



April 2002

The HARC Spark

The Official Newsletter of the
Holmesburg Amateur Radio Club
P.O. Box 6253 Philadelphia, PA 19136
WA3AOP/R 146.685 Mhz Repeater
K3FI CLUB CALLS WM3PEN
Web Site <http://www.harcnet.org>



Editor: WA3PZO

PREZ SAYS..

Well here it is, the end of April already and field day is only two months away. Our May meeting will be dedicated to preparing for Field Day so if you are interested in helping out, or just wondering what we do at Field Day please come to the meeting and find out. We also have the March of Dimes Walkathon on Sunday April 28th. If you would like to help there please contact someone for details, listen to the net on Wednesday evenings at 8pm or be on the repeater at 7-7:30am for talk in. The club is also planning a trip to the Battleship New Jersey in July. If you are interested Please contact me N3LXN or Bob WA3PZO @ harcnet.org.

The club is planning a lot of activities that we would like every one to attend. The fox hunting group are three hunts into the season and would like to see some new faces come by. If you only have an ht you can hunt and win, or if you only have interest come on by and ride along with someone, we would welcome anyone interested in fox hunting.

Hope to see you at something coming up soon.

73 for now Mike N3LXN

I-LINK BEING TESTED

Thanks to the efforts of Bob, KB3SM, and Pete, KB3EBG, I-Link has made an appearance on the 146.685 repeater. For those not familiar with I-Link it enables people to talk by linking radios in different locations via the Internet. Contacts are possible across the country or around the world. It is similar to IRLP but has some technical differences requiring a I-Link Control Operator to be present when the system is in use.

The Board of Directors discussed I-Link at some length, and as with anything there are some good points and some bad. When the system is up it creates a lot of activity on the repeater. At the same time when the system is up it stops members and others from using the repeater for local communication. The Board would like to hear your comments on I-Link. Do you like it? Has it prevented you from making a normal contact? Should the hours that I-Link is on be limited? Contact or drop a note to N3LXN or N3ZZN.

HAM RADIO AT WAR! THURSDAY, APRIL 25TH

Have you been following the news? Have you really been following the news as it relates to ham radio? If not, you might be surprised where ham radio has been. This month's meeting features CQ Public Service Editor Bob Josuweit, WA3PZO. Bob has covered world events for CQ and CQ VHF for several years. It's an interesting program and one that you might like to invite your non-ham friend to hear. Time is 8 PM.

ELMER MAKES REGULAR HARC VISIT

Often new hams (and some not so new) want to know how to do something in ham radio. For many of us it's common practice, for other's it might be a first time. Each month prior to HARC's main speaker we'll cover some topic of interest. This month 'Elmer' Frank, N3ZZN, will show us the proper technique for soldering. Is there a topic you would like to have covered? Would you like to give a short 10-15 minute presentation on a topic? Contact N3LXN, N3ZZN, or WA3PZO.

MARCH OF DIMES WALKAMERICA SUNDAY, APRIL 28TH

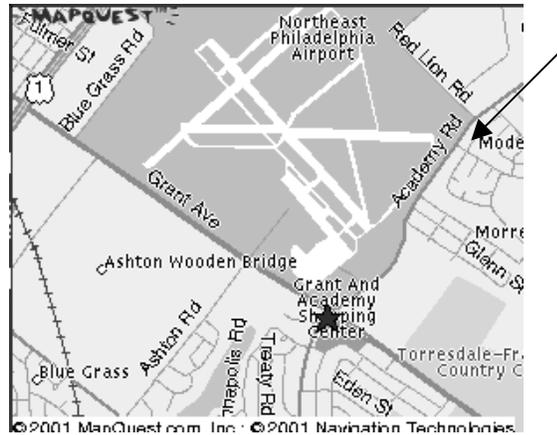
HARC will again be providing logistical and safety communications for this years March of Dimes Walk America in Northeast Philadelphia. The Walk will start at the Flyers Skate Zone, 10990 Decatur Rd (& Comly), Phila. This is near the Northeast Airport. We need 10 people with HT/Mobile communication from 7:30 AM until about 1 PM. If you are interested in helping contact, WA3PZO or N3LXN.



Last year HARC received an award for providing important communications. Come on out and help. This is a fairly easy event and a lot of fun.

