

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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HANDICAPPED NPRM: ARRL SAYS "WHOA"

The American Radio Relay League has quite a few problems with the way the FCC is handling the *Notice of Proposed Rulemaking (NPRM)* in PR Docket 90-356 (*"Amendment of the Amateur Radio Service Rules to Make the Amateur Service More Accessible to Persons with Handicaps."*)

The proposed rules would codify into §Part 97 the current policy of granting waivers of the 13 and 20 WPM Morse exams to amateurs with disabilities that are verified by doctors' letters. At presstime the FCC had granted 196 waivers, with over 40 pending at the license processing plant in Gettysburg, Pennsylvania and probably more in the offices of Volunteer Examiners.

We believe that the FCC wants to codify the handicapped waiver process into the Rules as quickly as possible because of decisions made at the highest levels of the Government. By now, it's well known that after getting letters from Jordan's *King Hussein/JY1*, President Bush intervened with the FCC to exempt handicapped amateurs from higher-speed CW tests. The official FCC NPRM makes no mention of these curious events. Instead, the Commission pointed to recent legislation that aims to improve conditions generally for handicapped citizens.

ARRL asked for additional time to comment on the NPRM, particularly because it said its members

and VEs did not have enough time to learn about and respond to the proposal. But the FCC denied the extension, saying that "it is important for individuals with severe handicaps to know as soon as possible whether there will be greater accessibility to the higher grade amateur service licenses." Here are excerpts from the League's strongly worded *Application for Review* of this denial.

"[F]or a reason not explained in the Notice or elsewhere, the Commission is rushing headlong toward resolution of this proceeding, offering only a token comment period in the process."

"The action in this proceeding would take the action specifically deemed 'not sound licensing policy' only eight years ago, without any enunciated rationale for the departure from prior policy." [Here the ARRL is referring to a 1982 FCC decision NOT to grant handicapped exemptions. - Ed.]

"There is nothing in the *Americans with Disabilities Act* which mandates the action taken in this proceeding in the first place; much less anything which would require that the matter be concluded with an inadequate opportunity for public comment and participation. The need for an adequate comment period is especially acute where the Commission has previously determined that the

proposed action is not sound licensing policy.

"It is further a logical impossibility for handicapped persons to be prejudiced by a two-month extension of time to file comments when the rule changes proposed in the Notice (ostensibly for their benefit) have already been implemented... It would appear that the Commission wants to proceed to implement the rules proposed in the Notice, regardless what the comments show, and regardless of the mandates of the *Administrative Procedures Act*."

The FCC has not yet taken any action on the ARRL request. Thus, the comment and reply comment period for this NPRM are closed until further notice. The FCC's adoption of new handicapped rules -- in some form or another -- appears to be a foregone conclusion.

20 METER OFFENDERS: PLEASE PAY CASHIER

Several amateurs may find themselves inadvertently helping Uncle Sam's funding shortfall this season. The FCC's Belfast, Maine and Vero Beach, Florida field facilities have mailed out the first *Notices of Forfeiture (NOF)*, or fines, in the 20 meter case -- albeit many months since the problems in this band first attained wide notice.

Past issues of the *W5YI Report* contained transcripts of FCC monitoring logs that allegedly show each of these hams interfering with ongoing communications; and in K1MAN's case, broadcasting in violation of §Part 97.

Recipients of the NOFs include **Gordon Skull-WB9BCL**, of Crete, Illinois; **Herbert Schoenbohm/KV4FZ** of Christiansted, U.S. Virgin Islands; **Richard Eastman/N5FX**, of Springdale, Arkansas; and **Glenn Baxter/K1MAN** of Belgrade Lakes, Maine. Each amateur first received a *Notice of Apparent Liability (NAL)* and wrote a reply to the FCC.

"In your replies...you request that the apparent forfeiture be cancelled," wrote Vero Beach FCC engineer Robert McKinney in the NOFs. "Consideration has been given to your request, however, due to the circumstances, elimination or reduction

of the forfeiture is not deemed warranted. Operation in compliance with the FCC Rules and Regulations is the responsibility of each amateur radio user.

"Submit your \$1,000.00 within 30 days of the date you receive this letter. Payment may be by check or money order made payable to the Federal Communications Commission.

"Forfeitures imposed by the Commission which are not paid may be recovered in a civil suit brought in Federal District Court by the United States Attorney (*Section §504(a)* of the *Communications Act of 1934*, as amended.)"

Glenn Baxter/K1MAN manages the *International Amateur Radio Network* operation on 14.275 and other frequencies. FCC Belfast engineers billed Baxter \$1,500 for interference and broadcasting, to which the amateur submitted a heavily documented rebuttal.

K1MAN based his request to cancel the fine in part on the premise that he was merely transmitting authorized bulletins, under his own definition of "broadcasting".

He revealed that the same FCC facility cited him twice in 1987. Both *Notices of Violation* cited him for lack of station ID. One notice also cited transmission of NON emission (unmodulated carrier) on 3880 kHz. Baxter claimed that the FCC was aware of his broadcasts in 1987 yet did not find that he was violating the broadcasting rules at that time, and that his transmissions are the same now as they were in 1987.

