

W5YI 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.

Dits & Bits

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NPRM Issued for Non-licensed RF Devices

In a blockbuster Notice of Proposed Rulemaking (General Docket 87-389), the Commission last week proposed to relax the §Part 15 rules to permit an 'unlicensed general class of RF devices' with increased frequencies of operation and no restrictions on type of usage, bandwidth or modulation type.

The rulemaking is in response to several petitions and requested waivers of the §Part 15 rules. The new rules "will restore some flexibility back to §Part 15 which has become very 'device-specific' over the years," the FCC said.

Basically unlicensed low power RF emitting devices will be allowed to radiate on virtually any frequency - including the ham bands. The FCC did restrict §Part 15 operation from a number of bands, however. These are generally bands that are allocated to "safety of life" such as air traffic control, radio navigation, search/rescue satellite systems ...and the like. Also restricted were certain "radio sensitive" bands such as radio astronomy, some satellite downlinks and others.

The press release reads "This could provide major benefits to manufacturers of Part 15 devices and should also serve the public by enabling new technologies and new equipment categories that satisfy consumer

demands to be introduced without the need for Commission rulemaking." It also has the potential to cause some grief to amateur radio operators - particularly in the 902-928 MHz band.

Some of the types of new consumer products that might be introduced quickly as a result of these changes are wireless stereo speakers, wireless VCR's and wireless computer systems for in-home or office use. All new §Part 15 devices will still have to go through the FCC equipment authorization procedures.

When asked if the new general class of RF devices might permit unlicensed amateur operation, FCC's John Reed, an engineer in the Office of Engineering and Technology, said the permitted field strength levels would be the same as now permitted from Class B (commercial) computing devices.

"As a general rule, you probably won't be able to transmit further than the room you are in." Reed is also the author of the 82-page NPRM which has yet to be released. "There is also another 24-page 'hand-out' describing what we did in the 82 pages."

He said they are retaining most of the higher field strength bands that are presently set up in §Part 15 for security alarm systems,

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garage door openers, and so forth. "We are also proposing a number of what we call 'Consumer Bands'." At least two of these bands are ham bands - 902-928 MHz and the 2400 MHz. band.

The Consumer Bands have higher proposed radiation levels of 50,000 microvolts per meter at three meters. Reed said "You are talking of a transmission range of up to a thousand feet." This is certainly enough to disrupt the 900-MHz amateur band. The repeater subband is from 907 to 933 MHz while weak signal and experimental communications such as EME (Earth-Moon-Earth), CW and propagation beacons are 'band-planned' from 900-904 MHz.

Reed calculated 50,000 mv/meter as 458 microwatts - about half a milliwatt into a dipole antenna. (...higher if more efficient antennas are used.)

"Radiation will most likely be kept within the home - maybe to the neighbor. One of the first products I see hitting the market is a video transmitter. You could set up a video camera in your child's room facing the crib and have your next door neighbor do the baby sitting. It could also be used for short distance computer networking within a home or office."

Reed also commented that the FCC was "going to review all of the emission limits from receivers and spurious emission levels from transmitters. We are proposing to tighten up the receiver emission levels substantially. It is a complete review of all of the §Part 15 regulations."

JUST WHAT IS §PART 15?

§Part 15 governs the non-licensed operation of RF devices such as remote control units, garage door openers, wireless microphones, cordless telephones and the tags attached to clothing in stores to prevent shoplifting.

"While use of these devices does not require a license, §Part 15 specifies technical standards to which these devices must adhere to prevent interference to licensed services.

Therefore the new rules will also tighten up some emission specifications to reduce the risk of interference to other radio services," the press release reads.

The rules for non-licensed use of RF devices were established nearly fifty years ago. In 1938, the Commission allowed devices using relatively low level RF signals to be operated without the need for individual licensing as long as their operation caused no harmful interference to licensed services and the device did not generate emissions or field strength levels greater than a specified level.

A major §Part 15 user is college campus radio stations which use the carrier current system. These broadcast stations take a low power AM transmitter and transmit directly into the AC power line through a capacitor and tuner. A small amount of radiation is emitted from campus power lines allowing reception in college dorms.

