



April 2014

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>



ARRL @ 100 Years
Mark, KC3JV
April 17, 2014

April 17 HARC Meeting

100 Years of ARRL

It's a major milestone in ham radio. ARRL, the National Association of Amateur Radio is 100 years old this year. A lot has happened since then. Come on out to the April HARC meeting as Mark, KC3JV, presents the history of ARRL from Spark to Space. This is a special program that your friends and family will find interesting. Invite them out! Get a peak at the history later in the *Spark*.



Dues are Due Elections of Officers

The HARC 2014-15 Membership year begins May 1. Dues are just \$20. Your support helps fund club activities, repeater expenses, and insurance. Use the membership form on pg. 10.

Club leadership elections are in May. President, Vice President, Secretary, member at large positions are open. Contact Bob, WA3PZO.

Amateur Radio-Developed Software Assisting in Search for Missing Airliner

US Navy personnel helping to look for missing Malaysia Air Flight MH370 have used the signal-processing and analysis package *Spectrum Laboratory* by Wolf Buescher, DL4YHF, to analyze recently detected 37.5 kHz "pings" that may be from the missing plane's "black box." Some *Spectrum Laboratory* screen shots as seen aboard the Australian defense vessel *Ocean Shield* were shown on TV in Australia and in the UK. The US Navy personnel are guests aboard the Australian ship. VLF experimenter Warren Ziegler, K2ORS, said the software is the same package Amateur Radio experimenters used recently to detect [transatlantic signals](#) on 29 kHz.



TV video of an analyst looking at "pings" using *Spectrum Laboratory*, as seen on Australian TV.

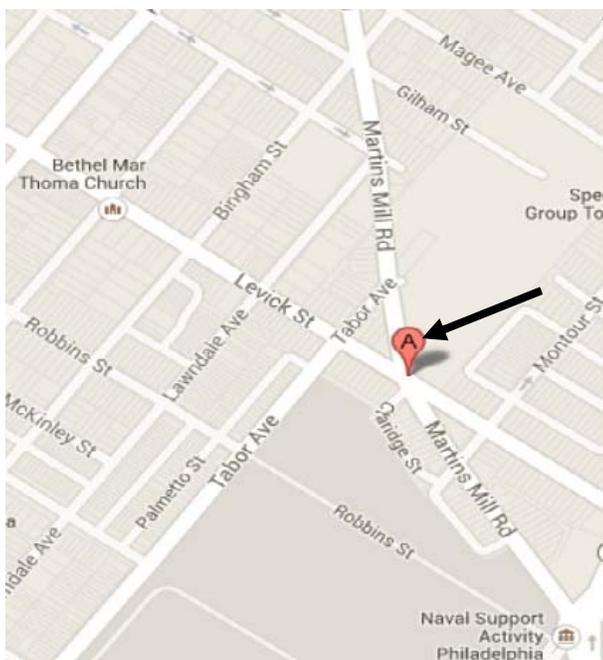
"Wolf's package is first-rate software, and I know that there have been other professional uses, but this was quite an interesting one!" Ziegler said.

The software began as a simple DOS-based FFT program, but it is now a specialized audio analyzer, filter, frequency converter, hum filter, data logger, and more. It's available for [download](#) from DL4YHF's Amateur Radio Software site.

HARC Board of Directors

President - Mike Wurgley, N3LXN
V.P./Treasurer - Bob Josuweit, WA3PZO
Membership - Charley Johnson, K3CJ
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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 1st Thursday @ 7:30 PM (Odd 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@arrrl.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
Upcoming Events
Amateur Radio History: April 17
D-STAR: May 15
Shortwave Listening in the 21st Century: Sept. 18th

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.