He also complained that the hams he was accused of interfering with were present on the frequency before a scheduled K1MAN transmission in order to disrupt him. Baxter asked for an extension of time to reply to his NAL, and for a hearing.

The FCC granted his extension, but said "Your request for a hearing before an Administrative Law Judge pursuant to *Title 47 USC Sect. 503(3)(A)* cannot be granted. The hearing process is one which the FCC, not the licensee, may choose to

"I am a currently licensed Extra Class amateur radio operator and... station pr... never had... I do not own a significant...
w... to l... vo... per... mine... I ha...
operator license revoked or suspended...
WOULD YOU LIKE TO BECOME A VOLUNTEER EXAMINER?
nde... he... Rec... P... am... so... bast... nd... by...
... the... Class... the... treatment... and... CASE

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avail itself of. The *Notice of Apparent Liability*, issued under sub-section (B), does not allow a hearing by an Administrative Law Judge."

"I find no merit in your contention that because your definition of broadcasting is quite different from the Commission's that you were not engaged in broadcasting," engineer Barry Bohac wrote to K1MAN. "I also find no merit in your contention that because you may have published a schedule, that you were subsequently allowed to interfere with ongoing communications. You are hereby ordered to pay a forfeiture of \$1,500.00."

Baxter, in his latest transmissions, is saying "The next step is to file with the FCC Field Operations Bureau, a formal petition for reconsideration. If this is not successful, the next step is appeal to the five FCC commissioners. If this fails, the next Appeal is to the Circuit Court of Appeals for the District of Columbia. After this, is the U.S. Supreme Court. IARN will go this distance on these constitutional issues."

HIGHER POWER DENIED TO AM HAM STATIONS

The Commission has denied and dismissed four *Petitions for Rulemaking* seeking to revise the transmitter power standards that apply to amplitude modulation. **William B. Prectl/W3KO**, Bridge City, Texas, asked that emission type A3E be removed from Section §97.3(c)(5) since "...with two exceptions, AM usage has been generally supplanted by emission type J3E (single sideband, SSB)."

In sharp contrast, however, three other petitions submitted by the ARRL, SPAM (the *Society for the Promotion of Amplitude Modulation*) and Dale Gagnon (call sign not given) want to amend §97.313(b) to promote AM by allowing amateur stations transmitting AM a maximum output power two to four times greater than the power allowed stations transmitting any other emission type.

Specifically, the ARRL requested that the June 2, 1990, sunset date of the AM power exception be rescinded. This exception allows a station transmitting in the AM mode to use a carrier output power of 1.5 kW, rather than the present standard

of 1.5 kW output peak envelope power (PEP). The 1.5 kW carrier output power translates into an equivalent PEP output of approximately 3 kW, the FCC said.

SPAM requested that a station transmitting AM be allowed to use a carrier output power of 1.5 kW rather than the present standard of 1.5 kW output peak envelope power (PEP) ...while Dale Gagnon wants an AM station to be allowed to use a carrier output power of .75 kW.

Carrier output power is the average power supplied to the antenna during one radio frequency (RF) cycle under the condition of no modulation. PEP is the average power supplied to the antenna during one RF cycle at the peak of the modulation envelope. A carrier output power of 1.5 kW is approximately four times greater than a PEP output of 1.5 kW.

Three of the four petitioners claim an increased interest in AM since 1983 as the justification for the Commission to reconsider its 1983 power measurement decision. SPAM estimates that its members own 1,400 1 kW AM transmitters in operation today. Gagnon indicated the growth in SPAM membership from 362 in 1983 to over 1,000 in 1990 was an indication of increased AM interest.

The FCC received more than 820 comments on the AM issue. Most were from amateurs with a personal preference for AM operation or contended that interest in vintage radio equipment and AM operation generally has increased in recent years. Most were supportive of retaining the older (and higher power) AM standards.

In referring to the Prectl petition, the FCC said "...deleting AM as an authorized mode is inconsistent with the basis and purpose of the amateur service and our desire to offer amateur operators the opportunity to experiment with practically every conceivable type of emission."

"The petitioners, however, do not persuade us that there is sufficient justification to raise the power limit, as AM emissions continue to be an authorized form of amateur emissions."

"The matter of specifying a transmitter power standard for AM that is different than the power standard for the other 1,300 emission types is an issue the Commission has previously considered and denied. Further, the Court of Appeals, in affirming this decision, found that the Commission's action was based on consideration of the relevant factors and was supported by a reasoned opinion. The arguments raised ...are the same as those considered and rejected in that proceeding."

In denying the requests, the Commission said the petitioners (1.) presented no reasons why the AM power standard issue should be reconsidered, (2.) did not show that the interest in AM operation today significantly exceeds the Commission's 1983 estimate, or (3.) that the expiration of the higher power authorization to AM stations is having any unanticipated effect on these stations.

