



September 2012

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>



HARC IS RADIO ACTIVE!
How Did YOU Spend Your Summer Vacation?
Were you radio active?

WM3PEN Travels to Far Away Places

While many people travelled to the shore or other favorite vacation spots, I decided to go on an out of this world adventure. The trip took a few years of planning and had to be well thought out since there weren't going to be any convenience stores at this remote desert-like location. I purchased my ticket on April 25, 2011.

The flight took 255 days or about 354 million miles of travel. We arrived at Bradbury Landing in early August and so far have taken a short drive to Glenelg. We'll spend about a month there. By the end of the year we'll take another trip past Glenelg to Mount Sharp. Mount Sharp is approximately 3 miles high. I don't think we'll make it to the top, but it will be one of the highlights of the trip.

Since I have an interest in Morse Code, I'll leave the initials of one of my friends "J-P-L" everywhere I go. JPL is carved into the tire treads in Morse Code so I'll know where we have travelled.

If you haven't quite figured out where we are at the moment let me tell you. We're riding aboard NASA's Mars Science Laboratory rover, Curiosity. Curiosity will be sending back lots of pictures of our adventure. I hope you enjoy seeing pictures of our trip.

See our travel "ticket" on page 3.



Reading the Rover's Tracks
The straight lines in Curiosity's

zigzag track marks are Morse code for JPL, which is short for NASA's Jet Propulsion Laboratory in Pasadena, Calif., where the rover was built and the mission is managed. The "footprint" is more than an homage to the rover's builders, however. It is an important reference mark that the rover can use to drive more precisely via a system called visual odometry.

The Morse code, imprinted on all six wheels, is: .--- (J), .-- (P), and -.- (L), as indicated in this image.

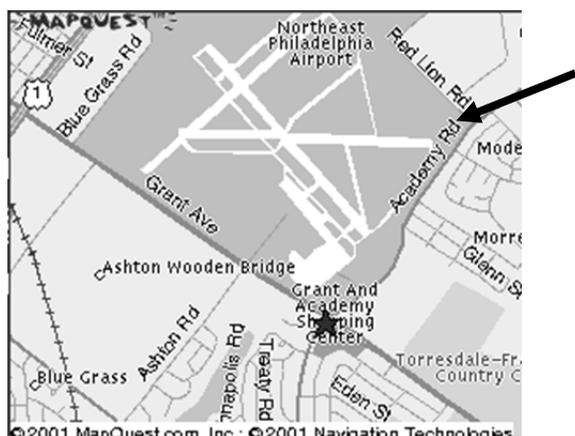
Image credit: NASA/JPL-Caltech

HARC September Meeting
8th District Police Station
Thursday, Sept 27
8 PM
How did you spend your summer vacation?
Bring your favorite radio related story to tell about your radio active summer.

HARC Board of Directors

President - Mike Wurgley, N3LXN
Treasurer - Bob Josuweit, WA3PZO
Membership - Charley Johnson, K3CJ
Technical - Ron Cardullo, K3RJC
Member-at-Large - Sol Volen, N3UBY
Webmaster - Rich Shivers, AB3EO
UPARC Rep - Mike Feeley, KB3NDC
Newsletter Editor - Bob Josuweit, WA3PZO
WM3PEN @ AOL.COM

H.A.R.C. Monthly Meetings - The Board of Directors meets on the 2nd Thursday @ 7:30 PM (Odd number months). General meetings are held the 4th. Thursday @8:00 PM. 8th District Police Station, Red Lion & Academy Rd. Phila PA. No meeting in August.



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.

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)

HARC Bulletin Schedule

Bulletin Station K3CJ

Wed 2000L Amateur Radio News Line
ARRL Audio News
The RAIN Report
Contests / Special Events / Hamfests
Sun 1000L This Week In Amateur Radio
Gate Way 160
Handy Hams
Contests / Special Events / Hamfests

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

Keep up on the latest HARC news by checking out the Club website www.HARCNET.org

Upcoming Events

Next Club Meeting: September 27
NE Philly Run: October 14th

HARC's Special Service Club Renewed



ARRL Special Service Clubs go the extra mile to provide ongoing training and community service. The ARRL looks for efforts involving new

ham development and training, public relations, emergency communications, technical advancement, operating activities, and other special interests or activities.

