



February 2015

# The HARC Spark

The Official Newsletter of the  
Holmesburg Amateur Radio Club  
WM3PEN 146.685 Mhz Repeater  
K3RJC 444.9 Mhz Repeater  
K3FI - CLUB CALLS - WM3PEN  
Web Site <http://www.harcnet.org>



## Fusion Fever Repeaters Upgrade Planned February 19, 2015

### Yaesu Offers Deal That Can't Be Turned Down

The HARC Board has authorized the purchase of a new Yaesu DR1X System Fusion repeater. The repeater will replace the current repeater which was built in the late 1970s.

The System Fusion repeater is a 50 Watt, Dual Band, Dual mode repeater system with both analog and digital capability offering true integration with all aspects of VHF/UHF Repeater infrastructure, including current onsite controller hardware.



Yaesu is offering the \$1700 repeater to clubs for \$500. A \$150 external controller interface may be needed. Ron, K3RJC, is upgrading the 444.9 repeater. This should be a fairly easy switch since it is a single site repeater. The 146.685 repeater will be replaced and operated as a standard FM repeater. It will not be able to go digital at the moment because of the multiple inputs. These inputs will not pass through a digital signal.

To finance the purchase of the repeater, one member has donated \$100 towards the purchase. Contributions are being accepted. The 2 repeaters are expected to be shipped either the end of March or early April.

### HARC Member Appointed to ARRL Eastern Pennsylvania Staff

ARRL EPA Section Manager Joe Ames, W3JY, recently appointed Bob Josuweit, WA3PZO, as Affiliated Club Coordinator for EPA. The ACC is the primary contact and resource person for each Amateur Radio club in the section, specializing in providing assistance and coordinating joint activities of radio clubs. In making the announcement, Ames said Bob is the current president of the Holmesburg ARC, a founding member of the Mid-Atlantic ARC, and a member of the Philadelphia Digital Radio Association. He is also coordinator for the Thirteen Colonies Special Event station, WM3PEN which operates each year during the week of Independence Day.

Bob is the ARRL's 1996 Phillip McGan Public Relations Award honoree and is well known for his articles as Public Service columnist for *CQ Amateur Radio* magazine in the 2000s and for his contributions to *CQ VHF*, *Popular Communications*, *Conformity*, and *QST* magazines. His service to the ARRL is equally distinguished, having served as SEC and ASM for EPA and the League's Public Relations Committee, Public Service Advisory Committee, and as past chairman of the Emergency Communications Advisory Committee.



## HARC Board of Directors

President/Treasurer - Bob Josuweit, WA3PZO

Vice President - Greg Malone, WA3GM

Secretary - Charley Johnson, K3CJ

Technical - Ron Cardullo, K3RJC

Member-at-Large - Sol Volen, N3UBY

Mike Wurgley, N3LXN

Webmaster - Rich Shivers, AB3EO

Newsletter Editor - Bob Josuweit, WA3PZO

WM3PEN @ AOL.COM

H.A.R.C. Monthly Meetings - The Board of Directors meets on the 1st Thursday @ 7:30 PM (Even number months). General meetings are held the 3rd. Thursday @ 8:00 PM. Pathway Bldg, Philadelphia Protestant Home, 6401 Martins Mill Road at Tabor Rd . Phila PA. Picnic in August. Holiday Dinner in December.



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.

WM3PEN@arrl.org, the web page

<http://www.harcnet.org> or writing to HARC 3341 Sheffield Ave, Philadelphia, PA 19136.

Keep up on the latest HARC news by checking out the Club website

[www.HARCNET.org](http://www.HARCNET.org)

*Upcoming Events*

**HARC Meeting**

**February 19, 2015**

**Yaesu System Fusion**

## PHILA ARES INFORMATION

All amateurs interested in participating should check into the Phila ARES Net, Sunday's at 9:00 PM, hosted on the Phil-Mont Repeater System; 147.030 MHz (+offset 91.5 PL) ;444.80 MHz (+offset 186.2 PL) When control operators are available, Echolink node 29742, WU3I-L, is on the repeater. Backup link is KB3IV-L.

All interested amateurs are welcomed and encouraged to check in for more information. There is always a different topic of interest to the amateur community discussed with an informal round table of comments and suggestions.

Look forward to having all check in on Sunday nights @ 9:00 pm. See web site for more information.