H.A.R.C. Board Of Directors 2002
President : N3LXN : Mike Wurgley
Vice Pres: N3ZZN: Frank Flanagan
Treasurer : W3KZA : Sid Kalos
Secretary : WA3PZO : Bob Josuweit
Trustee : KB3SM : Bob Brocklehurst
Trustee : KB3EBG : Peter Santiago
Trustee : K3CJ : Charlye Johnson
Tech Committee : WB3BDC : Ron Cardullo
Newsletter Editor : WA3PZO: Bob Josuweit

H.A.R.C. Maintains a Web Page @www.harcnet.org
All members online can be emailed via theircallsign @harcnet.org. Articles, pictures etc. submitted for the newsletter should be in standard ASCII or MS Word, .jpg or .gif formats and E-mailed to the Editor no later than the 2nd Saturday of month to be included in the next edition! **Send info to WA3PZO @ Harcnet.org**
H.A.R.C. Nets meet on 146.685 weekly
The Chaverim Net: Tuesday @ 9:00 PM
CW Practice: Wednesday @ 7:30 PM
Members net: Wednesday @ 8:00 PM you can listen to the Amateur Newsline & ARRL audio reports.
SSB Net on 28.450 +- mhz Sundays @ 9:00 AM
H.A.R.C. Monthly Meetings - The Board of Directors meets on the 2nd Thursday @ 8:00 PM. General meetings are held the last Thursday @8:00 PM.
8th District Police Station,
Red Lion & Academy Rd. Phila PA



H.A.R.C maintains the 146.685 repeater located @ Univ. of PA., Phila PA with inputs in Abington, N.E. Phila, and Cherry Hill, NJ; More Club Information & Member Applications can be had by contacting any of the Directors via E-mail. Info@harcnet.org, the web page <http://www.harcnet.org> or writing to HARC PO Box 6253, Philadelphia, PA 19136.



**HARC is an
ARRL Special Service Club.**

AMATEUR LICENSE INFORMATION

Renewing your Amateur Service FCC license, or changing your license address, call sign or name, or requesting a duplicate license. Amateurs have several options for renewals or filing changes. They include: * As a free service to ARRL Members, ARRL Members may complete and sign an NCVEC Form 605 (<http://www.arrl.org/arrlvec/ncvec605-3.pdf>) and return it to ARRL HQ. ARRL HQ staff will in turn file the application data electronically with the FCC. The processing time will take only a few days or less once the application reaches ARRL HQ. Send such applications to: ARRL VEC, 225 Main St, Newington CT 06111 USA.
 Non members are welcome to first sign up for membership and then use this service. For membership info, including an on-line membership application, see <http://www.arrl.org/join.html>. For NCVEC Form 605 see <http://www.arrl.org/fcc/forms.html>. If preferred, non members can mail a check (or the credit card charge info) for the applicable current membership rate for themselves in the same envelope with a completed NCVEC Form 605 and ARRL HQ will immediately process the membership request and shortly thereafter the NCVEC Form 605 FCC license renewal/update request. Vanity requests must still be

handled separately by mail or on line directly with the FCC (or via someone serving as a filing agent, such as the W5YI Group). * All Amateurs can apply by mail with FCC. To place your request by mail obtain an "FCC" Form 605, complete it and then mail it to: FCC, 1270 Fairfield Rd, Gettysburg PA 17325. This is a free FCC service. FCC Form 605 can be obtained via <http://www.arrl.org/fcc/forms.html> or <ftp://ftp.fcc.gov/pub/Forms/> or via fax to FCC's Fax-On-Demand system at 202-418-0177 (request form number 000605). * All Amateurs can apply via the internet. The FCC accepts submissions electronically via their Universal Licensing Service (ULS) system.
 You may file requests via: <http://wireless.fcc.gov/uls/>. To use the on-line ULS system, you must first be sure you are using a web browser which FCC indicates is fully functional for ULS use (FCC indicates that at present only recent versions of Netscape {vers. 4.7x work well} are fully tested and functional); you must then registered in ULS, which involves supplying your Taxpayer ID Number (TIN) which is your Social Security Number to FCC.

Wilkes Barre Priest, Drexel U. Grad Nominated for CQ Hall of Fame.

Father Joseph Murgas and Paul Baran, W3KAS, have been nominated for this year's *CQ* Amateur Radio Hall of Fame. The Hall was established in January, 2001, to recognize those individuals, whether licensed radio amateurs or not, who significantly affected the course of amateur radio; and radio amateurs who, in the course of their professional lives, had a significant impact on their professions or on world affairs.