The original §Part 15 regulations were based on a general field strength standard. As devices were designed to operate on higher frequencies, this standard was found to be too restrictive. Over the years, §Part 15 was amended by taking a 'device-specific' approach. In response to petitions, the rules were amended to permit a specific RF device.

By taking this approach, a number of inconsistencies and inequities in the technical standards contained in §Part 15 developed. There are different measurement methods prescribed by the rules depending on the operating frequencies of the RF device. There is little uniformity.

Additionally, the standards needed to protect against interference to licensed radio services have changed over the years due to improvements in equipment such as received sensitivity, increased proliferation of both licensed and non-licensed radio operation and changes to the frequency allocations of authorized radio services.

In developing this new plan to restore the technical flexibility originally envisioned for non-licensed devices, the Commission attempted to eliminate all unnecessary and

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We have developed a complete Novice Package that
hab... In A... bur... ho C... ator... to l...
NOVICE VOICE CLASS PACKAGE \$19.95 + \$2.00
I... t... "L... h... ti... bode... sset... tape
I... t... "L... h... ti... bode... sset... tape

overly restrictive technical regulations.

Fully two-thirds of all of the §Part 15 rules are proposed to be removed and not replaced. In some cases, however, the decision to permit greater flexibility in the choice of bandwidth and emission types has required the proposed standards to be more restrictive than the present §Part 15 standards. In the vast majority of cases, these more restrictive standards are required to prevent the possibility of interference to authorized radio services.

In order to mitigate any hardships caused by more restrictive requirements, the Commission provided for a substantial "grandfather" period - in most cases, ten years - for the continued manufacture of existing devices.

In addition, the Commission proposed putting kits for RF devices under the equipment authorization procedures. "We have had too many of these 5 watt AM and FM transmitters being sold in kit form." As a general rule, authorization procedures for all other §Part 15 RF devices remain unchanged.

While this is a Notice of Proposed Rulemaking, the comment date has not yet been established. OET's John Reed said the comment period would be 60 days from date of release ...with replies cut off 90 days later. The NPRM document is presently tied up in the bureaucracy. It was adopted by the FCC Commissioners on September 17th. The paperwork, however, is released by the Department of Commerce who publish the Federal Register - the daily diary of what our government is doing. At this point it appears the mammoth document will be available about the first week in October.

The information for this article came from three sources. The FCC press release, a telecommunications consultant who attended the Washington FCC luncheon where it was thoroughly discussed and John Reed, the FCC author of the NPRM document. This rulemaking is from the same FCC Bureau that issued Docket 87-14 that seeks to take the first two megahertz of the amateur 220-MHz band to narrow-band land mobile use.

THE "NEW WORLD OF AMATEUR RADIO"...

...a 28½ minute video about amateur radio was released September 20th on schedule. It is truly excellent - the best film we have ever seen promoting the ham radio hobby! The video, financed by the combined efforts of the ARRL, Yaesu, ICOM and Kenwood, has something for everyone! Covered is just about every facet of ham radio from emergency preparedness to DXing ...to amateur satellite operation.

Viewers meet 16-year old **Kelly Howard, N6PNY**, and 15-year old **Nathan Pyle, KB6PLH**, operating amateur radio equipment in a super ham station set up at CBS Television City; astronauts **Owen Garriott/W5LFL** and **Tony England/WØORE** operating ham radio from the Space Shuttle; Senator John Glenn talking to California school children from a ham station in the US Senate; and students of teacher, **Carole Perry/WB2MGP**, performing a skit based on the "Archie Ham Radio Adventure" comic book in their class in Staten Island.

Since ham radio is truly an international hobby, the video includes scenes from more than a dozen foreign countries. There's footage of Australian hams conducting a DX-pedition to desolate Heard Island in the Antarctic, a land of seals and penguins; aviators Dick Rutan and Jeana Yeager, two hams making history in the non-stop around-the-world flight of Voyager; and a group of Dutch hams who communicate around the world using the giant antenna of Radio Netherlands.