- Visit the Philadelphia ARES web site

<http://www.harcnet.org/aresindex.html>



## VE SESSIONS

PhilMont Mobile Radio Club has testing in Ambler, PA on the 4th Thursday of every month. Exams , 1414 E. Butler Pike in Ambler, PA.

Registration begins at 7pm.

Warminster Amateur Radio Club has testing the last Wednesday evening of each month except August and December. The sessions are at the Warminster Recreational and Educational Center on Little Lane, and start promptly at 7:00 PM (registration 6:45 PM).

Bryn Mawr - quarterly on a Saturday. Contact Bob Lees, W3ZQN, [rjlees@aol.com](mailto:rjlees@aol.com)

## HF AWARDS MANAGER

Are you getting close to having all 50 states confirmed for the Worked All States award or working enough grid squares for to qualify for the VUCC Award? As a HARC service you can now have your QSL cards verified by Bob, WA3PZO, and not have to ship the cards to ARRL Headquarters. You must be an ARRL member to qualify for the awards. Additional information and links can be found on the HARC website ([www.harcnet.org](http://www.harcnet.org))

## HARC Member Wins Prize from



QRZ.com recently announced a weekly winner in the Subscriber Rewards program. If you haven't heard yet, Subscriber Rewards is their way of saying thanks to loyal subscribers who help keep the site running. In January, QRZ.com awarded a brand new, in the box, Baofeng UV-5R Plus, dual band (144/440 Mhz) transceiver, complete with hands-free headset and a drop-in charger to James Lanigan, WA3ERQ, from Philadelphia, PA. This is a great little radio that is field programmable right from the keypad. It also includes a built-in flashlight as well as many great operating features.



In a Facebook posting Jim said he is very happy with this radio. "Sitting in my car on top of garage C at the airport I got a great signal report from a repeater 20 miles away in Jersey on 5 watts and a 5" antenna. Baofeng did a great job on this radio and the price is definitely right."

## Pennsylvania "67" Challenge Award

Amateur Radio operators around the world have the opportunity to participate in the Pennsylvania "67" Challenge. The Challenge, sponsored by the Holmesburg Amateur Radio Club, is to make contact with all 67 Pennsylvania Counties. The Challenge is open to all amateur radio operators regardless of individual station capabilities. All contacts must be 2-way communications made in real time. These contacts may be on any Amateur Radio band/mode.

Contacts made using repeating devices such as FM repeaters, Amateur satellites, moon-bounce, and keyboard-to-keyboard contacts through digipeaters/nodes are valid, because these QSOs are made in real or near-real time. Contacts using IRLP, Echolink, or D-Star are valid as long as a radio is being used by both operators. All contacts must be made from the same county.

As an incentive Pennsylvania "67" Challenge certificates may be earned by working stations in 20, 40, 60, or all 67 Counties. Paper or electronic QSLs are acceptable. The contacts can be verified by a local club officer or mailed to the Holmesburg Amateur Radio Club.

Complete rules are posted on the HARC website. Questions on the Award can be directed to HARC at [WM3PEN@ARRL.NET](mailto:WM3PEN@ARRL.NET).



## Pennsylvania 67 Challenge

Congratulations to  
**Larry Campi, WA5TRX**  
For making a confirmed contact  
with amateur radio operators in:  
Special Endorsement: HF SSB



Presented by the Holmesburg Amateur Radio Club, WM3PEN, January 24, 2012

## **FCC "Paperless" Amateur Radio License Policy Goes into Effect on February 17**

Starting February 17, the FCC no longer will routinely issue paper license documents to Amateur Radio applicants and licensees. The Commission has maintained for some time now that the official Amateur Radio license authorization is the electronic record that exists in its Universal Licensing System (ULS), although the FCC has continued to print and mail hard copy licenses. In mid-December the FCC adopted final procedures to provide access to official electronic authorizations, as it had proposed in WT Docket 14-161 as part of its "process reform" initiatives.

Under the new procedures, licensees will access their current official authorization ("Active" status only) via the ULS License Manager. The FCC will continue to provide paper license documents to all licensees who notify the Commission that they prefer to receive one. Licensees also will be able to print out an official authorization - as well as an unofficial "reference copy" - from the ULS License Manager.

