

# W5YI

National Volunteer Examiner Coordinator

## 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. May be reproduced providing credit is given to The W5YI Report.

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...and much, much more!*

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## Ham Radio Protection Bill Introduced in House

### Can FCC Be Forced to Preserve Amateur Spectrum?

On January 3, Congressman **Jim Cooper (D-TN)** introduced H.R. 73, the *Amateur Radio Spectrum Protection Act of 1991*. "Amateur radio operators tell me that they have already lost over 100 MHz of spectrum due to decisions by the FCC, and I don't want to see them lose any more," he said.

The bill would amend the Communications Act -- the 1934 legislation that created the FCC -- to prevent the agency from squeezing hams out of spectrum without compensating them with equivalent spectrum.

There is no immediate threat of FCC reduction of amateur spectrum at this time as there was with the recent reallocation of the 220-222 MHz band. As we previously reported, the U.S. Court of Appeals rejected the ARRL's appeal of that action. Now that band can be made available to commercial two-way radio users. (Hams may still operate there for a while longer until the FCC announces new rules later this year.)

More reshuffling of the radio spectrum is possible. The proposed *Emerging Telecommunications Technologies Act (ETTA)* would require the government to transfer some of its spectrum over to the FCC for reallocation to the non-government sector. The actual users of that recovered spectrum

have never been specified. However, some amateur bands shared with government operations could be affected by ETTA.

H.R. 73, if signed into law, could mitigate the impact on the Amateur Service of any spectrum reorganizations. "Under H.R. 73, the FCC won't be able to give away ham radio bands to some special business interest and leave ham radio operators in my district and across America high and dry," Cooper said. "If the FCC sees a need to use ham radio frequencies for another purpose, my bill will require the FCC to transfer ham operators to other frequencies that are just as good.

"If the FCC tried to take away a television station's spectrum, broadcasters would scream bloody murder and fight all the way to the Supreme Court," he said. "But since amateur radio operators don't have the kind of money and muscle for a long court battle, the FCC has chipped away at their spectrum. ...I've come to believe that amateur radio operators are a valuable national resource, and I hope to see that they keep the necessary radio spectrum to enable them to be around for many years to come."

Text of the bill follows on the next page.

## SECTION 1. SHORT TITLE.

This Act may be cited as the "Amateur Radio Spectrum Protection Act of 1991."

## SEC. 2. FINDINGS.

Congress finds that --

(1) ...more than 490,502 radio amateurs in the United States are licensed by the Federal Communications Commission after a thorough examination in radio regulations and technical principles of radio communications, as required by international regulations;

(2) ...by international treaty and Federal Communications Commission regulation, the amateur is authorized to operate stations in a radio service of intercommunications and technical investigations solely with a personal aim and without pecuniary interest;

(3) ...among the basic purposes for the amateur radio service is to provide voluntary noncommercial radio service, particularly emergency communications;

(4) ...emergency communication services by volunteer radio amateurs have consistently and reliably been provided before, during, and after floods, tornadoes, forest fires, earthquakes, blizzards, train wrecks, chemical spills, and other disasters; and

(5) ...the Federal Communications Commission has taken actions which resulted in the loss of over 100 MHz of spectrum to amateurs.

## SEC. 3. FEDERAL POLICY REGARDING REALLOCATION OF AMATEUR RADIO SPECTRUM.

Section 303(c) of the *Communications Act of 1934* is amended --

(1) ...by redesignating subsection (c) as subsection (c)(1); and

(2) ...by adding at the end of such subsection (c)(1) the following new paragraph:

"(2) The Federal Communications Commission shall not diminish existing allocations of spectrum to the amateur radio service after January 1, 1991. The Federal Communications Commission shall provide equivalent replacement spectrum to the amateur radio service for any frequency reallocation after January 1, 1991." [End of bill.]

Congressman Cooper has been deeply involved in telecommunications issues on Capitol Hill. One interesting example in which he played an important role was Alternative Operator Services legislation, which requires long-distance companies that serve pay telephones to treat consumers fairly and to disclose pricing and service information. Lower long-distance rates are also expected as a result.

We asked David Withrow, administrative assistant to Congressman Cooper, about what amateurs who support H.R. 73 could do to support it. "They can write their congressman, especially if the congressman is on the Telecommunications Subcommittee, or the Energy and Commerce Committee, or if they have a member from their state on the committee. Ask them to support the bill."

House Telecommunications and Finance Subcommittee members include:

Al Swift (WA); Cardiss Collins (IL); Mike Synar (OK); Billy Tauzin (LA); Ralph Hall (TX); Dennis Eckart (OH); Bill Richardson (NM); Jim Slattery (KS); John Bryant (TX); Rick Boucher (VA); Jim Cooper (TN); Thomas Manton (NY); Ron Wyden (OR); John Dingell (MI); Matthew Rinaldo (NJ); Edward Madigan (IL); Carlos Moorhead (CA); Thomas Tauke (IA); Don Ritter (PA); Thomas Bliley (VA); Jack Fields (TX); Michael Oxley (OH); Dan Schaefer (CO); and Norman Lent (NY).