WM3PEN Earns Awards



ARRL Worked All States award is earned by confirming QSOs with all 50 U.S. States. Along with the basic WAS Certificate,

there are endorsements for any combination of bands or modes, (excluding 60 Meters). Specialty certificates can be issued for a variety of different bands and modes such as Satellite, 160-meters, SSTV, Digital, Phone and each VHF band.



The **CQ WPX Award** recognizes the accomplishments of confirmed QSOs with the many prefixes used by amateurs throughout the

world. WM3PEN worked over 300 prefixes on SSB and earned an endorsement for over 160 North American prefixes. We have 310 confirmed.



The **United States of America Counties (USA-CA) Award**, sponsored by CQ magazine, is issued for confirmed two-way radio contacts with specified numbers of U.S. counties, starting at 500 counties. WM3PEN worked 849 counties. We have 558 counties confirmed.



HARC – WM3PEN – is riding around MARS on NASA's Curiosity.

NE Philly 5 Mile Run October 14th Northeast Phila Airport

12 Radio Operators are needed to provide communications for the annual NE Philly 5 Mile Run. Walk starts at 8:15 and run starts at 9:00 AM. Some operators will need to be on site at 7:00 AM. Others 7:45.

This is a fairly easy event. Come out and support local youth sport clubs. This event was started by State Representative Dennis O'Brien (now City Council Member.) He has been very supportive of HARC and amateur radio.

Contact Rich, AB3EO, or Bob, WA3PZO.



The **eDX** award is for confirming contact with hams in 25 countries via eQSL.cc

Are You Ready For the Winter?

Courage Center Handiham World Weekly E-Letter for the week of Wednesday, 19 September 2012

It's hard to believe that the October QST has arrived already in my mailbox and on line at the ARRL website. The hard to believe part is not really the arrival of the magazine in mid-September. The thing that surprises me is that October is just over the horizon. October! The entire ham radio dynamic changes in October, because the seasons are changing, and here in North America we are about ready to jump up and down in anticipation of some really excellent HF band conditions.

Here's the thing. By the time October rolls around, the northern hemisphere days are seriously shorter. Shorter days mean less daylight which also means less solar heating and less convective thunderstorm activity. Fewer thunderstorms mean less radio interference, so we can start using the lower frequency HF bands for even long-distance contacts, even DX. Every HF band benefits by less thunderstorm-generated interference, though.

If you want to talk DX, the higher frequency HF bands will really be hopping. The solar cycle is nearing peak, which may happen next year, and that make the coming Autumn and Winter months prime time for DX. You will have a chance to work stations you have never heard before on bands like 15 meters and 10 meters that may have seemed mostly dead for as long as you can remember. If you are a new ham and have not experienced the fun of DX during a sunspot maximum, you are really in for a treat. When the conditions get really good the bands open up for clear communications with very little power. Even if you have a very modest station with a dipole or vertical antenna and no linear amplifier you can still work DX. A solar maximum levels the playing field and opens up the bands!

There are some special considerations to working DX. The first rule is to listen, listen, listen. It is easier to call a DX station than to expect to be called by a DX station, at least if your goal is to work DX. Another reason to listen carefully is that a DX station may be calling on a frequency that is not available to USA stations but listening on another frequency. This kind of split operation is fairly common in working DX. Learn how to use the split function on your radio ahead of time. You will also want to listen for whether the DX station is calling for any particular type of station or whether they are calling only for stations in a specific geographic location. You will not want to return a call to a DX station if that station is calling for contacts in South America but you live in North America, for example.

You can call for DX yourself if you want. The way to do it is to call "CQ DX" several times, give your callsign, then listen and tune around a bit. If you are lucky enough to have a beam antenna, point it in the direction of the DX you would like to work. If you are new to the DXing game, you might want to acquaint yourself with beam headings for various parts of the world. It can be confusing if you have learned about the world from flat maps printed on paper instead of with a globe of the world. What appears to be "west" of your station in the USA might really be northwest, along what is called a "great circle" route. That fuzzy notion of where other countries are located comes from way back in your days in elementary school, and it might not be even close to correct. We want to point our antennas toward the DX. Here's a fun fact: We are here in Minnesota, and Minnesota is a northern state, sharing a border with Canada. Did you know that Paris is about as far north in latitude as that Minnesota-Canadian border? If I fly from Minneapolis to Paris, I will head northeast, over Canada and over the North Atlantic. If I fly from Minneapolis to Tokyo, I will fly northwest, and my path will be over Alaska!