"We find this electronic process will improve efficiency by simplifying access to official authorizations in ULS, shortening the time period between grant of an application and access to the official authorization, and reducing regulatory costs," the FCC Wireless Telecommunications Bureau (WTB) said. According to the WTB, the new procedures will save at least \$304,000 a year, including the cost of staff resources.

In comments filed November 5, the ARRL had strongly recommended that the FCC "give serious consideration to continuing a default provision for sending an initial paper license document to new licensees in the Amateur Radio Service, along with detailed, simple instructions for how to make the elections set forth in the notice relative to future modified or renewed licenses."

The FCC said that applicants or licensees who

include a valid e-mail address under "Applicant Information" in the ULS will receive an official electronic authorization via e-mail. New license applicants who do not provide a FCC Registration Number at the examination point will receive a printed license as well as an FRN and a temporary password to access the Commission Registration System (CORES).

The ARRL and other Amateur Radio commenters also worried that unless a license document is printed on distinctive paper stock, its authenticity could be questioned in such situations as obtaining vanity call sign license plates. To address this, the FCC said the watermark "Official Copy" will be printed on each page of an official authorization that a licensee prints out from the ULS. The WTB recently stopped using distinctive paper stock to produce hard copy licenses and has been printing these on "standard, white recycled paper." The Bureau noted that the distinctive paper stock it had used was six times more expensive than the plain recycled paper it now uses.

The ULS License Manager now includes settings that allow licensees to notify the WTB that they prefer to receive official authorizations on paper. Once the final procedures go into effect designating electronic access as the default, licensees can change the ULS License Manager setting so that the Bureau will print and mail a license document. Licensees also may contact FCC Support via the web at, [http://esupport.fcc.gov/index.htm?job=contact\\_fcc\\_support](http://esupport.fcc.gov/index.htm?job=contact_fcc_support), or via telephone or mail to request paper licenses.

The FCC rejected as "outside the scope of this proceeding" an ARRL argument that Section 97.23 of the Amateur Service rules be amended to replace "licensee mailing address" with other alternatives, including e-mail, for use in Commission correspondence. The rule, which requires that any licensee mailing address be in an area where the licensee has US Postal Service access, has precluded FCC issuance of location-specific call signs in such areas as Navassa Island (KP1) and some Pacific islands. (ARRL Bulletin)

## **Packet Network Committee Being Formed in Eastern Pennsylvania**

Packet remains a valuable digital mode with many unique advantages, some unavailable or difficult to implement with advanced technologies, especially in the emergency communications and traffic handling. The National Traffic System (NTS) operates its own global digital network called NTSD, based on packet technology mainly via HF Pactor. In the 3<sup>rd</sup> call area the system has passed many thousands of radio-only messages in its three years of operation.

ARRL EPA Section Manager Joe Ames, W3JY said “In our section, there is oft-repeated “popular demand” to keep the EPA packet network alive and even expand it into neighboring states such as New Jersey and its excellent FlexNet system.”

EPA-PNC is chartered to study the current state of our packet radio network and assess the feasibility of reinvigorating it as part of our internal, RF-only communication capability for “grid down” scenarios. A separate committee will be charged to study non-packet modes at a future date. Ames said “EPA-PNC is our initial effort.”

“We believe packet remains an important technology with many unique advantages,” said Ames.

The Committee’s initial work is straightforward:

- Identification and evaluation of current capabilities
- Definition of “critical success factors” to an operational EPA-wide network
- Envisioning what a functional EPA network looks like
- Gap analysis from “here-to-there” and a realistic assessment of what’s involved and what is feasible.
- Include related AX.25 technology such as Winlink2000 and APRS.

If you are interested in this project contact Joe at [W3JY@ARRL.ORG](mailto:W3JY@ARRL.ORG).

## **SWL FEST February 27-28, 2015 Doubletree Guest Suites Plymouth Meeting, PA**

The Winter SWL Fest is a conference of radio hobbyists of all stripes, from DC to daylight. Every year scores of hobbyists descend on the Philadelphia, Pennsylvania suburbs for a weekend of camaraderie. The Fest is sponsored by NASWA, the North American Shortwave Association, but it covers much more than just shortwave; mediumwave (AM), scanning, satellite TV, and pirate broadcasting are among the other topics that the Fest covers.

