OV	KH7BM	WH6DCV
Kure Is.			KH7AA	
Amer. Samoa	AH8O	AH8AH	KH8DC	WH8ABF
Wake W. Peale	AH9C	AH9AD	KH9AE	WH9AAI
Alaska	(**)	AL7QT	KL0BH	WL7CTY
Virgin Is.	WP2X	KP2CJ	NP2JM	WP2AIH
Puerto Rico	KP3V	KP3AN	NP3HF	WP4NMN

* = All 1-by-2 & 2-by-1 call signs have been assigned.

** = All 2-by-1 call signs have been assigned.

*** = Group "C" (N-by-3) call signs have now run out in all but the 1st and 3rd call district.

Note: New prefix numerals now being assigned in Puerto Rico (KP3/NP3), Hawaii (AH7/KH7) & Alaska (KL0)
[Source: FCC, Gettysburg, Pennsylvania]

NEW AND UPGRADING AMATEUR STATISTICS FOR THE MONTH OF OCTOBER 1996

Amateur License Class	New Amateurs 1996	Upgrading Amateurs 1996	Total Amateurs 1996
Novice	68	0	68
Technician	1451	2	1453
Tech Plus	141	276	417
General	15	284	299
Advanced	3	238	241
Extra Class	9	176	185
Club	45	0	45
Total:	1732	976	2708

■ **The seventh annual Grove Communications Expo was held October 18-20** at the Atlanta (Georgia) Airport Hilton. Grove Communications is owned by Bob Grove, WA4PYQ of Brasstown, NC. Emphasis was on satellite communications. Featured keynote speaker at the Saturday night banquet was Dr. Ron Parise, WA4SIR, payload specialist for Space Shuttle missions STS-35 and STS-67. Ron brought along and played a tape recording containing SAREX communications made from the Space Shuttle.

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FCC DISCONTINUES THE FCC FORM 610-R

License Renewal/Modifications now handled by VECs

"We have a few comments on the informal questions that have been raised with respect to the funding of the [VEC] Conference. First off, we would like to see you continue with the Conference. This Conference has been of great service to the amateur community. It is to everyone's benefit for the FCC staff to sit down with the volunteers on the front line and learn of your concerns first hand. It makes it possible for use to serve the amateur community better." [Remarks by FCC's John B. Johnston, W3BE, June 23, 1995 VEC Conference.]

Those were the opening words spoken by FCC's John B. Johnston on the subject of funding of the Annual VEC Conference. The Volunteer-Examiner Coordinators meet once a year in Gettysburg, Pennsylvania to exchange views on ...and to plot the future of license examinations in the Amateur Service. There are currently sixteen VECs. Participating in the VEC Conference is an expensive proposition in that the VECs are scattered coast-to-coast throughout the U.S. and travel and hotel expenses are high.

Most VECs do not generate sufficient test fees to afford the expense and the travel costs becomes a personal obligation. And there are also costs associated with various VEC activities ...such as those connected with the VECs Question Pool Committee for example.

The QPC is charged with the responsibility of developing, revising, and distributing all new written examination question pools. This committee collaborates extensively via electronic mail and a new question pool is distributed every December 1st to the ham radio community, amateur media and publishers. The new questions begin showing up in examinations administered the following July 1st.

Every question pool is revised on a four year cycle.

<u>Release Date</u>	<u>Examination Element</u>	<u>Use in Exams</u>
Dec. 1, 1996	Element 2, Novice	July 1, 1997
Dec. 1, 1996	Element 3(A), Technician	July 1, 1997
Dec. 1, 1997	Element 3(B), General	July 1, 1998
Dec. 1, 1998	Element 4(A), Advanced	July 1, 1999
Dec. 1, 1999	Element 4(B), Extra Class	July 1, 2000

Funding the VEC Conference

In 1994, the VECs took up the question of funding the VEC Conference. One of the ideas placed on the table was copyrighting the question pools and then charging study material publishers a license fee to use the questions. Another suggestion was soliciting funds from manufacturers and publishers. The VECs, however, were told by Johnston that "Copyrighting the pools would be fundamentally contrary to the Commission's goal to give the best possible services that it can to the public it serves at a minimum cost. The question pools are in the public domain. That means they are accessible to anyone including publishers, and there is to be no charge for them."

"As to soliciting funds from manufacturers and pub-

lishers: The statute leaves no doubt where reimbursement funds are to come from. Those funds must come from the examinees. That is the only source of funds authorized for the volunteers to collect for providing service to the public in the name of the United States Government. No other solicitation of funds is authorized in the VEC system. We believe that it would be illegal to do so."

The maximum test fee amount is determined each year based on inflation. The test fee (expense reimbursement) started in 1984 at \$4.00 and adjustments are made annually based on increases in the Consumer Price Index. The maximum permitted test fee for 1996 is \$6.07 and most (but not all) VECs round this amount down to \$6.05.

Another funding suggestion put forth was the possibility that the VECs might be authorized to electronically file license renewal and modification applications for which a fee could be charged. It was pointed out to the FCC that electronic filing saves dwindling Government resources.

The VECs estimated that it costs the FCC more than \$50,000 a year to print, mail and process renewals in the Amateur Service and possibly this was a service that could be assumed by the VECs for which a fee could be charged. No applicant would be required to use these services, but could if they wanted to. Amateurs would still be able to send in their Form 610 renewal application directly to the FCC at no charge

Approval given for VECs to handle license renewals

An inquiry was made to the FCC in early 1996 which appeared to be well received. It was, however, pointed out that current law only permits the FCC to utilize the services of Amateur operators to prepare and administer examinations for amateur operator licenses. The FCC acknowledged that the processing and electronic filing of examination applications had "...been very successful in eliminating delays in obtaining licenses. The available software, hardware, procedures and experience can similarly eliminate delays in processing of license renewal and modification applications."