[The membership of the subcommittee is subject to change.]

"We hope to be a real forceful advocate in drawing attention to the needs of ham radio operators and the benefits they provide," Withrow said.

"There's a lot of demand for spectrum. It seems to be a growing competition. We want to make sure ham operators have a strong voice in Congress, because they aren't like the most powerful companies in the world, they don't have large lobbying forces up here in Washington. We think they provide good service, particularly in rural areas, and their voice deserves to be heard. Cooper is a pretty strong player within the Telecommunications Subcommittee, and he would like to champion the cause of the amateurs."

"I am a currently licensed Extra Class amateur radio operator and wish to be a volunteer examiner. I have never had my station or operator license revoked or suspended. I do not own a significant amount of real estate and I am not a member of any organization." [Text continues vertically down the right margin]

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ARRL Washington Area Coordinator **Perry Williams/W1UED** (whom we met in Congressman Cooper's office) noted that hams who try to get their own district congressmen to co-sponsor the bill should send the League copies of correspondence that they send to Congress. "Then we will be able to coordinate our visits here [to Congress] to peaks in the mail to a given congressman," he said. "If a congressman has just got 25 letters, then he obviously will be ripe for a visit from us."

W1UED explained that one of the strengths of the bill is that it does not aim at any particular industry or FCC proposal. Therefore, there is no immediate interest group that will be offended by the proposal.

We believe, however, that should the bill show signs of making progress, spectrum-related industry interests are likely to lobby against H.R. 73. They could argue that the bill would "tie the hands" of the FCC in the future and invite virtually any group to have its own spectrum use locked in by law, safe from any reductions. Local support for the proposed legislation is therefore critical.

The bill to protect amateur radio spectrum was introduced on the first day of the new 102nd Congress. In commenting on H.R. 73 (an interesting designation for Ham Radio legislation), ARRL President **Larry Price/W4RA** said he hoped many Congressmen would join Representative Cooper as co-sponsors. "We know that Amateur Radio has many friends on Capitol Hill," he said. "Our success in defeating unreasonable license fees 1989 proved that."

## FCC RELOCATES 80 METER NOVICE CW BAND

The FCC has amended its rules to relocate Novice and Technician Operator Class control operator frequency privileges in the 80 meter amateur service band from the 50 kHz at 3700-3750 kHz to the segment at 3675-3725 kHz.

This rule change will reduce the amount of mutual interference between U.S. amateur stations and Canadian amateur stations, and provide Novice and Technician Class control operators with more opportunities to improve their telegraphy skills.

Commission rules authorize amateur stations with a control operator holding a Novice or Technician Class operator license to transmit telegraphy in the 80m Novice segment. This segment is designed so that beginning amateur radiotelegraphers can gain actual experience in sending and receiving telegraphy messages.

In Canada, however, frequencies in the upper half of the 80m Novice segment are used by amateur stations for telephony transmission, thus creating the potential for interference when a U.S. station transmits telegraphy on the same channel and at the same time as the Canadian station. Relocation of the 80m Novice segment to 3675-3725 kHz provides a solution to the mutual interference problem.

The Commission, however, declined to adopt a proposal by the *American Radio Relay League* to expand the 80m Novice segment by 25 kHz. Although the Novice and Technician Class operators would have access to a larger frequency segment in the 80m band, they would have to share it with large numbers of United States stations transmitting with a higher power. Rather than less interference to stations, the Commission said that the likelihood existed for more.

[Commission action January 4, 1991, in PR Docket 90-100. The Jan. 10th FCC press release did not indicate the effective date of the Report & Order.]

■ The **Dayton Amateur Radio Association** is now accepting applications for its **1991 Scholarship Program**. There will be eight \$1,500 scholarships available. The program is open to any FCC licensed amateur radio operator graduating from high school in 1991. There are no restrictions on the class of license or the planned course of study. Information and application forms may be obtained by writing to: **DARA Scholarship Committee, 317 Ernst Avenue, Dayton, OH 45405.**

■ The Jan.-Feb. issue of **The Futurist**, journal of the non-profit *World Future Society*, contains a write-up on the potential of four low-earth orbiting "**Microsat**" **communications satellites**. "...literally built on kitchen tables and in garage workshops [by AMSAT] ...their antennae are extended carpenter's tape measures." Each has low cost international store and forward messaging capability.

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## FCC CRACKS DOWN ON FREEBANDERS, COMPUTER AND TOWER RULES VIOLATORS

For what seems to be the first time ever, the FCC made an organized mass "bust" of so-called "free-band" operators in the 25 and 28 MHz bands. Enforcement actions against specific operators have been taken in the past, but this latest crack-down nabbed 144 violators over Dec. 13 and 14. Personnel from all 35 FCC field offices were involved in the effort.