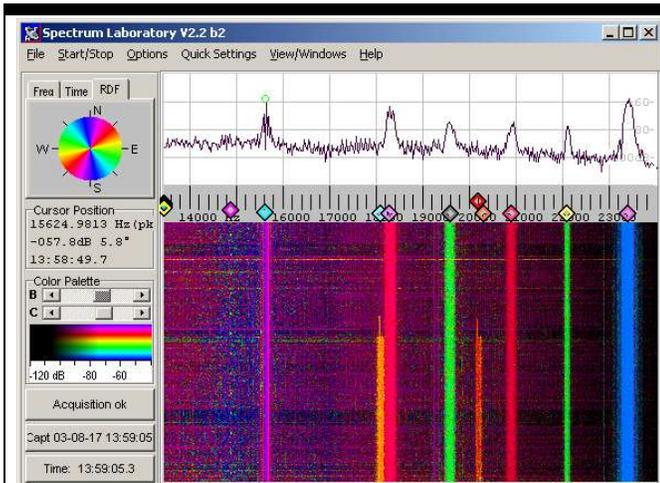
Registration begins at 7pm.

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

HF AWARDS MANAGER

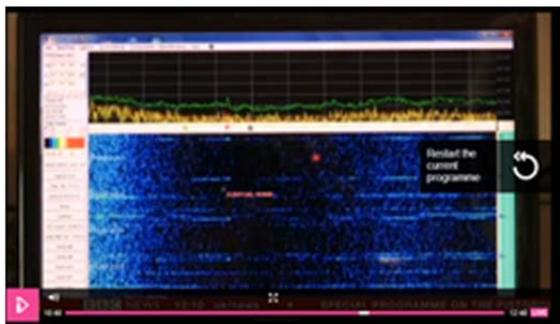
Are you getting close to having all 50 states confirmed for the Worked All States award or working enough grid squares for to qualify for the VUCC Award? As a HARC service you can now have your QSL cards verified by Bob, WA3PZO, and not have to ship the cards to ARRL Headquarters. You must be an ARRL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



(SpecLab screenshot in "Colour Direction Finder" mode, VLF spectrum, colour~bearing)

<http://www.qsl.net/dl4yhf/spectra1.html>

Buescher said he was skeptical about the initial "ping" detection by a Chinese search vessel, but later called the spectrogram taken by the US team aboard *Ocean Shield* "convincing." He said a screenshot from



Australian TV clearly shows the "bip-bip-bip" ultrasonic bursts or pings, "just as they should look," he said, rather than a "just a wobbly carrier that comes and goes."

"In slow-CW terms, it would be an 'outstanding signal.'" Buescher said. "Now keeping fingers crossed that the ["black box"] batteries last a bit longer than specified. The experts say the pinger's battery usually degrades slowly, instead of going QRT abruptly."

At mid-week, searchers had detected additional, more promising pings that appeared to conform to the pattern of those expected from an aircraft black box.



**World War II Radio Heroes
Letters of Compassion Second
Edition Lisa Spahr
List: 19.95**

Just \$15.00 Contact:

WM3PEN@AOL.com or Bob, WA3PZO



Have you been working
W1AW portable?

W1AW will be on the air from every state and most territories, and it will be easy to work WAS working only W1AW portable operations. WM3PEN has worked W1AW in 17 states including Hawaii. A contact with W1AW/3 in Pennsylvania was made on 2 SSB. Complete info on this special event can be found at: <http://www.arrl.org/centennial-qso-party> - The estimates for total number of W1AW portable QSOs continues to rise. It started at 2.3 million and is now approaching 4 million. The Pennsylvania operation had 61,878 Qsos.

----- 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.

Stamps For the Wounded

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.

2014 FCC Licensing Statistics

The number of new US Amateurs in the database continues to grow each year while upgraded license transactions remains fairly steady. During the first quarter of 2014, the FCC issued 8,943 new licenses, a 16% gain in new Amateurs over the same period last year. As of March 31, 2014, 2,719 Amateurs upgraded their licenses during the same time period, resulting in a 13% gain over 2013.

We are seeing outstanding results so far this year!

Interested in TV on the Air?