Father Joseph Murgas was the first person to successfully transmit over land (April 27, 1905) and develop a tone system for use in radio transmission. At one point Marconi traveled to Wilkes-Barre to meet with Murgas. After the meeting Murgas redesigned his wireless telegraph apparatus to carry sound impulses in the form of language over the airwaves. . Murgas patented the rotary-spark-gap mechanism, now listed as the "Wireless Telegraphy Apparatus." After completing his work with his tone system, Josef received 17 patents. The Murgas Amateur Radio Club was named after the priest.

Paul Baran, W3KAS, a Drexel University graduate, developed packet switching which is the foundation of modern communications networks and, in particular, the Internet. Baran suggested a distributed network "a communication network which will allow several hundred major communications stations to talk with one another after an enemy attack." He helped developed ham radio's early packet networks. "A distributed network would have no centralized switch. Each node would be connected to several of its neighboring nodes in a sort of lattice-like configuration. Therefore, each node would have several possible routes to send data. If one route or neighboring node was destroyed, another path would be available." The Hall of Fame Class of 2002 will be announced in mid May.

PCR1000 Winner!

Millie, KA3EPR, XYL of Pete, KA3EBG, is the winner of the ICOM PCR-1000 receiver that was used as a fund raiser. Thanks to all for participating and supporting the Club.

Club QSL Cards

With a call like WM3PEN, you can expect that sooner or later we would start receiving QSL Cards. Well the cards have to be ordered. Pricing depends on the style of card and it is a stock card or custom design. Cost could be between \$30 and \$130. We also have to remember that the club also has another callsign of K3FI. The Board would like to hear some input on who you like as a QSL Card printer. Do you have any interest in helping to offset the cost of the cards? The Board has ordered some sample cards and will be discussing it in more detail. Any input is appreciated. Contact Bob, WA3PZO.

UPCOMING PROGRAMS & EVENTS

April 25 - HARC Meeting - Ham Radio At War
April 28 - March of Dimes Walk
May 30 - Field Day preparation
June 22-23 - Field Day
June 27 - QRP
July Battleship NJ tour and operating NJ2BB
Date to be determined
August HARC Picnic

CW Practice

Frank, N3ZZN, will be introducing CW to a few people on the repeater beginning May 5 at 12:30 PM. He expects the practice to go until July 6. If you are interested in learning code or want to participate in the program contact N3ZZN@Harcnet.org.

HARC NEWS SERVICE

HARC runs 3 amateur radio related news programs 3 times per week. Wednesday 8 pm Saturday 9 pm, Sunday 10 am. AR Newsline, ARRL audio news, and the Rainreport. These 3 reports are available on demand 24 / 7 at your convenience by calling (215) 624-0672. If you have any questions, or need assistance, contact K3CJ.

Sightless ham tells story about ham radio in the Philadelphia area!

(This is the eighth of a series of articles by T. A. Benham W3DD, who lives in suburban Philadelphia. The articles are from the Handi-Hams email newsletter.)

Becoming a Ham - Part 8 By T. A. Benham, W3DD

After World War 2

During World War II, Ham Radio operations were suspended and all efforts were turned toward defeating the enemy. Early on I received a letter from the Third Command asking me why I had not volunteered for Army duty. I wrote back that I had several problems. First, I had a chronic stiff neck. Second, because my knees were in very poor condition I couldn't march more than a few hundred feet. Third, I was totally blind. Fourth, and perhaps most compelling, my Seeing Eye Dog had flat feet. I never got a reply. I can only hope someone got a laugh out of it. A bit later I got a letter ordering me to report for a physical exam preparatory to being assigned to a unit. I appeared with my dog and the letter at the assigned place, took my seat beside several other men and waited. There was much snickering and conjecturing amongst the others, but I said, "I have this letter and I don't dare ignore it". After a while, a sergeant came in and called my name. I stood and after a moment of stunned silence the sergeant said, "There's been a mistake! Go back home and forget it!" We all got a chuckle, including the sergeant.

In the early years of the war I worked for RCA in Camden, New Jersey, and in February, 1942, I began

teaching at Haverford College. Many of my Physics students were army personnel studying meteorology. It was the beginning of a long and interesting career for me.