The average fine imposed was \$1,000. Several were fined \$2,000 for repeat offenses. Some operators refused to allow FCC agents to inspect their stations. This refusal itself drew a \$600 fine in addition to the regular \$1,000 fine for unauthorized operation. The total amount fined in the freeband sweep was a whopping \$147,000.

Unlike other FCC actions against illegal stations, no U.S. Marshals were involved in the effort and equipment was examined but not seized. In most cases operators were identified by long-range direction finding, followed by close-in mobile DF by Field Operations Bureau vehicles.

Besides the fact that the "freeband" frequencies are not allocated to citizen use, incidents of TV interference have increased as the illegal operations have expanded the size of the band they occupy. We were shown computer-generated plots of freeband activity that indicated saturation-level operation in the 27.405-28 MHz area. The bands are allocated to business and government low-power use. FCC staff were not aware of any particular interference from freebanders to those legitimate operations.

Operators included members of organized groups such as World Wide Sideband, Satellite, Alfa Tango, Whiskey Jack, Unidad, Truckers, Eagles International and Old Timers. Several of these organizations are widely active in foreign countries. The Commission action zeroed in on U.S.-based leadership of the organizations. FCC monitors told us that they heard one prominent leader of a freeband group announce on the air that his organization was closing down. He asked for donations to help defray the cost of the fine.

The unlicensed transmissions came from all 50 states, plus D.C. and Puerto Rico. The most active states were Florida, California, Michigan, Texas and Arizona. The equipment was typically modified CB or ham gear, often used with homebrew or illegal manufactured linear amplifiers. According to FCC staff, the most common radio involved in the activity was the infamous Uniden 2510 10-meter transceiver running 20-25 W.

In an address to a Virginia ham club on January 15, 1989, Arlan Van Doorn, Deputy Chief of the FCC's Washington, D.C. Field Operations Bureau mentioned that the FCC had obtained a Uniden 2510 complete with a set of instructions explaining how to modify it to freeband operation. (See *W5YI Report, Feb. 1, 1989, p.8.*) Uniden was later required to recall their 2510's and epoxy the adjustment point. Apparently many 2510's were sold for illegal use, however, before the recall.

It was also the Uniden 2510 that **Michael Harrison ex-WB2PTI** advertised in radio hobby publications at a "never heard before price." He got over \$100,000 worth of orders, and customers never got the radio or their money back. Harrison is currently serving time for mail fraud in a North Carolina federal prison. Uniden has since gone out of the ham radio equipment business.

### *FCC shops for PCs; examines towers*

The freeband bust wasn't the only recent enforcement action that may help cash-strapped Uncle Sam. At Comdex, the huge personal-computer industry convention in Las Vegas, FCC agents posed as sales prospects for computer purchases. They issued \$200,000 in fines to exhibitors who offered to sell them non-FCC certified computer equipment. Sometimes the products carried invalid or made-up FCC ID numbers. At the Comdex show, 105 of approximately 250 vendors were found not in compliance, the bulk being laptop models.

"The FCC is striving to improve the compliance rate so that all vendors can compete equally in the marketplace," the Commission said. "Violators have an unfair economic advantage when they rush uncertified products to market while their

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The Radio Amateur's LICENSING HANDBOOK is for everyone who gets involved in ham licenses ... for non-hams who want to know about amateur radio license tests amateurs multiple choices and answers in every

competition applies to have their products FCC certified." Certification usually takes about 50 days.

During November, the FCC conducted a nationwide campaign to enforce the rules that require proper painting and lighting of radio towers. More than 1,000 towers were inspected. The level of compliance was 84%, a result that the Commission called "unacceptable" because of the risk to air safety. Over \$350,000 in fines will be issued to licensees whose antennas are on the towers. A follow-up investigation is planned for July. In 1989, a pilot and a nurse died when their helicopter crashed into an unlighted cellular radio tower in North Carolina.

In a sting operation, the FBI penetrated two separate Nashville-based BBSs (computer bulletin boards) and found its owners transferring commercial software at extremely low prices. The Debini BBS and the Wet Paint BBS were closed down. Their owners face \$50,000 fines and five years imprisonment.

■ According to *Glenn Baxter/K1MAN*, Belgrade Lakes, Maine, a *Amateur Radio Peace Corps* delegation of twelve people has elected to stay in Iraq past the January 15, 1991 deadline. Baxter told us "*Steve Blair/VK2BZB*, IARN Amateur Radio Peace Corps Assistant Manager in Iraq is negotiating with top officials in Iraq and Jordan to open up lines of amateur radio communications to enhance international good will, to discourage war, and to make ready for assisting international humanitarian relief efforts in case of war."