Ron, NY3J, provided information about some Friday night SSTV activity. Mark, N3NJ, has made arrangements with Bill, W3HJ, to use his repeater on 147.390 +600 with a tone input of 100.0. The session starts at 8PM. The program of choice has been MMSSTV which can be downloaded at:

<http://hamsoft.ca/pages/mmsstv.php> (the latest version is Ver 1.13A)

This is a Windows program with an easy install and setup. Make sure that you set you call sign and the sound card you are using under Option/Setup MMSSTV drop down menu. Make sure that you have your favorite pictures handy in Jpeg format file type .jpg.

HARC members will start collecting postage stamps for the Stamps For the Wounded program. *Stamps for the Wounded* accepts any U.S. or foreign stamps that are not torn or damaged. They have also requested each stamp should have at least a quarter-inch margin around the stamp. Do not try to either to peel or steam the stamp off the original envelope.

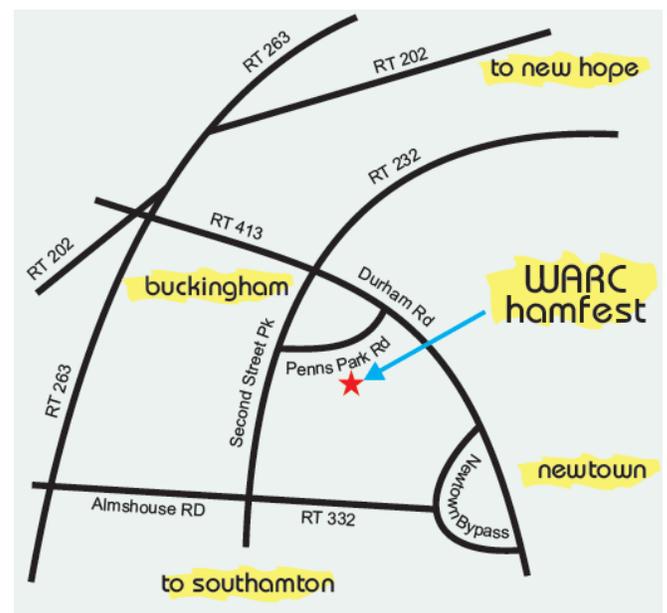
So save the stamps from your qsl cards or other mail. They do not need the common Flag Forever stamp. Bring the stamps to a club meeting and give them to Rich, AB3EO, who will mail them.

Warminster Hamfest May 4, 2014

HARC will have a table at the Warminster Hamfest in Wrightstown, PA on Sunday, May 4.

We'll be promoting the Club and the 13 Colonies Special Event. If you have something you want to sell, but don't want to get a table by yourself, then you can put your item on the table. Either donate some time to staff the table or if we sell the item, *the Club will get 10% of the sale value.*

For further information contact Bob, WA3PZO



ON THE AIR!

The ARRL Rookie Roundup SSB Sunday, April 20!

HARC Special Events:

13 Colonies Special Event: July 1 -6

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.

★ 4TH OF JULY WEEK - 13 ORIGINAL COLONIES SPECIAL EVENT ★

The 6th Annual:
Presented By The Original 13 Colonies Special Event Group - Independence week - 2014



Field Day: June 28 -29 This annual event at Avelthorpe Park in Jenkintown is part of a national operating event. More details to follow.



The Rookie Roundup returns to SSB on Sunday, April 20. The event gets underway at 1800 UTC and continues through 2359 UTC. In the Rookie Roundup, a "Rookie" is any radio amateur licensed within the current calendar year or in the previous two calendar years, regardless of license class. Operators exchange the call sign of the station they're working plus their own call sign, first name, two-digit number of the year first licensed, and state, Canadian province, Mexican call area, or "DX."

The goal of Rookie Roundup is to encourage newly licensed operators in North America (including territories and possessions) to operate on the HF bands and experience competitive Amateur Radio operating. Experienced operators are encouraged to participate and help new operators -- either on the air or in person.