For 2015, the Winter SWL Fest will have two days of sessions where you can learn about the latest developments in the radio listening hobbies, but there’s so much more going on. There’s a silent auction that takes place, where you’re bound to find something of interest. There’s the Hospitality Suite, where attendees partake of tuning oil and other treats and engage in spirited conversations. There is the closing Banquet, with after-dinner remarks by a luminary from the field, often one of the many broadcasters who attend the Fest, followed by the raffle, where you could win one or more of the dozens of prizes, ranging from pens from stations up to top-notch communications receivers. And of course, the infamous midnight ride of Pancho Villa that closes things out every year.

For more info: [www.swlfest.com](http://www.swlfest.com)

**HARC  
2015 Dues  
Are  
Due**

**See page 12.**

# ON THE AIR!

## Why Digital?

By Chris, N0CSW

Yaesu Sales Rep

## HARC Special Events:

### Charter Day: March 8

WM3PEN will be on the air Sunday March 8 to celebrate Charter Day, the day William Penn was given the Charter to Pennsylvania by the King of England. Interested in operating? Contact WA3PZO.

The beauty of System Fusion is one does not have to embrace digital at all, as it can co-exist with our current analog environments very well. This way people do not have to replace any existing equipment, and even in some installations can enjoy digital radio without even having to buy one.

The DR-1X has the capability to allow full break in of analog communications, or digital communication regardless of which mode is currently in use on the repeater.

This way we can embrace the features of digital and still not tick everyone else off by trying to replace it all together.

With digital radio, we can do other stuff as well that enhances VHF/UHF communication such as:

- Picture messaging
- Telemetry
- Remote Control
- Text messaging
- high quality voice
- higher speed data (9600bps Data over VHF and UHF)

All within the same data stream, meaning we can simultaneously transmit Voice while sending data as well.

The repeater and client radios have the capability of automatically switching in and out of these modes to allow cross-compatibility with Conventional FM using what we call "AMS" or Automatic-Mode-Select. It is Yaesu's Amateur friendly version of "mixed mode" analog/digital communication.

Last but not least, we are all amateurs and experimenters at heart....And in the spirit of being an amateur, I myself I took the digital leap just to experiment with a new technology. We are attempting to build a platform and develop it



**WM3PEN**  
Philadelphia, Pennsylvania

**William Penn**

- In partial repayment for debt, Charles II of England granted William Penn a charter for Pennsylvania "Penns Woods" March 4, 1681.
- Founded City of Philadelphia October 27, 1682
- The democratic principles that he set forth served as an inspiration for the United States Constitution.

### 13 Colonies Special Event: June 30 - July 5

WM3PEN will again be on the air for this week long special event. Several radio clubs will be helping us keep WM3PEN on the air. Interest in helping contact WA3PZO.



The US Original 13 Colonies Special Event Group Presents The 7th Annual:  
**INDEPENDENCE WEEK - 13 COLONIES SPECIAL EVENT**  
Fourth Of July Week-2015

**FOUNDERS AND PATRIOTS OF THE REPUBLIC**

This is To Certify That **KUZUS** Participated In This 4th Of July Week Celebration Honoring The Original 13 Colony States and The Declaration of Independence on Our Nation in 1776.

**CONTACTS**

**WM3PEN**  
KIN VILLON/KUZUS  
EVENT MANAGER

**GB13COL**  
The Villon

**WM3PZO**  
Paul Byrne  
K2MFA

**WM3PZO**  
Gen. William Crane  
K2GNC

**Field Day: June 27 -28** This annual event at Avelthorpe Park in Jenkintown is part of a national operating event. More details to follow.

further, and the only way we can do that is by reaching into the amateur community (since we developed amateur technology). There is no other digital system on the market that has been developed with not only the digital customers but the analog ones as well...this makes Fusion unique at the moment.

## **DX News**

Two rare dxpeditions are in the news. EP6T just finished in Iran and K1N is currently on Navassa Island. While most of us are out to make that rare dx contact there is other work going in at each location.

The Rockall DX Group expedition to Iran took place under extremely difficult circumstances. In a posting on its web page the group reported that “despite many hurdles such as security, customs, power losses, the visit of more than 30 officials and observers and an extremely high QRM level caused by man made noise with occasional peaks up to over S9, we still managed to retrieve more than 68,000 Q's!”

The Rockall Dx Group achieved its goal of promoting amateur radio in Iran and opening doors for both local radio amateurs as future DXpedition groups.