The videotape was put together under the direction of Executive Producer **Roy Neal, K6DUE**, former NBC News science editor, best known for his coverage of the space programs. **Frosty Oden, N6ENV**, senior post production editor with CBS network at Television City in Hollywood, served as producer and editor.

The associate producer and technical supervisor was **Bill Pasternak, WA6ITF** of Westlink fame, a broadcast engineer with Fox Television in Los Angeles. The original music score was written by John Tesh, co-anchor of "Entertainment Tonight."

of your Extra Class license, this is a 101 call. Text: 75207. A certificate (optional) is also available for \$1.00. Details and accreditation materials will be sent to you within a two week period.

Schools may order copies of the video on a free loan basis or purchase copies for \$20.00 plus shipping (\$2.50 postage, \$3.50 UPS) from: ARRL, Dept. NW, 225 Main Street, Newington, CT 06111. We strongly urge every ham club to make this video an integral part of their program library and Novice Class.

Western Mobile Communications, Inc., a Santa Maria, California, business band firm has filed interesting comments opposing Docket 87-14. Their president Jim Hendershot (also WA6VQP) feels that the animosity generated in amateur circles by the re-allocation of 220-MHz spectrum to the land mobile industry will do more harm than good. He says new research by his company on a better form of ACSSB known as ENB (Enhanced Narrowband) enables spectrum past 900 MHz to be used. He says that present ACSSB systems do not work well beyond 220-MHz and there is no room for future VHF expansion.

Nickolaus E. Leggett, N3NL, (a technology specialist) has filed comments opposing Docket 86-337 that seeks to implement ATIS, (Automatic Transmitter Identification System.) He raises the possibility that hostile nations or groups might engage in intentional satellite uplink jamming since the transmissions could easily be identified.

Meanwhile another satellite television programmer has been jammed. An uplinked pirate signal overpowered "The Playboy Channel" on Sunday night, September 6, and replaced the movie "Three Daughters" with the message, "Repent your sins. Keep the Sabbath Holy." The FCC's Field Operations Bureau is investigating. Maximum penalty for this type of offense is a one-year sentence and a \$10,000 penalty!

Get those beams ready, better DX days are coming! The consensus is that we are well up on the upswing of Sunspot cycle 22. Periods of extreme ultraviolet radiation (and a more closely packed ionosphere off which to bounce radio signals) run in approximate 11 year cycles. Peak long distance communications propagation is now predicted for the years of 1989 to 1992. At the end of this year you will note a marked propagation improvement. Happy hunting!

Miami-based SIRA, the Sociedad Internacional de Radio Aficionados a Spanish speaking ham group was selected by the Archdiocese of Miami to organize and plan the radio communications for the Miami John Paul II Papal Visit on several commercial frequencies. Rafael M. Estevez, WA4ZZG, was named the coordinator. Over 100 hand-held radios and 3 base stations operated on two UHF commercial repeaters and several UHF/VHF simplex frequencies. Rafael took unpaid time off from work to organize the effort. Security was at a maximum ...over 6,000 police and National Guardsmen took part. Even street manholes were welded shut on the parade route. When 110 mile Hurricane Emily hit the Dominican Republic, the SIRA emergency network went back into action on the 20 meter and 80 meter ham bands. The emergency also marked the first time that Cuban amateurs participated with U.S. hams.

AUGUST AMATEUR LICENSING STATISTICS...

	August	1985	1986	1987
First Time Amateurs:	1297	1377	918	
Novice Class Upgrades:	1002	707	1160	
Technician Upgrading:	382	216	303	
General Class Upgrading:	333	229	263	
Advanced Class Upgrading:	235	176	227	
Total Amateurs Upgrading:	1952	1328	1953	
Total Dropped Fm Service:	2817	1829	2020	
Total Novices Dropped:		1297	1448	
Change/Ham Census/Month-1520		+884	+824	
Month End Census:	411580	421077	429678	

Extra	Advan.	Gen'l	Tech.	Novice	TOTAL:
(Aug. 1985)					
37793	97759	117189	82867	75972	411580
9.2%	23.8%	28.5%	20.1%	18.4%	
(Aug. 1986)					
40455	98294	116944	86025	79359	421077
9.6%	23.3%	27.8%	20.4%	18.9%	
(Aug. 1987)					
42914	98114	114737	90675	83238	429678
10.0%	22.8%	26.7%	21.1%	19.4%	

Club/Military/RACES Sta.	2789	2671	2443
Total Active Stations:	414369	423748	432121
Percent Increase:	2.3%	2.0%	

HAM APPLICATIONS PROCESSED (During Aug.)