[Action by FCC Order, Released 10/31/90]

FCC ANNOUNCES MAXIMUM REIMBURSEMENT FEE FOR AN AMATEUR LICENSE EXAM

"The FCC announced on October 31 that effective Jan. 1, 1991, the maximum allowable reimbursement fee for an amateur operator license examination will be \$5.27. This amount is based upon a 6.2% increase in the Dept. of Labor *Consumer Price Index* between Sept. 1989 and Sept. 1990.

VE's and Volunteer-Examiner Coordinators (VEC's) may charge examinees for out-of-pocket expenses incurred in preparing, processing, or administering examinations for Technician, General, Advanced, and Amateur Extra Class operator licenses.

The amount of any such reimbursement fee from any examinee for any one examination session, regardless of the number of elements administered, must not exceed the maximum allowable fee. No fee is allowed for the Novice operator license examination."

The initial expense reimbursement amount was set at \$4.00 in 1984 and has been increased annually in small increments. The ARRL and W5YI-VEC will both be charging \$5.25 as the test fee for 1991.

[FCC Public Notice, Released 10/31/90]

AMATEUR RADIO CALL SIGNS

...issued as of the first of November 1990:

Radio District	Gp. "A" Extra	Gp. "B" Advan.	Gp. "C" Tech/Gen	Gp. "D" Novice
Ø (*)	AAØCL	KFØNO	NØMOR	KBØHRW
1	WM1O	KC1XQ	N1IEE	KA1WNM
2 (*)	AA2CA	KE2XQ	N2LJF	KB2LKU
3	WF3X	KD3UM	N3IQS	KA3WZJ
4 (*)	AC4AA	KN4RJ	(***)	KC4TVP
5 (*)	AA5VP	KI5KK	N5RPG	KB5OBH
6 (*)	AA6YY	KK6SB	(***)	KC6OXZ
7 (*)	AA7GR	KG7KE	N7PUG	KB7LWO
8 (*)	AA8CL	KF8KC	N8NAN	KB8KVV
9	WW9W	KE9ZT	N9KGT	KB9FQP
N.Mariana Is.	AHØI	AHØAG	KHØAM	WHØAAO
Guam	KH2O	AH2CI	KH2EV	WH2AMU
Johnston Is.	AH3D	AH3AD	KH3AD	WH3AAG
Midway Is.		AH4AA	KH4AD	WH4AAH
Hawaii	(**)	AH6KR	NH6XT	WH6CJG
Kure Is.			KH7AA	
Amer. Samoa	AH8D	AH8AE	KH8AI	WH8AAZ
Wake W.Peale	AH9A	AH9AD	KH9AE	WH9AAH
Alaska	(**)	AL7MO	NL7VH	WL7BZN
Virgin Is.	NP2H	KP2BU	NP2DZ	WP2AHF
Puerto Rico	(**)	KP4RG	WP4ZV	WP4JNC

CALL SIGN WATCH: *=All 2-by-1 call signs have been assigned in the 2nd, 4th, 5th, 6th, 7th, 8th and "Ø" radio districts where 2-by-1 format call signs from the AA-AK prefix block are now being assigned to Extra Class amateurs. (Other than DX, only the 1st, 3rd and 9th district have 2-by-1's left!)

**=All Group A (2-by-1) format call signs have been assigned in Hawaii, Alaska and Puerto Rico. Group "B" (2-by-2) format call signs are assigned to Extra Class when Group "A" are depleted.

***=Group "C" (1-by-3) call signs have now run out in both the 4th and 6th call districts. According to the rules (adopted by the Commission Feb. 8, 1978, Docket No. 21135), Technician/General class amateurs are next assigned Group "D" (2-by-3 format) call signs when all Group "C" have been assigned. Upgrading Novice amateurs holding a 2-by-3 format call sign in the 4th and 6th call areas will no longer be able to request a 1-by-3 and will be automatically assigned another more recent 2-by-3 format call sign if they do! The FCC has steadfastly said they will not be going back and reassigning unused "K" and "W" 1-by-3 format call signs.

[Source: FCC, Gettysburg, Pennsylvania]

HAM LICENSE PREPARATION SOFTWARE - Take sample ham radio
 AMECO LICENSE PREPARATION MANUALS - Contain all Amateur
 Exam questions, multiple choice, computer answer identifi
 cation, and explanation why answer is correct. Technician/General
 Class, Extra Class, and Novice Class.

■ The newest Commissioner blasted the decision making system at the FCC during an Oct. 11 speech before the Federal Communications Bar Association. Commissioner Ervin Duggan charged too much influence is given to the FCC Chairman and the balance of the Commission is expected to 'rubber-stamp' his positions.

Duggan said FCC policy-making procedures were a "...frustrating ...top-down, one-option process of deliberation [and] ...a faulty process in danger of producing a faulty product." He said the Chairman's office controls what the rest of the commissioner's see and all too often asks "...not for their substantive contributions, but merely for their obedient pawprints" on FCC Orders. That remark raised a lot of eyebrows!