Dr. Azim Fard, General Director of the CRA, has assured to further keep supporting ham radio in Iran by creating exams and establishing new clubs. The Rockall group's 150 page course was translated to Farsi and will soon also be downloadable for free in the neighbouring countries.

### **Navassa: A once in 32 year opportunity!**

The K1N Navassa DXpedition is up and running. As we went to press Carl, N3ZZK, reports that he made contact on 20 meters. The operators are working closely with the US Fish and Wildlife Service which controls access to the island. All equipment is being moved to the island by helicopter. It took three days to get all of the

equipment and staff to the island. It has been 22 years since there was amateur radio on the island, and according to the USFWS amateur radio won't be back on the island for at least 10 years. Navassa Island is currently the most wanted DX entity.

### **Participation in ARRL Centennial On-the-Air Events Exceeds All Expectations**

(Via ARRL)

Attendance at the ARRL's on-the-air Centennial celebration in 2014 was through the roof! Approximately 3.5 million contacts were recorded for W1AW portable operations and the Centennial Points Challenge during the Centennial QSO Party last year.

“The Centennial QSO Party was a huge success, and participation was way greater than anyone anticipated it would be when we were in the planning stages,” said Norm Fusaro, W3IZ, Assistant Manager, Field Services and Radiosport Department. As a result, the window for operators to apply and pay fees for awards they earned in the Centennial QSO Party is not expected to open until mid-March.

Fusaro said that while award certificates have been printed, the task of checking and double-checking the electronic logs and resolving any anomalies has put an unexpected burden on staff resources.

To compete in the Centennial Points Challenge, logs must have been submitted through Logbook of the World. The system will automatically look for points-qualifying QSOs from submitted logs and apply them to each participant's Centennial QSO Points total. During January, ARRL Headquarters has been recalculating all submitted scores to come up with final tallies.

“Recalculating will allow operators to earn points for contacts they made with stations that were not yet in the database when the logs went into LoTW,” Fusaro explained. “Accuracy in fulfilling awards is important, and we need to get this right the first time. It's been a very time and staff-

intensive process, researching busted call signs and running down claimed contacts and mode discrepancies for operators.”

The deadline to submit logs for 2014 via LoTW was January 22, but participants may apply for Centennial awards indefinitely, once the application process is up and running. Operators do not have to use LoTW to apply for Points Challenge certificates or W1AW WAS awards.

Enhancements to LoTW — which served as the repository for Centennial QSO Party contacts — also contributed to the delay. And a few operators logged on paper; those logs were keyed into the system manually.

Qualifying for the Top Level Award requires 15,000 points. The Third Level Award requires 7500 point, while the Second and First Level awards require 3000 and 1000 points, respectively. Point totals will be printed on certificates.

As of February 5 here are the totals for the Club calls.

WM3PEN (8 days on air)

Region Rank out of Total Rank

All calls	1780	35638
US	1245	17780
Zone 5	453	7128
PA	44	696

K3FI (Field Day)

Region Rank out of Total Rank

All calls	11916	35638
US	6716	17780
Zone 5	2630	7128
PA	242	696

## A Century of Amateur Radio and the ARRL

(From the ARRL Letter. By Al Brogdon, W1AB)

Part of the 220 MHz band, perpetually under attack by other radio services, was snatched from the Amateur Service on August 4, 1988, by the FCC, which reallocated 220-222 MHz to the Land Mobile Service. ARRL had been fighting this battle for some time and would continue efforts have that band segment return to the Amateur Service.

January 1989 *QST* published "The Listener," a quick, but interesting, look at the efforts of pioneer radio astronomer Grote Reber, W9GFZ.



On January 30, 1989, the FCC released the news that the much-awaited 17 meter ham band was open for business in the US!

The editorial in the May 1989 *QST*, "Spectrum Management, or Abdication?" decried a recent FCC action to allow manufacturers of electronic equipment to radiate unlicensed signals on hams bands from 902 MHz upward. The ARRL continued its defense of amateur frequencies by preparing to go to Congress for relief, using this as the latest example of FCC out-of-control decision making.

A two-part article by KO5I and N4HY in the May and June 1989 issues of *QST* introduced the latest generation of OSCAR satellites -- microsats.

In July 1988, a team of hams from Finland and the Soviet Union mounted a DXpedition to a new DXCC country, Malyj-Vysotskij ("M-V Island").