1982:	1983:	1984:	1985:	1986:	1987:
12965	13409	10751	10234	7163	8650

[Source: FCC, Gettysburg, Pennsylvania.]

W5YI-VEC #10... Dallas, Texas 75207
 HOLDING AMATEUR RADIO OPERATOR CLASSES? Every manual contains every word-for-word question.
 Test Manual: N... Tech. or Gen.
 1 Ea. \$4.00
 5-9 \$3.50
 10 or more \$3.00 plus postage

JULY VE PROGRAM STATISTICS....

	<u>July 1986</u>	<u>1987</u>
No. VEC's:	*75	*59

<u>No Testing Sessions:</u>	<u>328</u>	<u>318</u>
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	<u>1986</u>	<u>1987</u>
ARRL:	50.0%	40.9%
W5YI:	17.4%	32.1%
DeVRY:	7.3%	6.6%
CAVEC:	7.6%	4.1%
Others:	17.7%	16.3%

Year-to-Date Sessions:	2,195	2,538
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<u>No. Elements Administered:</u>	<u>4,948</u>	<u>5,712</u>
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	<u>1986</u>	<u>1987</u>
ARRL:	55.6%	55.3%
W5YI:	12.6%	21.7%
CAVEC:	8.8%	6.4%
DeVRY:	6.6%	3.3%
Others:	18.4%	13.3%

Year-to-Date Elements Adm:	39,008	48,921
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<u>No. Applicants Tested:</u>	<u>3,437</u>	<u>3,456</u>
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	<u>1986</u>	<u>1987</u>
ARRL:	54.8%	54.6%
W5YI:	12.2%	22.4%
CAVEC:	8.3%	6.1%
DeVRY:	7.4%	3.9%
Others:	17.3%	12.8%

Year-to-Date Appl. Tested:	26,805	30,804
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Pass/Upgrade Rate, All:	58.7%	62.3%
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Pass/Upgrade Rate, W5YI:	55.0%	56.1%
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Applicants per Session:	10.5	10.9
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Appl. per Session/W5YI:	7.6	8.5
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No. Elements Per Appl./All:	1.44	1.65
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No. Sessions Per VEC/All:	4.4	5.4
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Administrative Errors by VE's/VEC's

Defective Applications:	0.4%	0.6%
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Late Filed Sessions:	4.6%	3.5%
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Defective Reports:	1.5%	1.9%
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* = The FCC considers ARRL, W5YI, and DeVry to be 13 VEC's each since VEC's are appointed on a regional basis. The 13 regions are: Call sign districts 1 through 0 plus: Alaska (11) and Carribean (12) and Pacific Insular areas.(13)

[Source: FCC, Washington, D.C. 20554]

FCC ISSUES CURRENT VEC LIST

On September 18th, the FCC released an up-to-date Public Notice identifying each of the current VEC organizations. They are:

NATIONAL VEC's (Test in all 13 regions.)

The W5YI Report, P.O. Box #10101, Dallas, TX 75207 Tel: (817) 461-6443

A.R.R.L., 225 Main St., Newington, CT 06111 Tel: (203) 666-1541

DeVry Amateur Radio Society, 3300 N. Campbell Ave., Chicago, IL 60618 Tel: (312) 929-8500

REGIONAL VEC's (Test in certain regions.)