Knowing great circle routes is a good DXing skill. You will also want to pay attention to band conditions that change as daylight and nighttime make their way around the globe. At the edge of the daylight, where day and night meet, there is sometimes an open pathway for DX. Being aware of alternate paths, even long path openings 180 degrees from the way you would expect to point your antenna, will help you rack up the DX contacts.

You will also need to be aware of time differences around the world. There are certain times of day when it may be more likely to hear stations from Europe. As you might expect, when people get off work and are relaxing during the evening hours they will probably have more time to get on the radio. Your opportunity to work European stations will come at a different time of day than when you are likely to hear Asian stations.

Third-party traffic is prohibited in many countries around the world. It is worth reviewing the list of countries with which the USA has third-party agreements if you are contemplating DX operation. The ARRL has a list, which you can locate using the excellent search function at ARRL.org. Just put third party into the search field.

Identifying your station is a bit different, too. You will want to identify at both the beginning and end of a series of transmissions as well as at 10 minute intervals. Many DX contacts are very short, and you will not need to worry about 10 minute intervals. Identifying clearly, using standard phonetics, is important. Non-standard phonetics have no place in DX operation and will do nothing but confuse the other

operator, whose first language may not be the same as yours. Remember to identify your station in English if you are speaking another language during the DX exchange.

Sending and receiving paper QSL cards is still a part of DX operating, though less common than in decades past. Now that we have the Internet, Logbook of the World may be your choice. Some radio clubs have active DX managers who will collect your paper QSL cards and send them to the central location of the ARRL QSL Service, or you may use that service yourself. Awards are also available through ARRL and other groups. DXpeditions to remote places around the planet offer unique opportunities to work stations in really rare locations. DX news from ARRL, CQ, Worldradio, and a variety of other resources can help you stay up to date on what is available.

But back to October and the October QST. What reminded me about DX was that the October theme is "Special DXing Issue". You will want to be on the lookout for terms like "DX Spotting" and "Radiosport". "Zombie Bands" sure seems intriguing, too.

ARRL Atlantic Division Convention – November 10 Location: Near You!

**The Atlantic Division Leadership is
turning the traditional convention model on its
head!**

This year, through the use of multi-media, we will be bringing the convention to our Atlantic Division ARRL Affiliated clubs on Saturday, November 10th. (8:30 – 5 PM)

We are excited to have Kay Craigie N3KN, ARRL President and past Atlantic Division Director, as our 2012 Atlantic Division Convention keynote speaker!

This is an opportunity for affiliated clubs to provide their members with exciting presentations by acclaimed speakers. It is also an opportunity for the clubs to reach out to their local Amateur Radio community and invite potential new members to this major event hosted by local clubs. In addition to the webinar presentations, there will be time allocated for clubs to give a local presentation to their members and visitors.

In order to bring the convention to HARC we need a space for attendees to view & hear webinar presentations

- Internet connection with enough bandwidth
- Computer
- Computer projector or large monitor
- Powered external speakers
- White wall/screen for viewing presentations
- Computer operator to type in questions

This can be done from someone's home. There are 2 training sessions taking place on how to use the webinar software. Saturday, September 29th -- 10am - 11:30am or Wednesday, October 10th -- 9:00pm - 10:30pm

Members Recognized

Greg, WA3GM (N3FSC), not only got a new call but earned his *ARRL WAS Certificate*.

Bob, WA3PZO, joined the *DX Century Club (DXCC)* for working more than 100 countries. He also earned the *CQ WPX Award* for working 350 different prefixes and 160 different prefixes in Europe.

Congrats!!