Duggan called for major reform of the FCC power structure. Some of his suggested changes involve permitting more than two commissioners to meet in private, restoring the independence of bureau chiefs, requiring bureaus to work with all commissioners and encouraging the FCC staff to present alternative solutions.

FCC Chairman Alfred Sikes, who did not attend the luncheon address, called the Duggan remarks "...interesting and thought provoking..." The other three commissioners who were there, however, seemed to agree with Duggan.

More than 100 FCC decisions are currently pending in federal appeals courts around the country. Some critics claim the FCC is overly driven by ideology and political dogma. Others believe any FCC shortcomings are attributable to inadequate funding, rapidly changing technology and outdated laws.

To his amusement, Duggan received a rubber stamp of a canine pawprint after the speech from the FCC General Counsel's office.

■ The Washington, D.C. office of the 28,000 member **American Optometric Association** has asked the FCC to consider "vision impairment" rather than blindness as a functional limitation that would classify an individual as severely handicapped. They also take issue with the FCC's position that only a Doctor of Medicine or Doctor of Osteopathy can certify that an individual cannot pass an amateur telegraphy examination because of severe handicaps. They ask that "optometrist" be added as a physician who could attest that an individual cannot pass the amateur radio license exam because of blindness or vision impairment. The AOA says Medicare, Social Security and other government programs consider optometrists to be physicians.

■ The FCC has shut down two pirate stations that operated on 7435 kHz. This is a popular frequency for illegal broadcasting. It is in fact allocated to the International Fixed Public radio service band. Station "KMUD" was located in San Rafael, Calif. The operator, **Stephen McGreevy/N6NKS**, was fined \$1,000 for unlicensed operation. In a separate case, George Hopp Jr. of Donna, Tex. was fined \$1,000 for unlicensed operation on 7435 kHz, using the callsign "XERK".

The fine usually doubles with each subsequent offense. Unlicensed or unauthorized broadcasting is a violation of *Section §301 of the Communications Act* and may result in fines up to \$10,000 and/or criminal penalties up to \$100,000 and/or imprisonment for up to a year. Most pirate operators are detected by the FCC nationwide monitoring network that gets a fix within a matter of minutes, after which direction-finding equipment pinpoints the exact location of the transmitter.

■ At a Washington lecture, FCC chief Al Sikes recently spoke his mind on the hot topic of the **1992 World Administrative Radio Conference**. Panels of experts, lobbyists and attorneys for RF communications interests are advising the FCC on what positions the U.S. should advocate at this international conference. (The amateur service is represented on this WARC-92 Advisory Committee by the ARRL.)

Sikes did not mention the Amateur Radio Service, and declined to answer questions from his audience. But he pointed out that WARC-92 may "...well be the last significant allocation conference to be held before the 21st century."

He said that the federal government's radio procedures are grounded in a 56-year old law (the Communications Act) that was premised on assumptions of technological stability. These procedures, he said, are sometimes inhospitable for those who want to innovate in the radio spectrum. "Ousting incumbents here is no easier than in any other sector," he said.

Sikes said that the U.S. should work to achieve a regulatory structure that makes the most of new technologies -- especially one in which this country has a strong position: spread spectrum.

Sikes observed three main issues at WARC-92: The allocation of HF frequencies to international broadcasters; the proposals for new services in the 100 MHz-3 GHz range, including new portable phone services and digital audio broadcasting services; and the use of frequencies above 10 GHz for satellite communications including high-definition TV delivery

"In communications, as in many other fields, there's never any shortage of people with more reasons than you can imagine why

new initiatives should not be undertaken," Sikes said. "The FCC's mission should be, however, to encourage innovation and technological advancements, not simply to sit back and hope that forward progress somehow occurs."

■ "Spot waste and recycle."

That's what the FCC is telling Land Mobile (Business Band) radio service users. The FCC voted unanimously on October 11 to pursue a so-called "finder's preference." The rulemaking provides an incentive to new license applicants and current licensees who need 470-512 and 800-900 MHz spectrum for their business or emerging technology. Basically it awards preference to applicants who discover idle or underutilized radio spectrum.

Commissioner Ervin Dugan said the radio spectrum is a limited natural resource much like oil and wilderness lands. FCC Chairman Sikes believes a finder's preference will help tighten spectrum management at a time when demand for private radio channels is soaring. Claims of idle frequencies would be investigated by the FCC's Field Operations Bureau.

■ U.S. marshals and engineers from the FCC's San Francisco, CA office **raided the home of CB operator** Harvey Peters, Jr., of Oakland. Confiscated was about \$2,000 worth of illegal radio equipment.

Seized were several transceivers capable of operating on non-CB frequencies and two 300-watt linear amplifiers.

The raid was a result of over thirty complaints from area residents stating that Peters' CB radio transmissions could be heard on television, telephone and stereo equipment. Peters was previously fined for refusing to allow inspection of his CB station by FCC personnel.