Baxter said the delegation arrived Jan. 1 in Iraq and consists of 4 Australians, 1 American, 1 Swede, 3 British, and 3 from New Zealand. "They have set up a camp 400 miles from Baghdad, on the Iraq - Saudi Arabia border, in a zone marked on all Iraqi military maps as a neutral area. Ten of the volunteers remain at this camp, and two remain in Baghdad, with a rotation of personnel every two to three days. The group has been granted a welcome to stay by the government of Iraq, but permission to operate amateur radio equipment is still pending."

■ Effective January 1, Courage Center's *Bruce*

*Humphrys/KØHR* is relinquishing his position as director of the *Department of Rehabilitation Technology* to re-assume the role of **HANDI-HAM director**. "My vision for the Courage HANDI-HAMS System is to enter its second quarter century as the world leader in educational and support services to radio amateurs with disabilities," Bruce said. There are some 6,000 disabled HANDI-HAMS members. The Courage HANDI-HAMS System is almost entirely (90%) financed by contributions and there is a need more support. Contributions should be sent to: *Courage HANDI-HAMS System, Courage Center, 3915 Golden Valley Road, Golden Valley, MN 55422. (Tel. 612/520-0511)*

■ If you have been lucky enough to work *Musa Manarov/U2MIR* orbiting on the **MIR Soviet space station** (145.55 FM); QSLs should be directed to: Leonid Labutin; Veshiakovskaya St. 11-1 56; 111539 Moscow USSR. Amateur packet radio activity is expected any day now from MIR. By the way, there seems to be a controversy concerning a lottery sweepstakes prize of a one week all-expense paid trip to the MIR space station next year. A telemarketing outfit is offering this as the prize if you are selected after first calling a "900" number. At first the USSR said they knew nothing about the prize - now we understand the trip is a legitimate "payload." The phone number is 1-900-258-2MIR and costs the caller \$2.99. The lottery runs for the entire 1991 year - drawing is in December.

■ We have received two letters from *Lloyd/W6KG and Iris/W6QL Colvin*, the **YASME globe-trotting DXers**. The first letter was postmarked Naputo, Mozambique. Iris mentioned that they received much help from five women in getting permission to operate from Mozambique - a country in the midst of a 15 year war. It is indeed a very rare DX catch on the amateur airwaves. The American Ambassador to Mozambique, Melissa Wells, wrote a letter of their behalf to the Minister of Communications asking him to help them. Another lady in the U.S. Malawi Embassy suggested they stay at the Cardoso Hotel in Maputo, Mozambique and gave them names of "contacts" who might help. One of these contacts, a third lady, turned out to be the daughter of the ex-President of

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Mozambique. (His photograph appears on their paper currency of which Iris sent us a sample.) She knew the secretary to the Minister of Communications who agreed to give the Colvin's permission to operate ham radio from Mozambique as C9QL. Another lady, the acting manager of the hotel, allowed them to install and operate their amateur radio equipment. They made over 5,000 QSOs with amateurs in 131 countries. A second letter is postmarked December 11th from Walvis Bay, South Africa where they worked over 8,000 QSOs as ZS9/W6KG, 152 countries.

■ Stats recently received from the FCC's Personal Radio Branch show that nearly three-quarters of all FCC amateur operator licensing is at the Novice and Technician level ...and climbing! While Novice licensing has been growing 4.7% annually; the issuance of Technician tickets has been expanding at a 15.9% per year clip. It will be interesting to see the impact of the new Code-free Tech Class on Novice licensing. The figures:

	FY-1984	1985	1986	1987	1988	1989	1990
New Novice	17392	15913	19147	22319	18550	20047	22979
New Tech.	730	851	1163	1452	2117	2498	2617
Nov.-Tech *	6724	7629	8473	11168	13050	14024	15386
<b>Total N/T</b>	<b>24846</b>	<b>24393</b>	<b>28783</b>	<b>34939</b>	<b>33717</b>	<b>36569</b>	<b>40982</b>
Total Lic.	34984	37671	43207	48152	47422	49854	55833
<b>Nov./Tech %</b>	<b>71.0%</b>	<b>64.8%</b>	<b>66.6%</b>	<b>72.6%</b>	<b>71.1%</b>	<b>73.4%</b>	<b>73.4%</b>

(\* = Novices upgrading to Technician) FY is from Oct.-Sept.