On July 16, the FCC's Wireless Telecommunications Bureau adopted an Order stating that "Although electronic filing of applications for license renewal or modification is not a license examination preparation or administration function, we will permit any VEC to perform this additional function on behalf of Amateur operators because such action is procedural in nature. We nonetheless will consider such activity to be separate from their responsibilities as VECs and require that, if provided, it be at no cost to the Government." (See W5YI Report, Aug. 1, 1996, Page 2)

"In this connection, the compensation, if any, the organization receives as a result of providing this service is a matter that is between the Amateur operators choosing to use the organization's services and the organization. In addition, no VEC organization will be required to perform this service, nor will it be mandatory that such applications

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be filed electronically. The Commission will continue to process renewal and modification application filed via hard copy on FCC Form 610 with the Commission."

The FCC said "It is in the public interest to allow (but not require) these organizations to perform this function. This will provide for more efficient application processing for Amateur service license grants." In the Order adopted July 16, the Commission waived the rules requiring that renewal applications be submitted to the FCC in Gettysburg. This Order was released on July 17 - one day before the July 18, 1996 VEC Conference.

License renewal handling by VECs

A survey of VECs was completed after the VEC Conference to determine the best way to implement the Order permitting the VECs to charge a fee for electronically filing Amateur license renewals and modifications. It was suggested that in order to eliminate confusion to the Amateur community, that the FCC should discontinue mailing of the Form 610-R prior to a program being implemented by the VECs.

ARRL/VEC's Bart Jahnke, KB9NM said he expected "...that the ARRL/VEC will want to provide 'electronic filing of Form 610 modifications' as a member service, at no charge to ARRL members." A press release was issued shortly thereafter stating that the League would indeed be offering free electronic filing of FCC Forms 610 renewals, call sign changes, name and address changes. (See *W5YI Report, Sept. 15, 1996, Page 4.*)

To eliminate confusion, the FCC was asked by the VECs to discontinue mailing of renewal notifications. During mid-August, FCC's Gary Stanford agreed to discontinue the FCC Form 610-R. The VECs (including the ARRL/VEC) were notified that September 30 had been set as the date that the FCC would discontinue mailing notification of license renewals. The arrangement was that the renewal notification program would be picked up by the VECs effective with licenses expiring after Jan. 1, 1997.

The W5YI-VEC agreed to handle the preparation and pay the associated costs of mailing the renewal notices. Approximately 78,000 renewal notices would have to be mailed for licenses expiring in 1997. The printing, mailing and administrative cost to mail and electronically process a single renewal comes to about 50¢ each (25.6¢ of which is postage.) A fee of \$6.00 was suggested ...with a portion being earmarked for VEC Conference expenses.

A special computer program was written which selects and prints out mailing labels from the daily updated FCC database of Amateurs whose license would be expiring in the coming 90 day period. On October 15th, nearly 4,500 renewal notifications for licenses expiring in January 1997 were mailed out by a commercial mailing service.

A snafu develops during the first month

While the FCC said they would discontinue the Form 610-R mailings on Sept. 30th, someone forgot to tell the

FCC's computer department! But on October 22, the FCC finally abolished mailing of the license renewal notifications. The VEC System picked up this up this program effective with renewals coming due after Feb. 17, 1997.

Approximately 90 days before a license expires, an amateur will receive a notification letter along with both a Form 610-R renewal card or a yellow FCC Form 610. The card will indicate the license expiration date and the application information that the FCC has on the Amateur. If there is no change, all the Amateur need do is to sign and return the card. A fee of \$6.00 is requested.

A yellow FCC Form 610 is enclosed for completion if the Amateur's address has changed. In short, the Amateur simply completes either the card or the yellow Form 610. The amateur is also given an opportunity to purchase an up-to-date copy of the FCC Part 97 Rules for an additional \$3.95.

FCC's Walt Boswell, Gettysburg Licensing Division Chief wrote the following letter, "My apologies for the confusion that caused amateur radio renewal notices to be issued by both the FCC and The W5YI Group during the first three weeks of October. It was the result of internal miscommunication on our part. As of October 22, 1996, the FCC discontinued the printing and mailing of renewal notices. Amateur radio operators whose licenses expire on or before February 16, 1997 have received a renewal notice from the FCC. Those whose licenses expire on February 17, 1997 or after will not receive a notice from the Commission.

We have ceased to print and mail amateur renewal notices in order to encourage licensees to use the Volunteer Examiner Coordinators (VECs) to file their renewal applications electronically. Although the VECs may charge a fee for this service, we believe many amateurs will file electronically through a VEC. License holders may still file for renewal directly with the FCC at no charge by submitting FCC Form 610. However, by filing electronically, amateur operators will receive their new license more quickly than by filing a paper renewal form. Even those licensees who have received a renewal notice from the FCC may still have a VEC file their renewal application electronically. Those who choose to do this need not file their renewal application directly to the FCC.

We look forward to smooth sailing with this new program, which will also allow amateur operators to submit modifications electronically through a VEC. These modifications include change of name, change of mailing address, or a request to receive a new call sign from our sequential (non-vanity) system.

Through cooperation between the FCC and VECs, we are striving to provide more efficient service while saving money for the American taxpayer. I would like to encourage all amateur licensees to avail themselves of this opportunity. [Signed, Walter G. Boswell, Chief, Licensing Division, Office of Operations - FCC Gettysburg, Wireless Telecommunications Bureau]