War surplus donations

For three or four years beginning in 1946, I stuck pretty close to the College, teaching and experimenting with various projects and reviewing the vast amount of surplus materials given to us by the Government. During those years, I met and worked with several exceptional students and friends. The temptation is to tell it "day by day", but that would take a book in itself. The College had a barn that wasn't much used, so it was turned over to me and my crew of interested students for storing the materials as they came in. A group of us would spend several afternoons sorting through the piles of "stuff" deciding what was worth keeping and what to dispose of. By law, we were not permitted to sell anything for a period of several years, but we were permitted to dispose of anything we considered not worth saving. We could junk it or give it away. I can assure you that anything we didn't keep wasn't useful to anyone. We kept such things as receivers, transmitters, motors, motor-control circuits, generators, tubes, and so on. Among these piles of things I found equipment I had worked on at RCA in 1941-42. We also found several receiver-transmitters (today called transceivers) that were marked IFF, which we learned meant, "Identify, Friend or Foe." They looked neat and seemed to offer the chance to make some interesting Ham equipment out of them. Just as I was about to disassemble one to see what was inside, we received a telegram from some branch of the Government: "CAUTION: Do not open the IFF equipment marked BC-610 as it may contain an explosive charge designed to destroy it if triggered!" The telegram went on to describe how to tell whether there was a charge in a particular item or not. After studying the models we had, we sent some to the Government demolition center. Those we decided were safe we opened, with great trepidation! They turned out to be very interesting, but not suitable for Ham use. I was fascinated by the use of transmission lines as tuning circuits. It was the first application I had seen since studying about them in graduate school. Another piece was a complete autopilot with all the motors, gyroscopes and control boxes. One of the boys working with me was a 16 year high school senior named Corlies Hastings. He was a truly exceptional person. He and I worked on several projects during those years and I learned a great deal and had a tremendous amount of enjoyment. It was a thrill and an education to work with him. He did not have a great knowledge of electronics at the time, but he had a wonderful mind, could look at a circuit and explain it to me quickly and with understanding. He and I worked out a scheme for making the autopilot demonstrate the principle of keeping a plane on course and on level flight. We built a platform to represent the plane and mounted it on a pedestal with a ball joint holding the center of the platform. It could tip and rotate in any direction. We then mounted the elements of the autopilot on the platform. The motors that controlled flight were fastened to the system through flexible cables

and an arrangement of pulleys. The gyroscopes, of which there were three, controlled the motors to keep the platform level and headed in the given direction. I used it as a classroom demonstration for several years. After getting it set up, headed north, for example, and level, I would give the platform a twist off course, and it would come back to north. Then I would put a weight on one corner to throw it off level and the system would level itself again. It was quite popular and attracted a lot of attention. Corlies, of course, got full credit for his contributions and received many compliments. We published an account of the demonstration in a suitable magazine (I forget which one). Corlies helped me build two electronic instruments that I needed for my own use. They still exist today. One of them is a curiosity now because better ways have come along for doing the same thing. This was an instrument for detecting the fact that an electronic current had changed. The other instrument was for the purpose of measuring the capacitance of small capacitors. Until then, it was impossible for me to measure a capacitor whose capacitance was 100 pf or less. This device and the current indicator were also written up in one of the electronic magazines. Single dial tuning transmitter When the War was over and we were allowed to get back on the air with our amateur equipment, I didn't have a transmitter, although I still had my receiver. One of the problems with any of the transmitters of those days was that they required a lot of adjustment and tuning. I had been thinking for a long time about the possibility of building a transmitter that could be operated from a single dial-knob. Also, I was used to the idea of operating with a quartz crystal oscillator that allowed only one operating frequency. To change frequency, a different crystal had to be plugged in and things tuned again. I set about designing a variable-frequency oscillator, that would allow operation anywhere in the legal bands, followed by the necessary radio-frequency amplifiers, all tuned by one knob with the various stages of amplification being ganged together by belts, pulleys and gears. This would be quite a novel arrangement which would require much planning and design. After about six months, I had a neat system contained in a cabinet about 18 by 8 by 10 inches which would produce 200 watts of power. Not only was it tuned from a single knob, but it could be tuned remotely by a small motor attached to the tuning shaft. It worked well and was used from early 1946 to mid 1957, when we moved to a location where there was not a suitable spot for the special antenna required for operation of the transmitter. While the unit was new, I had an article published in the amateur magazine QST. The idea was more of a novelty rather than a practical solution to the original thought. These days, they are common and very widely used. Right after the War my friend Sandy, who accompanied me to Germany in 1936, got his Ham license, W1ILF. He was one of the first contacts I made with the new transmitter. We had many QSO's during the next ten years or so. To be continued.