This ended an 18-year effort to put the island on the *DXCC List*. Participant Martti Laine, OH2BH, recounted the experience in a June 1989 *QST* article. [The lease of Malyj-Vysotkskij to Finland expired in 2012, the island reverted to Russia, and MVI was deleted from the *DXCC* list. -- Ed.]

On May 11, 1989, a congressional oversight committee summoned the FCC's chief engineer to defend the Commission's decision to take 220 to 222 MHz away from amateurs and allocate it to another service. Following the hearing, the committee chairman wrote the FCC, asking it to reconsider alternatives. The FCC stonewalled and did nothing. The ARRL subsequently filed a federal court appeal.



The 4J1FS DXpedition team on Malyj-Vysotkskij, "MV Island" in 1988. [From the K8CX QSL collection, [www.hamgallery.com](http://www.hamgallery.com)] was rededicated. Nearly 10,000 individual donors had put up almost a half million dollars to fund the renovation.

In the "How's DX?" column in the September 1989 issue of *QST*, Ellen White, W1YL, noted "Pitcairn Island's Bicentenary," a fascinating read. White noted that Pitcairn was the country with the highest per capita number of hams in the world -- 6 hams out of a population of 60! The island's 200th anniversary was celebrated in part by special event station VR200PI.

In 1990, a husband-and-wife team achieved *DXCC* on 6 meters. The wife, K5FF, was first, and her husband, W5FF, was right behind.

An interesting photo in "Up Front in *QST*" in September 1990 showed Samuel F. B. Morse III, W6FZZ, operating at a special event station to celebrate his great-grandfather's 199th birthday.

An article by NU1N appeared in the September and October issues of *QST* telling how we could get on the air using lasers

The October 1990 *QST* reported on the 3Y5X Bouvet Island DXpedition of 1989-1990. This \$330,000 venture -- funded by the participants and by donations from hams around the world -- produced nearly 50,000 contacts on all HF bands on SSB, CW, and RTTY.

The first World Radiosport Team Championship was held in Seattle in 1990, as part of the International Goodwill Exchange Event.



Marking the 75th anniversary of *QST*, the magazine's December 1990 issue published an overview of those 75 years, written by WJ1Z. The article noted that at the time the first issue of *QST* was published, the League's membership was 635.

On October 28, 1990, W5UN worked his 100th country via EME (moonbounce). Not content to rest on his laurels, by November 4 he was up to 104 countries. Dave might have made EME *DXCC* earlier, had it not been for a tornado that wrecked his first 32 dBi-gain moonbounce array.

The FCC instituted the new "codeless" Technician license on Valentine's Day 1991. Within the first two weeks, 313 people had applied, and the first such license was issued to N3IFY.

An interesting airplane accident story was published in March 1991 *QST*. Gary, V31KX, was aboard a flight in Belize that went down on November 14, 1990. After the forced landing, Gary retrieved his 2 meter handheld from his luggage, connected it to the aircraft's 121 MHz antenna and made a successful call for help.



Operation Desert Storm began in 1990, and MARS stations were activated to handle personal

### The 3Y5X Bouvet Island QSL card.

messages, including phone patches, between members of the military and their families back home -- a major morale-booster. Those efforts of American amateurs operating under their counterpart MARS call signs generated a great amount of positive publicity for Amateur Radio.

The May 1991 *QST* article, "Last Voice from Kuwait," told how Abdul, 9K2DZ, hid his amateur gear from Iraqi soldiers when they came to confiscate it. When they demanded his radio equipment, he gave them a broken radio! After that, he used AMTOR and APLINK to handle health-and-welfare messages in and out of Kuwait. Many of Abdul's messages were forwarded to the media, Department of Defense, Department of State, and the White House. Again, good reviews for Amateur Radio.

During 1991, many hams made contact with the Soviet *Mir* space station, thanks to the efforts of operator Musa, UV3AM. Another Amateur Radio first occurred in 1991: The entire crew of the space shuttle *Atlantis* on its STS-37 mission (April 5-11, 1991) was comprised of hams, and Space Amateur Radio EXperiment (SAREX) ham gear was aboard.

A first took place on Space Shuttle mission STS-37. SAREX (Shuttle Amateur Radio EXperiment) provided live communication from the shuttle into many school classrooms to teach the students about space exploration and Amateur Radio.