This is a terrific opportunity for new operators to get on the air and gain contesting skills. Old Timers may want to consider opening up their stations to rookies and serving as contesting mentors. The more operators on the air, the more fun the Roundup will be for everyone. Review the rules before the event, and get familiar with logging and log submission processes too. Rookies exchange information with as many other stations as possible on the 80, 40, 20, 15, and 10 meters. (ARRL Letter)

May Topic: D-STAR radio.

At the May 15th meeting members of the Philadelphia Digital Radio Association will give us an update on D-STAR radio activities in the Philadelphia area.



ARRL Centennial: A Century of Amateur Radio and the ARRL

After Guglielmo Marconi proved the feasibility of radio communication in 1901, three distinct groups of radio experimenters and stations appeared: The US Navy, commercial operators, and Amateur Radio operators, derisively called "hams" (meaning bad operators) by commercial and Navy operators. Early hams took up the name with pride!

Soon there was chaos in the ether, as hams interfered with commercial and Navy stations. To curb that problem, Congress passed the Radio Act of 1912, requiring all amateurs to get licenses and to operate at wavelengths of 200 meters or shorter, spectrum considered worthless at the time.

When hams first began to pass message traffic, the typical ham station's range was measured in tens of miles, or a few hundred miles for the best-equipped stations. So hams would relay messages from station to station until they reached their destination.

One night in April 1914, Hiram Percy Maxim, 1WH, in Hartford, Connecticut, was unable to



ARRL Co-Founder Hiram Percy Maxim.

contact a station in Springfield, Massachusetts, to send a message. Maxim reached another ham at the midway point of Windsor Locks, Connecticut, and that station successfully relayed the message to Springfield.

This event made Maxim realize that there should be an organization to promote smooth and reliable message relays. In April 1914 he presented his

thoughts to the Radio Club of Hartford, which agreed to sponsor the activity, using the name Maxim chose -- the American Radio Relay League. In February 1915, the ARRL separated from the HRC, and incorporated as a nonprofit entity.

By March 1915, it became obvious that a publication was required to disseminate information to the 600 relay stations on the ARRL's roster. Maxim and Clarence D. Tuska (HRC Secretary) privately funded the first three issues of *QST* to meet that need. The first issue was published in December 1915. *Next*: A look through *QST*'s first issue.

ARRL Centennial: A Century of Amateur Radio and the ARRL

This week we'll look at early Amateur Radio as seen through the viewing port of the December 1915 issue of *QST* -- the magazine's first issue -- whose cover proclaims, "An Amateur Wireless Magazine ... Price 10 cents ... *QST* de The American Radio Relay League."

The December "Radio Relay Bulletin" discusses the fact that the US and other countries face a serious situation, with war clouds on the horizon. It was obvious to the officers of the League that the service of its members as operators could become quite important. Therefore, the League sent a letter to the Secretary of the Navy, offering the services of its members in the event of a national emergency.



For day-to-day operation, regular listening hours are suggested, to listen for stations with messages on their hooks. Lists of members and information on their stations had been circulated before that first issue; additions to that list were published in the first *QST* and in subsequent issues,.

At that time, League membership and a subscription to *QST* were separate. Membership was free, and a three-month trial subscription to *QST* cost 25 cents. Among the blanks on the membership application are, "Is your spark gap rotary, fixed, or quenched?" "What tone has your spark?" and "Approximate wave length?" That tells you much about the then-current state of the art.

The ads in that first issue touted the various parts available for radio operators. These included the Jove Detector Holder, "for holding one or two crystals and a cat-whisker" (\$1); the Bunnell "renewable contact radio key" (\$7.50); a Stromberg-Carlson radio headset (\$8.25), and the Chambers rotary spark gap (\$12.50): "Gives a tone similar to a flute, on 60 Cycles." *Next time:* The art and science of radio advances by leaps and bounds.

ARRL Centennial: A Century of Amateur Radio and the ARRL

During 1916, the art and science of radio advanced by leaps and bounds. The oscillating Audion was the subject of experimentation by professional and Amateur Radio operators, and receiving performance was much advanced by the end of 1916.