Why is your ham radio gear in the "shack"?

By WD0HCO

The use of "shacks" came with the birth of radio. During 1895 to 1908, "radio" was very different. Only crude spark transmitters were used to send morse code. Wire antennas were huge since the low frequencies used were at the bottom of today's AM broadcast band. Receivers were nothing more than a tuning coil, a capacitor, a hunk of galena and a headset. The distance of a typical amateur setup was about 50 -75 miles.

Spark transmitters were often powered by gas generators. These generators did not have mufflers because they were not invented at the time. In fact, many factories which had gas engines to power up the machinery did not have mufflers and it often possible to hear them from 10 to 15 miles away.

Because of these facts - radio setups were often in shacks away in the country or in a large back yard. At the time, it was considered a rich man's hobby.

But here the story gets interesting... a young man decided to find a way to quiet the gas engines... he invented the muffler and patented the idea. In fact he had 47 patents - yes even the one for car mufflers (He built and drove the 1st car in Connecticut - He also won the 1st track race in America!). His invention quickly made him rich.

Just before World War I came about. The government ask the young man if he could invent a muffler for rifles. He did so and called it a "silencer". He became interested in rifles and the government again asked if he could improve upon the manually cranked Gatlin gun. Again, he did and it became the world's first machine gun. The Army did not think it was fair to use such a weapon so they showed no interest in buying any. But the Germans thought it was a great idea, purchased a few from the young man and started using them when World War 1 started.

He became interested in radio when a radio operator asked for one of his mufflers for his setup. He purchased the entire radio setup and moved it inside his house. After several weeks of operating his radio setup he discovered he could go 150 miles but no farther.

He wanted to send a message to his cousin who lived 300 miles away. Fellow amateur operators agreed to relay his message from station to station and send back the response. It worked! In one evening, he sent a message and got an answer back... He thought, wouldn't it be great if America had a group or a league of radio operators to relay messages throughout the entire country?

That evening, the American Radio Relay League was born. After a few month's, a small group was formed and the young man was elected it's president.

His name was Hiram Percy Maxim.

The Amateur's Code

The Radio Amateur is

CONSIDERATE...never knowingly operates in such a way as to lessen the pleasure of others.

LOYAL...offers loyalty, encouragement and support to other amateurs, local clubs, and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

PROGRESSIVE...with knowledge abreast of science, a well-built and efficient station and operation above reproach.

FRIENDLY...slow and patient operating when requested; friendly advice and counsel to the beginner; kindly assistance, cooperation and consideration for the interests of others. These are the hallmarks of the amateur spirit.

BALANCED...radio is an avocation, never interfering with duties owed to family, job, school or community.

PATRIOTIC...station and skill always ready for service to country and community. --*The original Amateur's Code was written by Paul M. Segal, W9EEA, in 1928.*

ARMED FORCES DAY ANNIVERSARY MILITARY/AMATEUR CROSSBAND COMMUNICATIONS TEST

The Army, Air Force, Navy, Marine Corps, and Coast Guard are co-sponsoring the annual military/amateur radio communications tests in celebration of the 52nd Anniversary of Armed Forces Day. Although the actual Armed Forces Day is celebrated on Saturday, May 18, 2002, the Armed Forces Day Military/Amateur Crossband Communications Test will be conducted on May 11, 2002 (local) so as not to conflict with the Dayton Hamvention which is on the same weekend (17-19 May, 2002) as the actual Armed Forces Day.

The annual celebration features traditional military to amateur cross band communications test and the message receiving test. These tests give Amateur Radio operators and short wave listeners an opportunity to demonstrate their individual technical skills and receive recognition from the Secretary of Defense or the appropriate military radio station for their proven expertise.

QSL cards will be provided to those making contact with the military stations. Special commemorative certificates will be awarded to anyone who receives copies the digital Armed Forces Day message from the Secretary of Defense.

EPA HAMS NEWS ON ARRL WEB PAGE

Each week someone in Eastern Pennsylvania is making ham radio news. News of interest to EPA hams is posted to the EPA Section web page. You can find the link from the ARRL Home page. www.arrl.org.