Riley Hollingsworth, K4ZDH, to Speak at November MARC Meeting

Riley Hollingsworth, CQ Columnist and former administrator of the FCC's enforcement program in the Amateur Radio Service will be the guest speaker at the November 20, 2012 Mid Atlantic Amateur Radio Club meeting. MARC meets in the Council Room at the Tredyffrin Township Building, 1100 DuPortail Road, Berwyn, PA 19312-1079 off of Rt. 202. (GPS: N40° 3.9768', W075° 28.1653). Additional information about MARC can be found at www.marc-radio.org All invited.

More in 2013

2013 marks the 35th Anniversary of HARC. How are we going to celebrate the event? That's up to you. If you have any ideas contact Bob, WA3PZO.

January 2013 HARC Meeting

Fun with the SDR FUNcube
Dennis Silage, K3DS, Professor
Electrical and Computer Engineering

The FUNcube Dongle is a software defined radio (SDR) that fits into a 'USB key' and is part of AMSAT-UK's FUNcube satellite project. The FUNcube Dongle allows anyone to try their hand at reception of satellites like the FUNcube, due for launch in November 2012, as part of a global educational collaboration project collecting information from space.

The FUNcube Dongle has a frequency range of 64 MHz to 1.7 GHz (there is a gap between 1.1 GHz and 1.27 GHz) and with the PC decoding software can receive narrow band signals including AM, FM and SSB. The FUNcube Dongle will be demonstrated for a 'hands-on' experiences. For more information, see: www.funcubedongle.com and <http://funcube.org.uk>

HISTORIC DAY IN THE REPUBLIC OF KOSOVO

It was 23 years ago that most radio amateurs went off the air in Kosovo. A long period of silence came to an end when eleven Amateur Radio licenses were issued this month for the activation of this fledgling sovereign republic. When they suddenly came on the air, the first steps of the licensees are obviously difficult as world demand ran high. Great patience was required as you heard the reborn hams entering the world of Amateur Radio.

Besides receiving their individual call signs the newly born Amateur Radio Association of Kosovo (SHRAK) was allocated the call sign Z60K. The call sign will be used for

training purposes as well as for celebrating this wonderful event.

An all-day seminar was held with Government representatives, a majority of Kosovo's Amateur Radio population (with an estimated up to twenty to become active immediately) as well as with Telecommunications Regulatory Authority (TRA) officials and foreign delegation members present. Part of the event was televised on the Prishtina TV network.

It was a memorable event for those coming back from a 23-year hiatus and for the hams present.

The foreign lecturers welcomed the new group and represented five (5) supporting countries; Hans, PB2T; Nikola, 9A5W; Nigel, G3TXF; Bob, N2BB, and Martti, OH2BH. Their mission is to support these new hams and bring them on the air. Please kindly welcome them to the ranks of Amateur Radio.

Get on the air...

....with JOTA

The Jamboree-on-the-Air, or JOTA, is an annual Scouting event that uses amateur radio to link Scouts around the world, around the nation, and in your own community. Held on the third full weekend of October each year, this worldwide jamboree requires no travel, other than to a nearby radio amateur's ham shack. Many times the hams will come to you by setting up at a Scout camporee, or perhaps they already have a ham shack at your council's camp. There are many ways to get your Scouts involved in JOTA.

Tell Me More

Scouts of any age can participate, from Cub Scouts to Boy Scouts and Venturers. Once at the ham radio station, the communication typically requires speaking into a microphone and listening on the station speakers. However, many forms of specialized communication can also take place, such as video communication, digital communication using typed words on the



computer screen transmitted by radio, communication through a satellite relay or an earth-based relay (called a repeater), and many others. The exchanges include such information as name, location (called QTH in ham speak), Scout rank, age, and hobbies. The stations you'll be communicating with can be other Scouts across town, across the country, or even around the world! The World Scout Bureau reported that the 2011 JOTA had nearly 750,000 Scout participants from over 6,000 amateur radio stations! A participant patch is available, as is a certificate/log sheet that can also be used to fulfill a Radio merit badge requirement.

When Is It? The 55th Jamboree-on-the-Air is October 20–21, 2012. The official hours are from Saturday at 00:00 hours local time (right at midnight Friday) to Sunday 24:00 (midnight Sunday evening). So you've got the whole weekend to make JOTA contacts.