The ARRL continued to grow. Comments from members and *QST* subscribers lauded the magazine. One lovely bit of praise said, "Your *QST* received and I think it is all to the mustard." The first *QST* article by "The Old Man" appeared in the January 1916 issue.

Hiram Percy Maxim proposed trunk lines across the country for relaying messages methodically (*QST*, Feb 1916), and they soon went into operation. The League and its relay stations

showed skeptical government officials that amateurs could efficiently relay messages. A Washington's Birthday message that originated at Rock Island Arsenal was relayed by many hams, and was delivered to various mayors and governors all across the country.

Thoughts soon turned to mating two exciting new technologies -- "Wireless and the Aeroplane" (*QST*, Jun 1916). Also by this time, *The Lynn News* in Massachusetts was providing baseball scores to a local amateur to be broadcast over his station's 30 mile radius.

Radio was grabbing the public's attention.

In mid-1916, with World War I in progress but the US not yet involved, the president called out the National Guard in all States. The Army and amateurs began to discuss ways that portable amateur stations could be quickly loaded onto Army trucks and transported to points where it needed communication. David Moore, 1ZZ, a member of the Connecticut National Guard, was called up for that service. Moore had been one of the ARRL's original Governors. *Next:* Amateur Radio and WW I -- before, during, and after. -- *Al Brogdon, WIAB*

ARRL Centennial: A Century of Amateur Radio and the ARRL

The "European War" began on July 28, 1914, and the United States entered the renamed "World War" on April 5, 1917. The three American



Cover of the June 1916 *QST*, which featured an article "Wireless and the Aeroplane."

military services -- the Navy, the Army, and the Army Air Service -- quickly realized how ill prepared they were in the area of communication, having neither enough operators nor enough equipment to wage a modern war.

The Navy soon called on President H. P. Maxim and the ARRL for help. At that time, the ARRL boasted some 6000 hams, who were experienced radio builders, repairmen, and highly trained operators -- some with as many as 15 years of experience. The Navy asked Maxim to help it find 500 operators immediately, which was accomplished! Later, the Navy issued a second call, this time for 2000 more volunteer radio operators; again, that requirement was quickly met. Another 1000 hams went into Navy service later in the war. The Army and the Army Air Service raised comparable numbers of operators from among the ranks of American radio amateurs.

When these hams provided their services to the military, their station equipment often went with them. The military branches were as equipment poor as they were operator poor.

The amateurs who went into the various branches of the military did fine work. The quality of American communication links often made a great difference in the outcome of battles. The performance of American hams garnered accolades from many people, including Commendatore Guglielmo Marconi, the chief signaling officer of the Italian Army.

Soon after the war ended on November 11, 1918, the US Secretary of Commerce said, "The officers in charge of the wireless operations of our armies in France commend highly the skill, ingenuity and versatility of the licensed amateur radio operators who volunteered in large numbers for military service and served in dangerous and responsible positions."



However, things quickly took a turn for the worse for the amateur radio community. We'll look at that unexpected and dangerous development next week. -- Al Brogdon, WIAB

ARRL Centennial: A Century of Amateur Radio and the ARRL

American hams won high praise for their considerable help to the military during the Great War. However, at the end of the war, hearings in Congress began on an effort to put all radio matters under the control of the US Navy. It was expected that the Navy would abolish Amateur Radio -- despite the debt owed to hams for their war service.

ARRL President Maxim and representatives of many of the large radio clubs in the country attended the hearings and spoke against the proposed legislation. The ARRL called on its membership and on families of hams killed in action to speak out in opposition to the bill, which they did -- in large numbers, and with emotional pleas. So, despite a strong effort to push the bill through, it died in committee and never reached the floor.



On April 12, 1919, five months after the armistice was signed, the US Navy Department announced that the ban on amateur *receiving* would be lifted, but that the ban on transmitting would continue until the President of the United States officially announced that a state of peace existed.