HOLMESBURG AMATEUR RADIO CLUB
P.O. Box 6253 Philadelphia, PA 19136
"Serving the Community Through Ham Radio"

SEE YOU AT THE NEXT CLUB MEETING APRIL 25TH
HAM RADIO AT WAR - CQ Public Service Editor WA3PZO
MEETING: 8TH DISTRICT POLICE STATION

DATE: **APRIL 25, 2002**

TIME: **8:00 PM**

LOCATION: **8TH DISTRICT POLICE STATION**

SPEAKER: **HAM RADIO AT WAR**
 CQ PUBLIC SERVICE EDITOR WA3PZO
 SOLDERING TIPS - N3ZZN



The HARC Spark

E-XTRA



Editor: WA3PZO

April 2002

An Email Extra to the HARC Spark

AMTRAK TRAIN CRASH FLORIDA HAMS RESPOND

By Billy F. Williams, N4UF

(This is an unedited report received by WA3PZO on 4/18 11:30 PM Six people were killed when an AMTRAK Auto Train jumped the tracks near Crescent City, FL.)

It looks like activity is winding down. All victims have been evacuated from the wreck site to Crescent City High School where triage was taking place.

ARES hams had portable stations operational at the Putnam County EOC (Miller Norton, N4RYX and Ben Meyer, KB3AMT) and Crescent City High School shelter (KD4BEE, KF4SYZ, WD0CUG, KF4WQI). Bill, KF4EJD was set up at the wreck site.

A secondary shelter at Middleton-Burney Elementary School was established to assist in moving the passengers. At the peak, about 400 passengers were sheltered at Crescent City High School. A group from the Northeast Florida Chapter American Red Cross headquartered in Jacksonville included Lewis Jolly, W4LTJ and John Reynolds, W4IJJ (Radio Officer.) They accompanied the Jax Red Cross Emergency Response Vehicle (ERV) which was dispatched to Putnam County. Putnam County only recently came under jurisdiction of the Jax Red Cross.

At 11PM EDT, Amtrak announced it was sending busses to Crescent City High School to take remaining passengers to hotels in Orlando for the night. Two hospitals in Jax were staffed by Duval ARES operators to provide status reports to medical volunteers who were ready to head to the site if needed. By monitoring the district net, they were kept up to date on requirements. Their help was not required and the hospital ham stations were secured at 10PM EDT.

Putnam County EC Mark Bradford, WF3F coordinated operations with help from AECs KD4BEE and KF4EJD. Duval EC Miller Norton, N4RYX was EC for Putnam until moving to Jax. He served as a Lieutenant with the Palatka Police Dept. until retiring. He returned to Putnam County to head up the Putnam EOC operation shortly after the incident occurred. His knowledge of the area was a great asset in organizing the response. The Florida Crown Emergency Net

was in operation on the W4IZ 146.7/444.4 MHz Repeater System which was linked to the KF4PXZ 145.37 MHz Palatka Repeater. The linked system provided excellent service. The net was in session from 5:30PM and is still going at 11PM although activity is declining.

Putnam County ARES operated on the 147.06 Palatka repeater which was linked to the W4IJJ 146.64 repeater in Jacksonville with help from WA4BUX. This provided two districtwide communications channels.

James Stark, WA4BUX readied his I-Link system in case extended coverage was necessary and Tom Nolan, KD4MWO had SEDAN capability and volunteers ready just in case.

Special thanks to East-Central DEC Dave Flag, N4BGH and Flagler County EC Jay, AF2C for their offers of assistance. Jay and Dave had several operators lined up and will assist if help is still needed tomorrow.

Things seem to be winding down quicker than expected. This wreck could have been much worse.

ARRL TO OFFER HF DIGITAL COMMUNICATIONS COURSE

The ARRL Certification and Continuing Education (C-CE) Program soon will introduce its newest on-line course--HF Digital communications (EC-005). It marks the fifth course in the growing list of continuing education offerings from ARRL.

"Students will understand the scope of HF digital Amateur Radio communications as they exist today," said ARRL C-CE Program Coordinator Dan Miller, K3UFG. "This course will develop your awareness and skills for the HF digital modes and assist you to use and benefit from them."

Students taking the course will become familiar with the scope of HF digital Amateur Radio communication modes available and learn how to use all of them. The curriculum was developed by QST Editor and digital enthusiast Steve Ford, WB8IMY, the author of ARRL's HF Digital Handbook.