■ **Dr. Michael Christ/XE1MD** of Mexico City wrote us concerning ham licensing in Mexico. He says "In Nov. 1988 the SCT, (their FCC) issued a new *Reglamento de Radioaficionados*. All candidates have to satisfy a written test on technology, regulations and operating procedures according to the class of license they apply for. There are four possible choices. **First Class:** 10 WPM code; all bands; 1250 watts HF; 500 watts VHF/UHF output; 5 year term/renewable. **Second Class:** 7 WPM code; all bands; 500/200W; 5 yrs/renewable. **Novice:** No-code; 7000-7050 kHz/144-148 MHz; 150/50W; 2 yrs/not renewable. **Restricted:** No-code; 50W; 144-148 MHz; 1 yr/not renewable. **Foreign amateurs** may operate up to six months as tourists using their own call with an XE prefix. A valid foreign license, passport/VISA, letter from XE ham warranting the proper use of the station, 2 photos and proof of payment of license fee (about \$50) is required to obtain the authorization."

## NOVEMBER AMATEUR LICENSING STATISTICS

November	1987	1988	1989	1990
New				
Amateurs:	1131	1852	1312	1746
<b>Upgrading:</b>				
Novices	647	1045	868	1016
Technicians	231	409	310	633
Generals	224	338	244	494
Advanced	134	285	151	264
<b>Total:</b>	<b>1236</b>	<b>2077</b>	<b>1573</b>	<b>2407</b>

<b>Renewals: (*)</b>				
Total Renew:	2183	1874	* 151	* 28
Novices	126	165	* 19	* 4

<b>Purged: (*)</b>				
Total Dropped:	743	1569	** 1020	** 1300
Novices	354	610	** 371	** 519

<b>Census:</b>				
<b>Indiv. Oper.</b>	<b>431301</b>	<b>438038</b>	<b>468447</b>	<b>496947</b>
Change/Year	+12043	+6737	+30409*	+28500*

### Individual Operators by Class: (and % of total)

Extra	Advan.	General	Technic.	Novice	Total:
<b>November 1987</b>					
43608	98383	114396	92618	82296	<b>431301</b>
10.1%	22.8%	26.5%	21.5%	19.1%	100.0%

<b>November 1988</b>					
46735	98465	112974	100878	78988	<b>438038</b>
10.7%	22.5%	25.8%	23.0%	18.0%	100.0%

<b>November 1989 (*)</b>					
50070	101904	116944	114507	85022	<b>468447</b>
10.7%	21.8%	25.0%	24.4%	18.1%	100.0%

<b>November 1990 (*)</b>					
53520	105102	119552	126543	92230	<b>496947</b>
10.8%	21.2%	24.0%	25.5%	18.5%	100.0%

Club/	(1987)	(1988)	(1989)	(1990)
RACES &	2411	2288	2462	2434
Military:				
<b>Total Active:</b>	<b>433712</b>	<b>440316</b>	<b>470909</b>	<b>499381</b>
% Increase	+2.8%	+1.5%	+7.0%*	+6.0%*

### \*Adjusted Growth is actually a decrease!\*

(\*) NOTE: The number of amateurs in 1989 and 1990 is not comparable with prior years. Due to the implementation of the 10-year term license in 1984, amateurs who would ordinarily be dropping out of the Amateur Service between 1989 and 1993 by not renewing will be carried on the amateur roles for another five years before being purged from the FCC's data base. This has the effect of greatly overstating the amateur census for 1989 and 1990 since the records of silent keys and non-renewals will not be deleted. (\*\*) Amateurs being dropped are those within the "grace period" in the "Master File" - not the "Active File".

[Source: FCC Licensing Facility, Gettysburg, PA]

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## FCC ISSUES CODEFREE TECHNICIAN ORDER

The Commission has released the Report & Order along with the new Part 97 Rules covering the new no-code Technician Class and telegraphy exemptions for disabled amateurs.

An R&O is the last document issued before laws are changed and new procedures implemented. They are a summary of an entire proceeding and is required by the 1946 Administrative Procedures Act. They include the FCC's consideration of the public comments, their decisions and state any new regulations.

### **No Code Comments from the Public**

Approximately seventy percent of the more than 1,110 comments received from the public favored some sort of entry level codeless class. Some of these comments suggested alternatives that would have had undesirable effects on current licensees, the volunteer testing community, the FCC's workload - or went beyond establishing a single codeless class. The FCC said the remaining thirty percent objected to any form of codeless license.

Among those confirming the need for a codeless class is the *Quarter Century Wireless Association*. "...many QCWA members have a lifetime history of operating with and a sentimental attachment to, use of the Morse code. It is understandable that some may not be overly enthusiastic in endorsing changes in licensing procedures which would delete the requirement of proficiency in this traditional mode of communication. Nonetheless, after consideration of the facts associated with licensing trends, we have concluded that the blanket code proficiency requirement may be a major cause of decline in the entry of many people into the Amateur Radio Service. Given this conclusion and in recognition of our responsibility to the Public Interest, we are agreed that a blanket Morse code requirement for entry into the Amateur Radio Service can no longer be justified."