■ **Attention parents, teachers and students.** The nominating period is now open for the 1991 Westlink Report **Young Ham of the Year**. The award, which has wide industry support, is given annually to a radio amateur who is 18 years of age or younger, and who best epitomizes the accomplishments of youth in amateur radio as related to community service on a local, regional or national level; service to amateur radio; promotion of international good-will through amateur radio; promotion of high ethical and moral values through amateur radio; education using amateur radio or any combination of the foregoing.

To qualify, a candidate must hold a valid FCC Novice class or higher amateur license, be a resident of the United States and attend an accredited learning institution. Letters of nomination are due no later than March 20, 1990 and must be detailed, accurate and contain substantiating data to any claims made.

The 1991 award presentation will take place at the *ARRL Midwest Division Convention* in Kansas City, MO in early April. Nominations go to: **1991 Young Ham of the Year Award, The Westlink Report, 28197 Robin Ave., Saugus, CA 91350.**

■ **Lyle B. Aufranc, AA6DJ**, has been named the 1989 ARRL Herb S. Brier **Instructor of the Year** and **Gerald L. Kasselmann, KD4QA** is being honored as 1989 ARRL **Professional Teacher of the Year**. Lyle is a volunteer instructor for his local Recreation and Park District. Gerald teaches Electrical Engineering at the University of Cincinnati where his work with Amateur Radio has become the focus of many student design projects.

Nominations for the 1990 volunteer or professional teacher awards should be sent to your ARRL Section Manager before Jan. 31, 1991.

■ The *ARRL Foundation* announces the recipients of their **1990-91 academic scholarships**.

Kurt D. Schwehr/N6XWB	\$5,000
Chris. C. Peters, KB4MRH	\$1,000
Douglas Benish/N3CXB	\$1,000
Daniel Lawry/KA1PNE	\$1,000
Robert Inderbitzen/NQ1R	\$ 600
Scott L. Young/N9FZS	\$ 500
Dennis P. Ward/KT8X	\$ 500
Gregory Laufman/N6GPA	\$ 500
Chris. N. Haddan/NØGXB	\$ 500

The next award season begins: Feb. 1991. Scholarship package available from: **ARRL Foundation, 225 Main St., Newington, CT 06111**

■ Oral arguments on the **reallocation of 220-222 MHz to narrowband business communications** are scheduled for Friday, Nov. 16 in the U.S. Court of Appeals for the Dist. of Columbia Circuit.

The ARRL charges that the FCC mistakenly accepted partial listings in its Repeater Directory when deciding that amateur radio activity was extremely limited between 220-222 MHz. The Commission responded by arguing that the League failed to provide evidence of massive 1.25 meter usage.

The ARRL contends that the reallocated spectrum is vital to amateur high speed packet transmission.

Prior to 1988, the entire 220-225 MHz band was shared among amateur, fixed and land mobile users. In the 1988 decision, 220-220 MHz was reallocated to narrowband private/government operations and 222-225 MHz set aside for exclusive amateur use.

■ Two former FCC officials will head up the **United States negotiating team at WARC-92**. These are Bradley Holmes and Michael Fitch. Presidential appointee Holmes holds ambassador status. Fitch, a previous Private Radio Bureau Chief, reports to Holmes.

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■ A report by London research firm, *Frost & Sullivan, Ltd.*, says a mass market awaits the new digital **CT-2 and DECT cordless telephone services**. Analog Cordless Telephone, generation 1, (the type you are familiar with) suffers from interference problems, frequency congestion and a lack of security. CT2 and DECT, (Digital European Cordless Telephony) solve the technical problems while allowing portable handset use. *Frost and Sullivan* expects an estimated 5.87 million CT2/DECT British/French/German users by 1994. (Report sells for a whopping \$4,750!)

Second-generation cordless telephony (CT-2) could generate 1.3 to 4 million subscribers in the United States over the next five years according to a study issued by *Economic and Management Consultants International, Inc.* EMCI expects the demand for CT2 to be similar to cellular if CT-2 is priced at least 40 percent below cellular. (Their report sells for \$1,750.)

PCS, Personal Communications Services, encompasses a number of new technologies including CT-2 and Personal Communications Networks. PCN's allow users to stay in touch around the clock. Many hardware manufacturers are poised to provide the hardware once the spectrum and service parameters are determined by the FCC.

The bands being looked at the most are 930 to 940 MHz for CT-2 and 1.8 to 2.3 MHz for PCN's. At least one company (Omnipoint Data of Colorado Springs) already has their PCS handsets and base stations operating spread-spectrum emission overlaid in the 902-928 MHz and 2.4-2.48 GHz amateur-shared bands. No license is required since they are also ISM (Industrial, Scientific and Medical) bands. Omnipoint is also in the process of joining Bell Atlantic for a experimental PCS test of the technology.