"Having a resident expert like Steve Ford is a definite plus!" Miller said. The course covers many of the topics contained in Ford's book as well as some new ones. Early in the ARRL HF Digital Communications Course, students will learn how to configure a station for HF digital work, then learn about such topics as chasing digital DX and HF digital contesting. Students will become acquainted with RTTY, PSK31, MFSK, Hellschreiber, PACTOR, PACTOR II, WinLink 2000, Clover and HF packet, and they will need no prior experience with any of them.

Tuition for HF Digital Communications (EC-005) is \$60 for ARRL members and

\$90 for nonmembers. More course information is available at the C-CE Course Listing Page

<http://www.arrl.org/cce/courses.html>. The ARRL Certification and Continuing Education offered its first on-line class--in Amateur Radio

Emergency Communications--in December 2000. Since then, the highly successful emergency communications series has expanded to three levels and benefited hundreds of amateurs. Last December, the program added its first technical offering, a class in Antenna Modeling (EC-004) that also has proven very popular.

AMATEUR RADIO HITS THE BIG SCREEN (AGAIN) IN NEW IMAX FILM

Amateur Radio again is getting a role on the silver screen, this time in the new IMAX film called Space Station. The film includes a segment depicting the Amateur Radio on the International Space Station (ARISS) program in action. ARISS team members were on hand to demonstrate ham radio to the press and invited moviegoers when the film had its first screening Tuesday, April 16, at the National Air and Space Museum in Washington, DC.

The movie opens to the general public this weekend. US International Space Station crews have included at least one Amateur Radio operator. The current Expedition 4 crew--Commander Yury Onufrienko, RK3DUO, and astronauts Dan Bursch, KD5PNU, and Carl Walz, KC5TIE, is the first to have all three members licensed.

The IMAX earthbound segments were filmed last August at Seabrook Intermediate School in Texas. Students there enjoyed an ARISS contact on September 4. The ISS segments was shot in January 2001 with Expedition 1 Commander Bill Shepherd, KD5GSL. The two segments were pieced together during editing.

The film is showing at the Imax Theater in King of Prussia. In 2000, Amateur Radio had a featured role in the science fiction thriller Frequency.

Cost of QSLing to rise again:

The United States Postal Service has announced that new postal rates will go into effect June 30. The single-piece, one-ounce first-class mail rate will increase three cents--from \$0.34 to \$0.37. The additional ounce rate for single-piece first-class mail will remain at \$0.23. The single-piece card rate (eg, QSL cards) will increase by two cents--from \$0.21 to \$0.23. For details, visit the USPS Web site <<http://www.usps.gov/ratecase/>>.

Comments invited on Novice Band, field-reparable gear petitions

NOVICE BAND PROPOSAL

Comments are due by May 16 on an Amateur Radio-related Petitions for Rule Making put on public notice this week by the FCC. The ARRL petition, designated RM-10413, would eliminate the 80, 40 and 15-meter Novice/Technician Plus CW subbands and reuse the spectrum in part to expand the 80 and 40-meter phone allocations. Amateurs may view and comment on this proposals via the FCC's Electronic Comment Filing System (ECFS), <http://www.fcc.gov/e-file/ecfs.html>. (Click on "Search for Filed Comments." In the "Proceeding" field enter the rulemaking number, with "RM" in upper-case and the hyphen included.)

The ARRL's petition, filed in March, asks the FCC to eliminate the Novice and Technician-Plus CW bands and reapportion these "inefficiently deployed segments" to alleviate overcrowding elsewhere. If the FCC goes along, current Novice and Technician Plus (ie, Technician with Element 1 credit) licensees would be permitted to operate on the 80, 40, 15 and 10-meter General-class CW allocations at up to 200-W output. For General and higher class operators, the ARRL plan would implement changes in the 80, 40 and 15-meter phone bands, expanding phone segments for many amateurs.

The League's petition also seeks FCC permission to use spread spectrum on 222-225 MHz; to expand the pool of special event call signs beyond the 1x1 format to include identifiers for US territories and possessions that do not provide for mailing addresses; to clarify rules to indicate that modulated CW (MCW) is permitted for repeater station identification; and to incorporate into the rules a 1990 FCC waiver authorizing amateurs in certain areas of Colorado and Wyoming to operate on certain segments of the 33-cm band.

Because you are on email you are receiving the HARC SPARK E-XTRA. This is late breaking news and other info that we couldn't fit it into the printed version of the newsletter.

All stories are from the ARRL Letter unless otherwise noted.

Do you have a story to tell that has reference URLs? Let us know and we might be able to use it in the HARC SPARK E-XTRA.