In July 1991, N6CA and KH6HME set a new record on 3456 MHz between California and Hawaii. Each was running 5 W to a 4-foot dish.

In 1992, after 8 years as ARRL President, Larry Price, W4RA, declined to run for re-election. The League's Board of Directors subsequently chose him as the next International Affairs Vice President, which provides liaison with the IARU, which Price served as Secretary. George Wilson, W4OYI, succeeded Price as ARRL President.

N7FKI and W7ZOI reported in the March 1992 *QST* that they had built a one-transistor 10 meter CW transmitter and made contacts with it using lemon power -- essentially a cell made by inserting appropriate electrodes into a lemon. If life gives you lemons, make contacts!

During the early 1990s, interest in digital communication grew, and *QST* published many articles on the subject that helped fan the flames. Also, hams became interested in the old concept of direct-conversion receivers. KK7B presented one of the best in the August 1992 issue of *QST*. Another old receiver circuit was also revived -- the regenerative receiver. WJ1Z described one for 40 meters in the September 1992 issue of *QST*.

By the early 1990s, digital signal processing (DSP) had made its appearance, and had begun to be used by both homebrewing hams and equipment manufacturers.



The Atanasoff-Berry computer used racks of vacuum tubes.

A September 1992 *QST* article, "ABC: The First Electronic Digital Computer," recounted the fascinating tale of the first real computer, the Atanasoff-Berry computer -- a vacuum tube device -- designed in 1939 and 1940 by university professor John Atanasoff and built by electrical engineering student Clifford Berry, W9TIJ

A photo story in "Up Front in *QST*" in January 1993 noted that President George H.W. Bush had made an official visit to Springfield, New Jersey, to meet with local and state officials. One of those officials was Jeff, WB2DCJ, who coaxed the President into greeting some locals on 2 meters. "Hey, how are you guys doing?" Bush said on the radio. "Nice to talk with you."

That same issue of *QST* noted that DXCC credit was now being given for contacts with three new entities --

Croatia,  
Slovenia,  
and Bosnia-Herzegovina -- that emerged from the breakup of the former Yugoslavia.



By 1993, as the number of licensed amateurs increased, so did the number of intentional violations of FCC rules. The Commission responded by getting tough and levying severe fines on intentional wrongdoers, and in some cases taking offenders to court.

The July 1993 issue of *QST* published the tale of K3KMO's 10,500 mile motorcycle trip from Maryland to Alaska and back, all the while operating HF CW in motion. CW contacts with hams all over the world helped while away the long hours driving along the road.

In the 1970s, the FCC banned amateur communications for business purposes. The vague wording of those rules became interpreted in a progressively stringent manner over the years, however, curtailing the use of Amateur Radio to support even meritorious public service activities. In July 1993, the FCC changed its rules to allow hams to provide communication for worthwhile public service activities. The final rules were adopted almost verbatim from the suggestion made by ARRL.

The 10th anniversary of Amateur Radio as part of NASA space shuttle missions was observed in 1993, with five shuttle crews requesting that ham radio be part of the payload that year.

## Stay Connected!

The HARC Club net meets every Wednesday night at 8 PM on the Club repeater. Check in and see what's going on.

HARC has a Facebook page. Sign up today.



Follow HARC on the web at [www.harcnet.org](http://www.harcnet.org) and via the HARC Spark.

**HOLMESBURG AMATEUR RADIO CLUB**

3341 Sheffield Ave., Philadelphia, PA 19136

“Serving the Community Through Ham Radio”

**February 19, 2015 – Yaesu System Fusion**



**HOLMESBURG AMATEUR RADIO CLUB  
2015 MEMBERSHIP FORM**

**HARC, 3341 Sheffield Ave, PHILADELPHIA, PA 19136**

<http://www.harcnet.org>

**WM3PEN/K3FI**



All members in good standing are eligible to vote and hold a board office. Dues are \$20.00/year.

Make checks payable to H.A.R.C. and mail to 3341 Sheffield Ave, Philadelphia, PA 19136. Membership year begins May 1.

NAME \_\_\_\_\_ CALL \_\_\_\_\_

ADDRESS \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Telephone # \_\_\_\_\_ Are you be willing to receive the newsletter via email? \_\_\_\_

E-mail \_\_\_\_\_

Are you an ARRL member? YES NO Membership Expires (mm/yy) \_\_\_\_\_