■ There still seems to be confusion as to whether there will be a **luxury tax on consumer electronics**. Reportedly the five-year \$500 billion 1991 deficit-reduction budget could still contain a 10% tax on consumer electronics priced above \$1,000 that would be charged to manufacturers and passed on to consumers. Budget negotiators also are still **considering radio spectrum-based fees**. While the the 1991 budget package was approved, the "specifics" were left to the House Ways and Means Committee and the Senate Finance Committee. The White House had proposed a 5% of gross revenues earned by broadcasters as an appropriate spectrum use fee.

■ President Bush has signed into law a bill that requires new TV sets with 13-inch or larger screens manufactured or imported after Oct. 1993 to have **built in decoder circuitry to display closed captions for the hearing impaired**. It is the first law mandating TV set equipment changes since the 1962 law requiring UHF tuners on VHF sets. The FCC now has until mid-April to come up with display and performance standards.

Congress says the decoder will only add \$3 to the retail price of a TV set. The Electronic Industries Association disagrees. They say it will be more like \$15 to \$20.

■ **Stock quotes in your pocket?** Former Colorado stock broker and entrepreneur, Dennis Roland, has formed Quotes Plus, Inc; a paging system that processes and outputs a combined satellite feed from all major stock exchanges to alphanumeric pagers. The device not only outputs stock quotes but alerts subscribers when specified securities reach certain prices. Subscription cost will be \$10 a month.

■ A government report is **highly**

critical of the FCC data processing capability. The GAO (Government Accounting Office, the investigative arm of Congress) says the Commission's present system is vulnerable to theft and prolonged shutdowns because of untested backup computer capabilities and lack of other safeguards. GAO said the FCC should develop a strategic IRM (information resources management) plan along federal guidelines that allows it to best choose a system that is cost effective, meets user's needs and has security and emergency backup features. The FCC depends on information technology to process a million applications a year, to take on engineering analyses and to perform other regulatory administrative tasks.

■ The state of Washington is in the process of **outlawing "Caller ID" services**. They say, "Caller ID", which displays the number of all incoming phone calls, violates privacy rights and increases the number of unwanted telemarketing calls. Telemarketers are using the service to identify, classify, compile and sell consumer's phone numbers according to their buying habits. The state of Washington is, however, urging phone companies to begin implementing "call trace" which provides a caller's number to law-enforcement agencies.

■ **The big toy sellers this Christmas will still be hands-on video games** ...especially those by Nintendo. Sleeper is Sega's **Genesis**. (Sega is number one in the Japanese video game industry.) Nintendo recently set up a video-game university called *Nintendo-Dentsu Game Centre* to train people to create videogames. Twenty-two applicants were approved for the course which costs Nintendo \$79,000 per person for the ten month course.

Five 5-1/4" 360K disks cover every license class. Only \$29.95 postpaid. (one manual covers both 3A and 3B); Advanced (4A) or Extra Class (4B) \$39.95. Shipping/handling: \$1.50. Computer Aided Coding System included. W5YI, P.O. Box #565101; Dallas, TX 75356. Satisfaction guaranteed or money back.

■ **Hot sellers in adult consumer electronics for Christmas** will be camcorders (smaller format 8mm is growing), big screen televisions (27-inch-plus and projection sets), high-tech home theaters and stereos, FAX machines and personal computers. It seems everyone now has a VCR.

■ To head off declining sales, **Apple Computer rolled out their new low-cost Macintosh line** on Oct. 15. The Mac Classic (Motorola 8 MHz/68000 CPU) will sell for around \$800 (dealer cost \$740), the Mac LC (16 MHz/68020-based) \$2,400 and the Mac IIsi (20 MHz/68030 \$3,500) - depending, of course, on configuration. A \$250 rebate is available for holiday buyers on some models.

It is a big gamble for Apple seeing that 90% of the PC's sold are IBM compatibles ...and considering the success of Microsoft's Windows 3.0, all PC's now can have user-friendly graphical interfaces. While the Classic and IIsi are now available, the Mac LC won't hit stores until after Christmas.

The first time home computer buyers can now select from three brand new low cost entries; the IBM PS/1, Mac Classic and the Tandy 1000 RL. The PS/1 and Classic have about the same retail, the 1000 RL is somewhat lower in price.

All three are marketed at entirely different outlets. Apple sells only through computer stores, the IBM PS/1 is available from family outlets such as Sears and dept. stores ...the 1000 RL from Radio Shack. It will be interesting to see what the marketplace has to say.

■ **Tandy is not standing still.** They have the private label electronics business wrapped up with their 7,000 Radio Shacks. Now they are going after the name brands and high-end electronics

market. They have already opened some 350 **McDuff Superstores** selling name brands at big discounts.

Now they will launch a new small experimental mall store concept called **"The Edge in Electronics."** The stores will sell high-retail personal consumer electronics such as compact disc players and personal stereos. Ten stores are due to open early next year in Texas and in the greater Washington, D.C. area.

By the way, Radio Shack has donated 5,000 AM/FM radios to the U.S. Armed Forces serving in the Persian Gulf. The radios were shipped to the USO for distribution to U.S. military personnel serving in Operation Desert Shield.