How Can I Participate as a Scout?

Contact your local Scout council and see what may already be planned in your area. You can also contact a local ham radio operator or a local amateur radio club. You can find a searchable database of clubs at www.arrl.org/find-a-club. This website is operated by the American Radio Relay League, the national association for amateur radio, which is cooperating closely with the BSA on JOTA and many other activities.

Your local club may be able to direct you to its planned JOTA activities. These can include ham stations set up at camporees or other events. Or, if there are no planned activities, you can either work with them to get something set up or arrange to visit a local radio operator's ham shack at a scheduled time to participate in JOTA.

How Can I Participate as an Amateur Radio Operator?

Contact your local Scout council and see what may already be planned in your area and how you can help. You can find your council at <http://scouting.org/LocalCouncilLocator.aspx>.

If nothing is currently planned, or if current plans aren't reaching your area, you can work with the council or a local unit (pack, troop, crew) to set up a JOTA station or arrange for visits to your ham shack. You can also participate just by making QSOs with the many JOTA stations that will be on the air.

Virginia Ham Killed in Consulate Attack

Sean P. Smith, KG4WSS, of Falls Church, Virginia, was killed when the US Consulate in Benghazi, Libya, was attacked on September 11. He was 34. Smith was one of four Americans, including Chris Stevens -- the US Ambassador to Libya -- who was killed in the attack.



According to ARRL Smith wasn't on the air much, but he was an avid on-line gamer. He was on a temporary assignment as an IT support specialist for the State Department, which allowed him to be online a lot. He played an online space game called EVE Online. Smith's friend, in real life as well as on line, Alex Gianturco, Smith posted online " 12:54:09 PM) assuming we don't die tonight. We saw one of our 'police' that guard the compound taking pictures." Gianturco said Smith often commented how the locals used guns to celebrate weddings and how there was a constant susurrus of weaponry in the background. In Baghdad he would type 'mortars' and then would be back online in a bit. This time he cursed and typed "GUNFIRE." He never returned.

Smith is survived by his wife, Heather, and two young children, Samantha and Nathan. "They will grow up being proud of the service their father gave to our country, service that took him from Pretoria to Baghdad, and finally to Benghazi," Secretary of State Hillary Rodham Clinton said in a statement.

PA QSO PARTY October 13 -14

One of the most popular state QSO Parties takes place October 13-14. The object is for PA hams to contact as many PA hams as well as other hams in the US and around the world. Hams outside PA try to contact as many PA hams as possible. The PA QSO Party takes place 1600Z October 13 to 0500Z October 14, and 1300Z October 14 to 2200Z October 14, 2012. PA hams give out a sequential serial number as well as their county. There is a Club competition. HARC members should put Holmesburg ARC on the Summary Sheet. Complete rules can be found at:
<http://www.nittany-arc.net/PAQSO.html>

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.

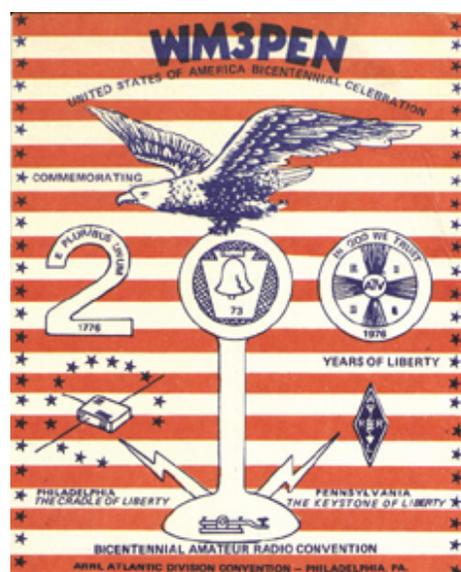
Contacts made using repeating devices such as FM repeaters, Amateur satellites, moon-bounce, and keyboard-to-keyboard contacts through digipeaters/nodes are valid, because these QSOs are made in real or near-real time. Contacts using IRLP, Echolink, or D-Star are valid as long as a radio is being used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

HARC Award Manager Bob Josuweit, WA3PZO said there was a need to have a County Challenge in Pennsylvania that was within the reach of most hams in Pennsylvania. When other state awards lost their sponsorship it was an opportunity for the Holmesburg Amateur Radio Club to fill the void.