Call Sign Area: 3

Laurel Amateur Radio Club, Inc., PO Box 3039, Laurel, MD 20708-0039 Tel: (301) 953-1065

Mountain Amateur Radio Club, PO Box 234, Cumberland, MD 21502 Tel: (304) 289-3576

Call Sign Area: 4

Western Carolina Amateur Radio Society, 5833 Clinton Hwy. #203, Knoxville, TN 37912-2545 Tel: (615) 688-7771

Central Alabama VEC, Inc., 606 Tremont St., Selma, AL 36701 Tel: (205) 875-2405

Charlotte VEC, 227 Bennett Lane, Charlotte, NC 28213 Tel: (704) 596-2168

Triad Emergency Radio Club, 3504 Stonehurst Place, High Point, NC 27260 Tel: (919) 869-6637

Call Sign Area: 5

Jefferson Amateur Radio Club, P.O. Box #73665, Metairie, LA 70033

Call Sign Area: 6

SANDARC-VEC, PO Box #5023, La Mesa, CA 92041 Tel: (619) 465-3926

Greater Los Angeles Amateur Radio Group, 9737 Noble Ave., Sepulveda, CA Tel: (818) 762-5095

Sunnyvale VEC A.R.C., P.O. Box #60142, Sunnyvale, CA 94088-0142 Tel: (408) 255-9000 (Also a Region 7 & 11 VEC)

Golden Empire Amateur Radio Society, P.O. Box #508, Chico, CA 95927

Call Sign Area: 7

Boeing Employees Amateur Radio Society, 12822 NE 61 St., Kirkland, WA 98033

Call Sign Area: 8

The Milwaukee Radio Amateurs Club, Inc., N 50 W16328 Pin Oak Court, Menomonee Falls, WI 53051

Call Sign Area: 10

PHD Amateur Radio Assoc., Inc., PO Box #11, Liberty, MO 64068 Tel: (816) 781-7313

Call Sign Area: 11 (Alaska)

Anchorage Amateur Radio Club, 2627 Turnagain Pkwy, Anchorage, AK 99503 Tel: (907) 243-2221

Call Sign Area: 12 (Pacific)

Honolulu Amateur Radio Club, 3251 Pakanu St., Honolulu, HI 96822 Tel: (808) 988-3586
Koolau Amateur Radio Club, 45-529 Nakulaua St., Kaneohe, HI 96744

"Amateurs wishing to be accredited as volunteer examiners (VEs) should contact a VEC for their region. Persons wishing to take an examination for the Technician (and higher class) operator license should contact three VEs in their region who have been accredited by one or more VECs. The administering VEs must make a public announcement before each examination session. Question pools are maintained by the VECs and they must be made available to the public."

[FCC Public Notice dated: Sept. 18, 1987.]

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UPDATE ON EXTRA CLASS QUESTION POOL

The Extra Class Element 4(B) question pool will be the next examination element worked on by the combined efforts of the QPC - Question Pool Committee. On September 16th, Jim Clary/WB9IHH, of the ARRL-VEC (and Chairman of the QPC) released a suggested Element 4(B) question pool outline to all QPC members.

There were a few suggested changes in the syllabus, but the differences were minimal - mostly new improved wording rather than topic changes.

No comments (other than those of the ARRL publications group) were considered - primarily due to confusion resulting from comment closing dates of the syllabus. The ARRL published a September 1st comment closing date to all members of the QPC. We now understand that this was a typographical error and the correct syllabus closing date should have been September 15th.

The next step is to revise (if necessary) the existing 457 examination questions that make up the Element 4(B) question pool. Here is your chance to influence the questions

used on the Extra Class examination. We need input from the amateur community.

The closing date for these suggestions is: December 1, 1987. We strongly urge all (Extra Class) amateurs to take a look at the current 4(B) question pool and to forward your suggestions for revisions, deletions and/or new questions to the QPC. If you don't have a copy of the current 4(B) question pool, you can purchase it (complete with suggested multiple choices) from us for \$4.00 (plus \$1.25 postage.) With few changes, the syllabus will be basically as published in our September 1st newsletter.

Your suggestions should go to one (or all) of the following members of the QPC:

Jim Clary/WB9IHH (ARRL-VEC, 225 Main St., Newington, CT 06111)

R.C. Smith/W6RZA (GLAARG-VEC, 9737 Noble Avenue, Sepulveda, CA 92343)

Ray Adams/N4BAQ (WCARS-VEC, 5833 Clinton Hwy #203, Knoxville, TN 37912)

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● Kantronics president Phil Anderson, WØXI, says that worldwide interest in packet radio as a low cost means of data transfer is increasing. He recently demonstrated packet at the JARL Convention in Tokyo and at a Baltimore "packet workshop" for APCO, the Association of Public-safety Communications Officers.)