The *American Radio Relay League* agreed "...the FCC objectives in this proceeding are basically sound and are consistent with its own rationale for the creation of a codeless class. An ARRL study committee has concluded that the perception of the Morse telegraphy requirement filtered out too many desirable and technically qualified operators who have not recognized the value of manual telegraphy as a means of practical communication."

The *National Conference of Volunteer Examiner Coordinators (NCVEC)* stated that it "...found ample evidence that the Morse telegraphy requirement is no longer essential to an entry level amateur operator license." The *Amateur Radio Industry Group (ARIG)*,

another codeless class supporter, commented "...amateur radio has evolved from a hobby of tinkerers and telegraphers into a service of communicators... The Morse code requirement at the entry level is a carry-over from the origins of amateur radio which today may be preventing many interested and otherwise qualified persons from entering the Amateur Radio Service."

### **Value of the Morse Code...**

There were also opposing views. Some said that telegraphy skill is absolutely required for any participation in the amateur service, claimed telegraphy as a superior communications medium ..with telegraphers being model radio operators. They argued "...Morse code is the most effective means of communicating and the only one which can be used under the most adverse conditions." "All hams must be prepared to use code in an emergency situation." "We do not desire to have individuals join our ranks that would have us lower our standards."

Another contention was based upon the need to maintain tradition. "I had to take the code when I got my ticket, so why should someone else pass the code up?" "I believe everyone should be blessed with the glory of learning code before operating in the amateur frequency spectrum."

The FCC acknowledged the responses clearly confirmed that the amateur community was undergoing a dramatic shift in sentiment concerning the value of Morse code as an entry level license requirement. "Modern commercial and military electronic systems require engineers to design them, technicians to install and maintain them, and a technologically literate citizenry that can use them. The amateur service should as it has in the past, attract technically inclined persons, particularly the youth of our country, and encourage them to learn and to prepare themselves in the areas where the United States needs expertise."

The FCC added, "We do not foresee that telegraphers will be in as great demand by future systems as will electronics and communications experts. ...We conclude that telegraphy skill is not so essential to proper operation of a station that transmits exclusively above 30 MHz such as to justify turning away otherwise qualified persons who do not possess the skill."

"We do not concur with the comments alleging that the passing of a telegraphy examination is an indication of the examinee's good character, high intelligence, cooperative demeanor, or willingness to comply with our rules. These traits are also found in individuals who have not passed such a test. For regulatory purposes, passing a telegraphy examination is no more and no less than proof of the examinee's ability

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to send and receive texts in Morse code as some specified rate."

### **FCC Rules on Codeless Ham License**

Instead of enacting its controversial proposal for a Communicator license, the FCC on Dec. 13 removed the 5 WPM Morse code requirement from the existing Technician Class amateur operator license. Praising Amateur Radio for its achievements, the five Commissioners voted unanimously for the change.

Implementation of the new rules takes place on February 14, 1991. Applicants who have already passed the Novice and Technician written requirements during the past year will be immediately eligible for the new Technician class.

At the same time, the FCC voted to change the Part 97 Regulations to include the procedures for exempting handicapped Novice and Technician hams from the 13 and 20 WPM Morse tests required for upgrading to higher license classes. The 5 WPM Morse test will continue to be required of all amateurs who desire HF operation. The FCC told us that they were preparing additional instructions to doctors and volunteer examiners which will be issued shortly.

Current holders of Technician licenses will be 'grandfathered,' meaning that they will keep all of their current privileges (including HF privileges). After the new rules go into effect, new Technician licensees will receive all amateur privileges above 30 MHz. They may optionally pass a 5 WPM Morse test to obtain the same privileges below 30 MHz enjoyed by Novices and current Technicians.

### **Codeless Technician Qualifications...**

The "new" Technician exam will consist of 55 questions from the current Novice and Technician elements 2 and 3A. The multiple choice exam will not include five proposed special questions about Morse code's "utility and tradition" as requested by the ARRL. Element 2 (30 questions) and 3A (25 questions) need not be taken at the same time.

The FCC said they decided not to adopt their proposed Communicator Class because "...the addition of a sixth (Communicator) class to an already intricate license structure is neither desirable nor achievable without unacceptable effects upon our workload."

Furthermore, the FCC found that their present computer system will not support six classes of licenses without new and significant costs. "A new Communicator Class of license, consequently, is not a viable solution."

### **Technician Plus CSCE...**

Codeless Technician licensees who pass the 5

WPM test will not receive a new callsign, nor will they have to use a suffix or other special station ID. The Commission said they were "...persuaded by the comments" not to require use of a two letter (/AC) station identification indicator system to distinguish stations having Technician Plus privileges. "Shorter call signs ...generally are reserved for the more accomplished higher class operators."

The new rules will not prescribe an official name for Technicians who have HF privileges. However, FCC staff told us they expect the name "Technician Plus" to be widely used in place of "Technician Plus 5 WPM Morse Code".