■ Through a deal involving American Express, **MCI and U.S. Sprint are entering the credit card long-distance calling business.**

The decision is based on the success of AT&T's *Universal* card.

American Express' new *Connect Plus* program allows customers to get a 10% discount on long-distance calls via MCI and Sprint along with billing on monthly AmEx statements. VISA and MasterCard also have a tie in with MCI called VisaPhone and MasterPhone.

MCI has a 12% share of the \$55 billion long-distance market, compared with 70% for AT&T and 8% for Sprint. Look for Sears *Discover* card to be next to offer discount long distance calling.

AT&T launched their *Universal* card on March 23rd with no annual fees for life. Since its debut eight months ago, the card has gathered 3.4 million accounts with a total charge volume exceeding \$2.2 billion!

■ Motorola has introduced new patented **Wireless In-building Network (WIN) technology** that allows personal computers to communicate at up to 15M bps. WIN

technology uses a low power 18 GHz radio as the data transmission medium. The miniaturized radio module is about the size of a deck of cards. Motorola is looking for other firms to utilize the new LAN technology in their products.

■ The Fredonia Group, a market-research firm, says **sales of pocket-sized pagers and telephones will grow by more than 31% a year** to \$2.7 billion by 1994.

While that may be true, AT&E is apparently not doing as well as first planned with their *Receptor Message Watch* built by Japan's Seiko Corp. It delivers information transmitted over FM subcarrier frequencies. AT&E recently released 90 of its 283 employees in a "change of corporate strategy." Motorola also markets a *Wrist Watch Pager*.

■ Direct Broadcast Satellites are once again trying to get off the ground. **Primestar DBS Service will launch in 20 markets** initially and increase to 38 by the 1991 year end. The service will offer seven broadcast stations and three pay-per-view channels. Primestar is targeted at households that are unable to get cable and will be marketed by cable operators. The average initial installation will cost about \$200. The one meter dish and associated equipment will be leased to subscribers who must also pay a monthly service fee.

SkyPix in association with COMSAT is also set for an early 1991 introduction. They plan to use video compression technology to offer 80 channels using a medium-powered Ku-band satellite. The DBS service hopes to sign one million subscribers in its first 18 months of operation. Consumers will pay \$699 for the dish plus a monthly fee. The cost of PPV movies will range from \$1 to \$3 to be competitive with video stores.

Only \$9.95 plus \$2.00 shipping charge
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NEW!!
The Radio Amateur's LICENSING HANDBOOK is for everyone who gets involved in ham licenses...it's for...on-h...J wh... want to know about amateur radio license tests, amateurs

NEW HAM RADIO BOOK FOR YOUNG PEOPLE

If you've been dissatisfied with the "Archie Comic" approach to introducing ham radio to young people, you should check out a book titled "*The Wonderful World of Ham Radio*". We think that the book really communicates the variety and excitement available in the hobby. The book is intended largely for students in the upper grades of primary school and the lower grades of high school.

"I got interested in getting my son and other kids on the air," author *Richard Skolnik/KB4LCS* told us. "People began to say to me, 'You seem to be pretty good at getting kids interested in Amateur Radio, but there's nothing written to introduce them to the hobby.'

"There are books about coin and stamp collecting, model railroading and so on, and so I wrote a book to tell what's special about ham radio, how can you help people through ham radio and get enjoyment and satisfaction through it. I've been told that the book is good for adults too, but it's really penned for adolescents."

Chapters include *Helping People with Ham Radio*, *Learning Through Ham Radio*, *The Special Language of Ham Radio* [including callsigns, CW and Q-signals] and *Setting Up a Station*. A brief but particularly well-written chapter titled *Can You Really Become a Ham* competently answers several objections and concerns that parents and teachers might have about Amateur Radio. There's a lot of information there, but it's easy to read and not overwhelming.

The book is full of photos of kids on the air, and includes plenty of references and sources of help. [Author Richard Skolnik is the founder of the *World Bank Amateur Radio Club* in Washington, D.C. After years of persistence and working with the FCC and United Nations, the club received a station license and the prized callsign 4U1WB.]

"*The Wonderful World of Ham Radio*" is now available from ham dealers and from MFJ Enterprises, the publisher, at \$7.95 with group and dealer discounts possible. Order number is MFJ-35. [MFJ's phone is 800-647-1800, in Miss. 601-323-5869.]

CANADA ISSUES NEW AMATEUR REGULATIONS

We have now received a copy of Canada's *Regulatory Information Circulars, Number 24 and 25*, dated: October 1, 1990. RIC-24 contains general information on amateur radio operator examinations in Canada. RIC-25 is entitled "Rules and Regulations Affecting the Amateur Service." Effective Oct. 1, Canada has completely deregulated their Amateur Service.

There is now only one license (it's called a "Certificate" in Canada) available with four degrees of eligibility.