● Canadian amateurs have been advised by the DOC that a notice concerning "Deregulation of Mode Subbands" will be shortly released. It isn't clear if this will be a proposal or implement new rules. The CRRL directors adopted a resolution at their annual meeting calling for the DOC to recommend that amateurs follow IARU band plans. It is interesting to note that when the DOC gave Canadian amateurs access to the 17 meter (18.068-18.168 MHz) and 12 meter (24.89-24.99 MHz) bands this past July 29th, no mode subbands were specified. (We wonder how long will it be before U.S. "CW only" subbands are abolished?)

● In other Canadian news, the Amateur DOC Questions Bank has been produced in two languages - English and French. The

"Canadianizing" of the CRRL continues with many forms and personnel appointments being changed from that of the U.S. ARRL. There was also a discussion looking towards a merger of the CRRL with the Canadian Amateur Radio Federation - a rival ham group ...and the CRRL Board voted to grant \$1,000 to the Jack Ravenscroft appliance/TVI case.

● Digital publicizing of U.S. Amateur Radio testing opportunities seems to be catching on. Packet Radio bulletin boards and the CompuServe Information Service seem to be the most popular vehicles. (The CompuServe "HamNet" file is EXAMSKED.TXT)

● An Akron potty-mouthed CBER has been fined \$550 and given two years probation during which he may not use or operate radio equipment. Earl Rose of Suffield Township, Ohio, was also ordered to forfeit all radio equipment for transmitting obscene language via radio (a felony) and for illegal CB operation. Rose recently pleaded guilty in federal court.

● The FCC amended its "ex parte rules" on September 17th. Congressmen and federal agencies will now be allowed to make presentations to the FCC in the period between when a rulemaking decision is scheduled for FCC action and the actual Commissioner's meeting - the so-called "Sunshine Agenda period." The general public is still prohibited from reviewing the merits of upcoming rulemaking with the FCC during this period.

● In addressing a ruling by the U.S. Circuit Court of Appeals for the District of Columbia decided July 17, 1987, the FCC has ruled that cable operators must now make lock boxes available upon request so subscribers may restrict the viewing of programming deemed obscene or indecent on any channel carried by cable systems.

● Maybe telephone subscribers need a similar lockbox. "Monique" has been sending out hundreds of thousands of mailers soliciting Washington, D.C., callers to telephone her "976" number to hear her deliver "soft porn" erotic fantasies. (The telephone company shares the phone call cost with the 976 marketer.) Once confined to men's magazines,

these telethrill companies are now resorting to mass bulk mailings. Recipients have been complaining but both the U.S. postal service and the telephone company say no laws are being broken by the dial-a-porn company.

● The Playboy Channel became the first cable service to offer its programming on a nightly or weekend basis. The option dubbed "Playboy on Demand" allows viewers to receive its programming for \$3.95 for a single night - \$4.95 for a two evening weekend. (60% goes to the cable operator.) Two million (of 10 million cable homes) are now addressable with PPV (pay-per-view) technology. Playboy reasons that many of these homes won't subscribe because there are kids in the house but might buy a particular movie or weekend.

● Hi-tech gambling by live satellite comes to Las Vegas! "Superbook" is a \$17 million state-of-the-art betting facility the size of a football field located at the Las Vegas Hilton. Forty-six giant projection screens show actual paddock areas and live racing from every major U.S. track simultaneously. The 23 betting windows are the only thing that is not satellite delivered. Incoming signals are received by fourteen 3.7 meter dishes. A thirty foot console is manned by five operators viewing 49 TV monitors. Wagging also extends to baseball, basketball, boxing and tennis.

● Assiniboia Downs in Winnipeg, Canada, has been granted a license to satellite beam racing to Manitoba's thirteen cable systems. Anyone who opens a telephone betting account with the track can phone in their bets. The track provides the race card without charge to cable companies. Louisville Downs (Kentucky) and Pennsylvania's Penn National tracks also offer live racing telecasts.