The Commission initially proposed a "Communicator plus CSCE" operator class which would recognize that Communicator Class licensees hold a Certificate of Successful Completion of Examination (CSCE) showing the licensee has passed an international Morse code test. A CSCE is a document certified by three examiners showing that an examinee has passed certain written and telegraphy tests. "To avoid an increased license processing burden, our proposal was that the documentation of the passing of the telegraphy examination be indefinitely evidenced by the CSCE rather than by the issuance of another license."

Even though the VECs and ARRL thought an upgraded license should be issued, the FCC disagreed stating that the testing community already performs the necessary work. VECs would merely advise the FCC monthly the names of new "Technician Plus CSCE Class" operators. The VECs are presently in the process of implementing a Tech Plus database.

### **Codeless Novice Class...**

The FCC decided not to adopt a codeless Novice Class because it "...has very limited privileges above 30 MHz. The Technician Class, however, has a more difficult written examination and authorizes all privileges above 30 MHz. The conversion of the Technician Class to a codeless class, as allowed by the international Radio Regulations and as recommended by QCWA and others, therefore, is the logical choice." The FCC emphasized that Technicians licensed before Feb. 14, 1991 and who have passed a telegraphy test would retain their HF privileges.

Initially the FCC proposed a sixty question multiple choice exam consisting of 30 questions from the Novice question pool, 25 from the Element 3A Technician pool plus 5 from a new pool. In effect, applicants for the new codeless class would be required to pass the same written examination as is required for the current Technician Class license plus five additional questions.

The ARRL supported the additional questions, but the VECs pointed out that the only purpose of testing

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element



is to assure that the licensees are qualified to operate amateur stations on the frequencies authorized. "The deletion of privileges below 30 MHz does not call for an increase in the number of questions posed in the written examination for a Technician Class license," FCC agreed.

### Discontinuing the Novice Class

The amateur community, while supporting the establishment of a codeless class, was uncomfortable with the prospect of discontinuation of the Novice Class. The comments indicated the Novice Class should be retained as an entry level for persons who do not have the knowledge to pass the written examination for the Technician Class license, but who can pass a telegraphy examination.

"The keystone of our proposal was to reprogram resources currently expended in processing new Novice Class licenses annually to processing the new codeless class license. Retention of the Novice Class, however, precludes reprogramming all of those processing resources for the new codeless Technician class. We estimate, however, that with our current resources we should be able to process the applications for new Novice and codeless Technician Class licensees. The Rules we are adopting, therefore, retain the Novice Class license."

The Novice examination will continue to be available under the current two VE system. Despite serious problems with fraudulent examinations, the Commission decided not to integrate Novice testing into the Volunteer Examining program at this time.

The Novice testing program is not affected in any way. Novice applicants may still be examined by two (General Class or higher) VE's who need not be accredited by a VEC. Unlicensed applicants may elect to pass the 5 WPM code exam before two VE Novice program examiners. Codeless Technicians must, however, upgrade to Technician Plus at the more formal three examiner VEC-coordinated test session. No-Code Technicians may not go back and pass 5 WPM under the Novice testing program before two VE's.

### Handling by Question Pool Committee...

The *Question Pool Committee (QPC)* is a group of three VECs who are assigned by the *National Conference of VECs* with the responsibility of developing and revising all questions, multiple choices and answers in the various amateur radio operator written examinations. This committee is headed up by *Ray Adams/N4BAQ* of the Western Carolina ARS-VEC, Vice Chairman *Fred Maia/W5YI-VEC* and *Bart Jahnke/KB9NM* ARRL-VEC member. There are currently nearly 2,000 questions in our question data bank.

Ray Adams released the following bulletin to all VECs and license preparation publishers on Jan. 11:

"We are, of course, aware of the wording used by the Commission in paragraph 28 of the *Report and Order* which says 'We decline, therefore, to change the number of questions in the written examination elements required for the Technician Class license.'

"Each time there is a rule change, at least some questions are either contaminated to the degree of being clumsy in regards to the now-applicable rules or even totally wrong, and in some cases outright inapplicable.

"In view of the fact that the FCC most graciously passed NO-CODE with the announced intention of not affecting any question pool, your QPC is hesitant to make any changes to any question pool that is not absolutely vital. We therefore believe we can most effectively serve the best interest of Amateur Radio if we remove from the Question Pools an absolute minimum number of questions, dealing only with those that are now totally unusable.

"We believe those questions to be 2A-9.2, 2A-10.1, 3AA-2.1 4BA-7B.4 and 4BA-7C.2.

- 2A-9.2 deals with a "beginner's license"
- 2A-10.1 deals with the frequency allocated to a Novice subband on 80 meters.
- 3AA-2.1 asks "What are the HF privileges authorized to a Technician class control operator?"
- 4BA-7B-4 asks "What examination elements are required for a Technician class operator license?"
- 4BA-7C.2 deals with element credit to be given to an applicant who holds a Technician class license issued after March 21, 1987.