Complete rules will be posted on the HARC website. Questions on the Award can be directed to HARC at WM3PEN@ARRL.NET.



Frankford Arsenal Employee earns award for Bicen design

John York, K3GGA, has won the Bicentennial Amateur Radio Convention Committee contest for design during the group's 1976 Convention. David Zimmerman, W3ZD, wrote York that "Your design was far and above the outstanding favorite of those voting, and this card may well be the most outstanding QSL card I have ever seen." WM3PEN was assigned by the FCC to BARCC for use during 1976 to commemorate this event and honor William Penn. York said he started the design with the number 200 – after that it just evolved as other ideas came to him. The Atlantic Division Convention was held at the Ben Franklin Hotel July 23-25, 1976. (*Frankford Arsenal Newscaster*)

**Consumer Product Safety Commission Warns:
As Button Battery Use Increases, So Do
Battery-Related Injuries and Deaths
Toddlers and Seniors Most Often Injured in
Battery-Swallowing Incidents**

WASHINGTON, D.C. - Small, coin-sized batteries can be found in products in nearly every home in America. From the flashlight sitting on the table, to the remote control next to the TV, "button batteries" as they are commonly referred to, are in thousands of products used in and around the home. Young children and senior adults are unintentionally swallowing the button batteries and in some cases, the consequences are immediate and devastating.

A recent study conducted by Dr. Toby Litovitz of the National Capital Poison Center, found that button battery-related incidents resulting in severe injury and fatality have increased sevenfold since 1985. The majority of reported incidents involve 20 mm diameter, or larger, 3 volt batteries. Occasionally, a swallowed battery will pass through the intestine. Most often, however, batteries that become lodged in the throat or intestine can generate and release hydroxide, resulting in dangerous chemical burns. Incidents most often involve children younger than four years old and senior adults. In the majority of incidents, children gain access to batteries directly from games, toys, calculators, remote controls and other items commonly left within a child's reach. Senior adults have swallowed button batteries used in hearing aids after mistaking them for pills.

Parents often are unaware that a child has swallowed the button battery, which makes it difficult to diagnose the problem. In fact, in the recent study, more than 60 percent of reported incidents initially were misdiagnosed. Symptoms resemble ailments common in children, such as an

upset stomach and fever, and in some incidents, there are no symptoms at all.

"These incidents are preventable and CPSC is working to get ahead of this emerging hazard quickly," said CPSC Chairman Inez Tenenbaum. "Our consumer awareness efforts and outreach to the electronics industry are under way."

CPSC has reached out to the electronics industry and battery manufacturers, urging them to develop warnings and industry standards to address this issue.

CPSC recommends the following steps to prevent unintentional battery ingestion:

- Discard button batteries carefully.
- Do not allow children to play with button batteries, and keep button batteries out of your child's reach.
- Caution hearing aid users to keep hearing aids and batteries out of the reach of children.
- Never put button batteries in your mouth for any reason as they are easily swallowed accidentally.
- Always check medications before ingesting them. Adults have swallowed button batteries mistaken for pills or tablets.
- Keep remotes and other electronics out of your child's reach if the battery compartments do not have a screw to secure them. Use tape to help secure the battery compartment.
- If a button battery is ingested, immediately seek medical attention. The National Battery Ingestion Hotline is available anytime at (202) 625-3333 (call collect if necessary), or call your poison center at (800) 222-1222.

Upcoming HARC Events

***Next Club Meeting: September 27
NE Philly Run: October 14th***



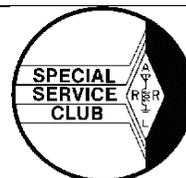
HOLMESBURG AMATEUR RADIO CLUB
3341 Sheffield Ave., Philadelphia, PA 19136
"Serving the Community Through Ham Radio"

Club meeting: September 27
NE Philly Run: October 14



HOLMESBURG AMATEUR RADIO CLUB 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.

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ADDRESS _____

City, State, Zip _____

Telephone # _____ Would you be willing to receive the newsletter via email? ____
E-mail _____

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