● The Royal Hong Kong Jockey Club has a different problem! Their phone lines (staffed by 1,600 operators) frequently get overloaded on race days. The track is now providing high-rollers with hand-held betting terminals so members can access the track's betting equipment themselves - sort of an in-home betting window! A New Hampshire company

SAME DAY SHIPPING! multiple-choice answer and tells you which answer is right! (Be certain shipping charges are included.) (Complete Morse Code Course: 0-21 w.p.m.=\$29.95, ppd) PLUS Postage \$1.25 75¢ 50¢ each manual. \$4.00 \$3.50 plus postage \$3.00 plus postage \$2.50 plus postage \$2.00 plus postage \$1.50 plus postage \$1.00 plus postage \$0.50 plus postage \$0.00 plus postage

their repeater coordination duties which now involve Tennessee and Kentucky.

● Randy Underhill, WD8PMV, of Ann Arbor, Michigan, has won the ICOM IC-03AT handi-talkie giveaway in ICOM's Novice Enhancement drawing. ICOM recently introduced a new (\$97.50) CT-16 Satellite Interface Unit and entered the repeater field with a (\$1,499) RP-2210 25-watt 220-MHz Repeater.

● We have answered this before, but keep getting questions on which ham license preparation material is current. All 1987 copyright amateur radio operator study material in the marketplace is accurate and will remain current on all question pools for at least another year. Our Novice textbook and package continues to do well. The \$4.95 (plus \$1.50 postage) illustrated Novice Voice Class textbook covers all aspects of becoming a ham - including all 302 Element 2 questions and multiple choice answers. The \$19.95 (+ \$2.00 shipping) Novice package comes in a binder with two long-play cassette audio tapes that teach the Morse code from "ground zero" and other goodies. Order from: W5YI-VEC, PO Box #10101, Dallas, Texas 75207.

● NASA expects to win its battle to fund the space station in the 1988 budget. Senator Proxmire is trying to kill the \$767 million item as being "ill-conceived." According to astronaut Tony England, W0ORE, amateur radio is expected to play an important roll on the Space Station.

● While NASA has virtually abandoned the commercial launch business, the French-run Arianespace program is now going full speed ahead once again. Ariane recently launched two communications satellites after a 16 month suspension caused by a May 1986 launch failure. Arianespace has 63 satellite launches scheduled in the coming years. While NASA's reusable shuttle won't be launching commercial satellites, the slack will be taken up by three U.S. expendable launch vehicles ...the Atlas-Centaur, Delta and Titan rockets.

● An article and photograph in the September 8th Orange County Register (California) shows KD6DA, Bob Reitzel, with binoculars on the lookout from the roof of a

nearby hotel for criminals that plague Disneyland. Reitzel is one of 20 operators enlisted in a new Summer experimental crime prevention program called HAMER, Ham Authorized Mutual Enforcement Radio. When something suspicious happens Reitzel radios Anaheim police reserve officers who handle it.

● GTE's Airfone while receiving an FCC extension to continue its passenger telephone service on commercial airliners for another two years, must change frequency so as not to interfere with broadcast studio links. Airfone was required to eliminate the interference since it has only limited rights under their experimental permit. The phone calls will now take place in the 849-851 MHz and 894-896 MHz bands. This spectrum was being held in reserve by the FCC for potential allocation to the air-ground telephone, fixed cellular or mobile satellite services. Airfone is available on 500 aircraft flown by sixteen airlines. Over 100,000 credit card phone calls are made monthly at a cost of \$7.50 for the first three minutes - \$1.25 for each additional minute. International calls cost \$15 plus \$2.50 per minute beyond three minutes. A passenger simply brings the cordless airfone back to their seat. Soon phones will be attached to seat backs. An emergency medical communications system transmitting vital signs of sick passengers is also planned.

● You'll soon be able to buy prescription drugs, cosmetics - and all sorts of financial products (insurance, consumer credit, money market funds, foreign currencies, discount brokerage, etc.) via video shopping. The cable Home Shopping Network will be offering these shortly.