Three months later, on July 24, the Navy tried again. The Secretary of the Navy wrote the President of the Senate, asking that legislation be enacted to give the Navy a monopoly on all oceanic and international radio communication. This effort was also defeated by the combined forces of American radio interests, including the efforts of the ARRL.

In August, the Navy *again* postponed the removal of the ban on transmitting by hams. A bill was introduced in Congress to force the Navy to lift the ban. Finally, under the threat of congressional action, the Navy, on September 26, 1919, lifted the transmitting ban and ceded authority over radio matters to the Department of Commerce. Amateur Radio was back in business!

In this year-long overview of the first 100 years of the ARRL, I've lingered over the early years simply because of their great importance. Without the early efforts of the League, its officers, and its members, we likely would not have Amateur Radio as it is today. Perhaps there would be no Amateur Radio at all.

Now we'll move on through our retrospective at a faster pace. Hams get on the air again! Technology makes great strides! The ARRL continues its leadership roll. Stay tuned! -- *Al Brogdon, WIAB*

Radio History: A Century of Amateur Radio and the ARRL

Following the resumption of Amateur Radio activities after World War I ensued a thundering herd of advances in the state of the Amateur Radio art. Here are some highlights from that period.

April 1922 -- The first contact was made between California and Hawaii. **September 1922** -- 1CCZ worked every US call district in one night, the first time that had ever been accomplished. **November 1922** -- Another record-breaking relay was accomplished, from 1AW to 9AWM to Hawaiian 6ZAC and back to 1AW in 4 minutes 18 seconds.

June 1923 -- The first expedition using Amateur Radio sailed. The schooner *Bowdoin* (WNP) had Don Mix, 1TS, aboard as its operator. This and later *Bowdoin* expeditions were searching for the land mass that was thought to exist at the North Pole. **September 1923** -- VK2CM contacted ZL4AA (a 1500 mile path), with VK2CM running 4 milliwatts on CW! **November 1923** -- 1MO and 1XAM worked F8AB, the first transatlantic

contact. **December 1923** -- 1EH made contacts with England, Italy, and Holland.



May 1924 -- The first contact was made between New Zealand and Argentina, a new DX record of 6400 miles. The same month saw the first contact between North and

South America. **July 1924** -- All previous shortwave work had required "experimental" licenses. After considerable groundwork by the ARRL, the government allowed shortwave work by all amateurs, with band assignments of 1.5 to 2.0, 3.5 to 4.0, 7.0 to 8.0, 14.0 to 16.0, and 56.0 to 64.0 MHz. **September 1924** -- The first confirmed contact was made between California and New Zealand. **December 1924** -- The first *daylight* transcontinental signals were heard, from Connecticut to California, as John Reinartz, 1QP, made experimental transmissions on the new 20 meter band.

April 1925 -- The first published article on the theory of shortwave propagation appeared in *QST*, authored by John Reinartz, 1QP. Also in April, the International Amateur Radio Union was formed at a conference in Paris, and Hiram Percy Maxim was elected as its first president. **May 1925** -- The first contact was made between Australia and England, during daylight hours on 20 meters.

April 1926 -- The Worked All Continents award was first offered; it garnered eight initial members.

May 1927 -- The first annual ARRL DX Contest was held.

March 1928 -- The 10 meter band was opened to Amateur Radio use. These were just a few highlights from that wonderful era of advancement of the radio art by amateurs. Next: On to the 1930s. -- *Al Brogdon, WIAB ARRL Centennial: A Century of Amateur Radio and the ARRL via The ARRL Letter* and The American Radio Relay League.

HOLMESBURG AMATEUR RADIO CLUB

3341 Sheffield Ave., Philadelphia, PA 19136

“Serving the Community Through Ham Radio”

April 17 Meeting – Details Inside



**HOLMESBURG AMATEUR RADIO CLUB
2014 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 April 1.

NAME _____ CALL _____

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) _____