"Accordingly, these questions should be withheld from any test administered on or after Feb. 14, 1991 and omitted from any study guide printed after that date."

### CHANGES IN THE W5YI-VEC TESTING PROGRAM

Effective Feb. 14, the W5YI-VEC program will be accrediting Advanced Class amateurs to participate as examiners at the Novice, Technician and "Tech Plus" levels. The team leader (Contact VE), however, must still hold an Amateur Extra Class license. The 1991 W5YI-VE Manual will be mailed to all registered teams within one week. (\$2.00 cost to all others.)

In order to encourage observance of the rules, beginning Feb. 14 it will be W5YI-VEC policy to give each first time licensee a free copy of the *Part 97 Amateur Service Rules*. These booklets may be obtained from the W5YI Office at a special rate for VE's (currently 50 cents each in multiples of 25) and is to be paid out of the VE team share of the test fee. Test fees (expense reimbursement) for 1991 is set at \$5.25 with all of the increase over 1990 going to the VE team.

## AMSAT PRESENTS HAMSATS AT FCC

Radio Amateur Satellite Corp. (AMSAT) president **Doug Loughmiller/KO5I** and engineering director **Jan King/W3GEY** hosted an amateur satellite tutorial at the Commission on Jan. 11. Included were demonstrations of tracking software, a video history of the amateur space program, recordings of Transpolar Ski-Trek communications, and a detailed review of contributions ham radio has made to aerospace and commercial communications.

It was more than a dry technical session. The tutorial was aimed at making FCC policymakers aware of the social benefits of amateur use of the spectrum. AMSAT is known to be quite concerned about the future availability of UHF spectrum to amateurs. The presenters also distributed brochures titled "The Case for Amateur Radio", produced by the IARU.

Regrettably, neither the FCC chairman, nor any commissioners or even their staff members attended the impressive event -- even though it was held just a few steps away from their offices on the Commission's top floor.

Had they attended even briefly, we believe they would have come away with a greater appreciation of the amateur service and, in KO5I's words, its "stewardship" of the spectrum. Staff from the FCC's Private Radio Bureau and Office of Engineering and Technology did attend, and engaged the AMSAT representatives in discussions about FCC and public opinion of the amateur service.

### **Three resources**

Loughmiller explained that AMSAT's achievements -- world leadership in small satellite technologies, applications and education -- depend on three resources. First is people: "The work is done almost exclusively by volunteers. We are able to attract some of the top people in various disciplines to come and work on projects. Many are radio amateurs, but in the most recent projects we've undertaken, many of the people who've helped us are not amateurs. They're people from the aerospace community who see what we're doing and think it's worthwhile."

"Launches are another key resource. Without launches there is no amateur space program. AMSAT has placed more spacecraft into orbit using Ariane [the French rocket] than any other

organization." W3GEY noted that launches cost \$50,000 for each Microsat and for a Phase III satellite launch the cost triples to \$150,000. "That's cheap by aerospace standards," King said, "but very expensive for the amateur community when they have to come up with the cash."

Spectrum is of course a necessary resource. "We recognize our guardianship of the spectrum," Loughmiller said. "We're always striving to make the best use possible use of the frequencies."

### **Ahead for 1991**

PACSAT and LUSAT have just received comprehensive software updates capable of handling the many demands from users on the ground. Improved software for the DOVE Microsat is expected in the next several weeks. DOVE is functioning well with continuous packet bulletin and telemetry transmissions on 145.825 MHz FM. WEBERSAT has been turned over to Weber State University in Utah which is using it for education and video experiments.

RS-14, a joint Soviet/German satellite to become OSCAR-21 was supposed to be launched this month but is still on the launching pad. Later this year, the STS-37 Space Shuttle mission will have an all-ham crew. Experiments will include voice and packet communications and slow-and-fast-scan amateur TV. Other nations are developing more Microsat satellites, including Italy, Australia and Mexico. The University of Mexico-built satellite will utilize meteor scatter.

The AMSAT/TAPR Digital Signal Processing (DSP) board is in development. The assembled hardware is under review and software writing has begun. KO5I said he hopes a completed product will be available to amateurs in mid-1991.

The newest edition of the Satellite Experimenter's Handbook has just been published by ARRL and AMSAT. This edition is much larger than previous ones and contains material on the Microsat series of satellites. Also, a Microsat User's Guide is being written by Command Station Development Program members **Dusty Warner/KF4AU** and **Joe Holman/KA7LDN**. Release of the first printing is anticipated for early spring of 1991.

*(AMSAT-NA, PO Box 27, Washington DC 20044, 301-589-6062. Membership \$30/yr. U.S.; \$36/yr. Canada & Mexico; \$45/yr. foreign.)*