● The QVC Shop-at-Home Network will be the first to issue their own Visa and MasterCard. Invitations to join will be sent to all of QVC's 400,000 customers. About half of these will be authorized \$5,000 credit levels. All risks will be assumed by MBNA, a national banking organization. QVC purchasers will be awarded "bonus points" when they use the QVC credit card. Points are redeemable toward more QVC goods.

● Interesting idea - advertising on blank plastic boxes used by video-rental stores to

New Illustrated Novice Voice Class Textbook
Oscillator and Battery \$9.95 + \$1.50 shipping.
M J co ley, I lass: Is f idisc k! H one your hey room instructors and dealers!
formal classroom training. Guaranteed to get the job
\$19.95 + \$2.00 post. AM AY PPIN

hold videocassettes. Beginning next month, BankAmerica will test an ad on rental boxes. McDonald's and Pizza Hut will also test the novel advertising medium. About 49.6% of TV households nationwide own VCR's. Advertisers pay \$1.00 for a three month box circulation.

Microsoft has squeezed an unabridged dictionary, the World Almanac, the Book of Facts, Roget's Thesaurus, Bartlett's Familiar Quotations and other reference books into a single Read-Only-Memory Compact Disk. The CD-ROM is about the same size as an audio compact disk. Microsoft teamed up with Amdek Corporation whose Laserdrive (\$1,095) stores and reads CD-ROM disks. Microsoft sells their "Bookshelf" computer software for \$295. Sears Business Systems will be carrying the bundled products. A single CD-ROM can hold an unbelievable 550 megabytes of information.

Parker Brothers, the game people, have signed an agreement with AIM (American Interactive Media) to explore development of CD-I (Compact Disc-Interactive) board games. Parker feels CD-I combines the best of all forms of entertainment technology - audio, video, text and data.

The Japanese government has initiated a promotion aimed at increasing public awareness of their 1125 scanning line HDTV (high definition television) direct satellite broadcast system. Henceforth, Japanese "Hi-Vision Day" will be celebrated on November 25th - 11/25 because of the 1125 line resolution. The 1988 Seoul Olympics will be HDTV taped and shown using their now-orbiting experimental BS-2b broadcast satellite. In 1990, BS-3a will start regular direct satellite HDTV broadcasting on two transponders, a third follows in 1991 when BS-3b is launched.

Telecom Equipment Corporation is a new Denver startup firm that recycles used telephone systems. The owner, Gary Rasmussen, a former Bell System marketing consultant, got into the business when a telephone equipment broker offered only \$4,000 for an old AT&T system - but wanted to sell a similar system for \$10,000 to \$14,000. Rasmussen bought the old equipment for \$3,800 and sold it for \$16,000.

RADIO TVI SHOES BEING RECALLED!!

Our readers are constantly forwarding us leads and tidbits of information. This one, a TVI story, takes the cake! We were sent the front page of the Zimbabwe Harare Herald where it was featured. Zimbabwe is the African country that previously was Rhodesia.

It seems that that a strange source of television and FM radio reception interference has been discovered. According to a spokesman for three leading footwear manufacturers, the TVI has been traced to the shoes worn by viewers and listeners!

The problem is confined to some shoes made during the last two years using hides from cattle and elephant that came from certain drought stricken areas. Because of the lack of grass, the animals had been forced to eat a certain type of weed that contained a large concentration of aluminum salts.

Acting as tiny transistors, the components of the contaminated hides interacted and set up static discharges on shoes that were worn in dry carpeted rooms. Viewers and listeners were forced to move their feet to stop the TVI.

The "radio shoes" came to light, the Harare Herald said, when a senior technical executive of one of the shoe companies was dancing to FM "Radio Three" in his living room. He was astounded when, as he moved back and forth, the FM radio interference level synchronized with his dancing. Discreet contact with other shoe companies confirmed his suspicion.

A phone number was published (Harare 702218) where, in the most serious cases, the shoes are being replaced. It all goes to prove that interference can (and does) originate from almost anything. You might ask your TVI complaining neighbor if they are wearing imported shoes. Let me know how you make out.

(If you happen to come across any other interesting human interest stories involving electronics, send them to us. Much of the information covered in these pages originates from readers around the globe.)