(1.) BASIC (Written) Qualification:

Privileges: ...Allows all mode/emission operation on all frequencies above 30 MHz using commercially available transmitters. Power level must not exceed 250 watts DC transmitter power input. Occupied bandwidth must not exceed 30 kHz on the 6 and 2 meter band, 100 kHz on 220-225 MHz, and 12 MHz: 430-450 and 902-928 MHz. Station equipment with the exception of transmitters and amplifiers may be home built.

Requirements: ...Must pass a theory test on basic electronics, propagation and antenna systems, interference/suppression, station assembly and operations, procedures and regulations. Emphasis is on basic components rather than detailed electronic circuits. The examination is composed of 100 multiple-choice questions. At least 25 must relate to domestic and international regulations; the remainder to test theory and operating procedures. Pass mark is 60%.

Examinations: ...There are two routes open to candidates taking any of the license tests. They may be examined either by a "delegated examiner" or by the radio inspector at the local district office of the *Department of Communications (DOC)*. Delegated examiners may be contacted through amateur radio clubs, technical schools or the local DOC district office.

An examination fee of \$5.00 for each qualification level either goes to the delegated examiners or the DOC depending upon who conducts the tests. For the written tests, each candidate will be supplied with a booklet containing the questions, formulas as required and an answer sheet. A

making, preparing or distributing amateur radio equipment or license preparation materials. My age is at least 18 years old."

materials will be sent to you in about two weeks.

radio inspector (only) may elect to administer the written examinations orally. A candidate may be examined for any qualification, in any order, but may not apply for a license until they have passed the Basic Qualification.

(2.) MORSE CODE-5 WPM (Code) Qualification:

Privileges: ...Allows holders (who also possess the BASIC Qualification) the addition of all-mode operation in the 1.8 to 2.0 MHz and 3.5 to 4.0 MHz bands; bandwidth on these bands must not exceed 6 kHz.

Requirements: ...Must demonstrate the ability to send by hand and receive by ear International Morse Code at a speed of no less than 25 characters per minute (5 words-per-minute) for three consecutive minutes. Pass mark is 100%.

Examinations: ...The Morse code examination is in plain language and may (not "must") include the twenty-six letters, ten numbers, punctuation marks (comma, period, question mark, dash and fraction bar), Q-signals and emergency signals. Each character omitted or incorrectly sent or received is counted as one error. A mark of 100 percent is awarded for five errors or less.

(3.) MORSE CODE-12 WPM (Code) Qualification:

Privileges: ...Allows holders (who also possess the BASIC Qualification) to operate all modes/-emissions on all amateur spectrum. Six kHz bandwidth permitted in the 40, 20, 17, 15, 12 and 10 meter bands; one kHz between 10.100 and 10.150 MHz.

Requirements: ...Must demonstrate the ability to send by hand and receive by ear International Morse Code at as speed of no less than 60 characters per minute (12 words-per-minute) for three consecutive minutes.

Examinations: ...A candidate who attempts the 12 WPM Qualification who does not possess the 5 WPM Qualification will be awarded the 5 WPM Qualification without further examination if a mark of over 60% (fewer than 45 errors) is achieved.

(4.) ADVANCED (Written) Qualification:

Privileges: ...Allows holders (who also possess the BASIC Qualification) to build and operate transmitting equipment, use maximum transmitter power of 1,000 watts DC input, sponsor repeaters and club stations and remotely controlled fixed

stations, including the use of radio links. Only Advanced Qualification licensees may possess a transmitter or RF amplifier that is not commercially manufactured for use in the amateur service.

Requirements: ...Must pass a 50 multiple-choice question examination on advanced radio theory which includes circuit analysis, transmitters, receivers, linear amplifiers and modulation techniques, advanced propagation and antenna systems, test equipment and equipment construction procedures. Passmark is 60%.

EQUIVALENCY:

Canadian Amateurs: ...Existing Canadian amateur radio operators (except those only holding the no-code Digital Certificate) are deemed to possess all four Qualifications. Digital operators are considered to hold only the Basic and Advanced (written) requirements.

Existing holders of Canadian commercial radiotelegraph operator's certificates are deemed to hold all four Qualifications; holders of commercial radiotelephone licenses are deemed licensed only for the Basic Qualification.

Foreign Amateurs: ...A U.S. licensed amateur who is not qualified to send and receive in Morse code may operate an amateur station in Canada in accordance with the provisions applicable to the holder of an Amateur Operator's Certificate with Basic and Advanced Qualifications.

A U.S. licensed amateur who is qualified to send and receive in Morse code at a speed of at least 5 words-per-minute (i.e. the Novice and Technician Class) may operate an amateur station in Canada on all spectrum above 30 MHz using all modes/emissions **but may only use telegraphy on bands below 30 MHz.** That means U.S. Novice and Technician Class amateurs may not operate telephony in the ten meter band.

A U.S. licensed amateur who is qualified to send and receive in Morse code at a speed of at least 12 words-per-minute (i.e. General, Advanced and Extra Class) may operate in Canada in accordance with the provisions applicable to holders of all four Qualifications. That is, they have all privileges available to any Canadian amateur. There is no longer any CW subbands in Canada.