



April 2013

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!

April 25 meeting: It's all in the antenna tuner...

Let's Get Technical! HARC April 25 Meeting

HARC's resident antenna expert, Mark, KC3JV, will talk about antenna tuners in particular the "L" Match which is the basis of almost all less expensive autotuners.

Mark says he will start with a talk about the DC Power transfer Theorem and how it relates to RF. Then a little talk about complex numbers and a graphical concept of them. Then the idea that to transfer the maximum power to the antenna the antenna should look like a 50 ohm resistive load to transfer the maximum power. We will then talk about the conjugate match to correct for reactance then how to correct for both resistive and reactive loads with the "L" match. I will also point out that if the tuner is not at the antenna and the SWR is high then there is loss in the coax.

Mark has written antenna articles for the online magazine Antennex and has given several presentations at HARC meetings.

**HARC April 25 Meeting
8th District Police Station
8 PM**

FCC Seeks to Reassess RF Exposure Limits

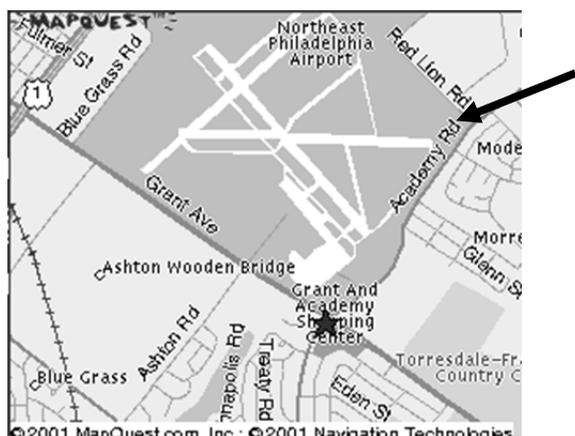
On March 27, the FCC released a *First Report and Order, Further Notice of Proposed Rulemaking* and a *Notice of Inquiry* ([ET Docket Nos. 13-84 and 03-137](#)). The documents seek to reassess the FCC's RF exposure limits and policies, as well as to propose changes to the FCC's rules regarding human exposure to RF electromagnetic fields. These proposed changes would affect the Amateur Radio Service ([Part 97](#)) rules.

In the 201-page document, the FCC noted that "[p]eriodic review of the government's rules and regulations to ensure they have kept pace with current knowledge and changing needs is an important characteristic of good government, and we here will advance the process of providing a comprehensive review and modification, where appropriate, of this Commission's various rules pertaining to the implementation of the National Environmental Policy Act ([NEPA](#)) requirements for environmental reviews, specifically those reviews related to health and safety of radiofrequency (RF) emissions from radio transmitters. Our actions herein are intended to ensure that our measures are compliant with our environmental responsibilities and requirements and that the public is appropriately protected from any potential adverse effects from RF exposure as provided by our rules, while avoiding any unnecessary burden in

HARC Board of Directors

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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: April 25
Club Table: Warminster Hamfest
May 5

FCC Seeks to Reassess RF Exposure Limits (continued from pg 1)

The document is divided into three parts: a *First Report and Order (First R&O)* and a *Further Notice of Proposed Rulemaking (FNPRM)* in ET Docket No. 03-137, and a *Notice of Inquiry (Inquiry)* in a new docket, ET Docket No. 13-84. In the *R&O*, the FCC looks at several technical and semantic issues -- initiated in 2003 -- to be revised and updated; in the *FNPRM*, the FCC proposes to further update and revise its procedures and treat all services equally.

In the *Inquiry*, the FCC seeks comments to determine whether its RF exposure limits and policies need to be reassessed. "Since consideration of the limits themselves is explicitly outside of the scope of ET Docket 03-137, we propose with the *Inquiry* to open a new docket to consider those limits in light of more recent developments," the FCC said. "The *Inquiry* is intended to open discussion on both the currency of our RF exposure limits and possible policy approaches regarding RF exposure. We look forward to developing a complete record to determine whether the current rules and policies should remain unchanged, or should be relaxed or tightened."

According to the FCC, mitigation matters are "post-evaluation procedures to ensure exposure limits are not exceeded, such as labels, signs, barriers, enforcement and occupational issues." In its *Notice of Inquiry*, the FCC included clarifications related to the application of occupational exposure limits for devices and at fixed transmitter sites. The FCC noted that it "should be helpful to licensees to codify our earlier adopted policy with regard the use of occupational/controlled limits at Amateur Radio stations."

This policy was first established in the *RF Report and Order of 1996*, but it was not incorporated in the rules at that time. It

allows amateur stations to be evaluated "with respect to occupational/controlled exposure limits, as long as appropriate training and information has been provided to the amateur licensee and members of his or her immediate household. Other nearby persons who are not members of the amateur licensee's household must be evaluated with respect to the general population/uncontrolled exposure limits." The FCC will codify this policy by adding a paragraph as a new sub-section in [Section 1.1310](#) -- radiofrequency radiation exposure limits -- to its rules.

The FCC pointed out that one goal of the general exemptions from routine RF exposure evaluation proposed "is to avoid specific exemptions for particular services and ensure a consistent set of rules without exceptions." With this in mind, the FCC is proposing to delete the special exemptions from evaluation in the Amateur Radio Service in [Section 97.13\(c\)](#) of its rules.

"We appreciate that Amateur Radio operators are knowledgeable about the appropriate use of their equipment, such that separation distances are likely to be maintained to ensure compliance with our exposure limits," the FCC said. "However, since the existing amateur exemptions are based only on transmitter power and do not consider separation distance or antenna gain, exempt transmitting antennas that are unusually close to people could potentially lead to non-compliant exposure levels." The FCC said that a separation distance of at least 24 feet would meet its proposed exemption criteria, "considering a currently exempt 50 W transmitter at VHF in accord with Section 97.13(c) and assuming an antenna gain of 6 dBd."

The FCC noted that existing classification of amateur exposure as occupational "is consistent with use of our proposed general exemption criteria based on general population exposure limits because awareness of exposure greater than the general population limits is required in all

occupational settings, including amateur households. Application of the general exemptions proposed here to Amateur Radio installations would preclude the possibility of overexposure and require further evaluation only when necessary, giving guidance for both fixed and mobile transmitting antennas.”

The FCC invited comments on how this would affect the amateur community: “Parties that support maintaining the current exemption based on power alone are requested to explain how it provides adequate assurance that the public is protected against exposure to RF energy in excess of our limits and the extent of the burden imposed by this proposal. We encourage interested parties to comment on the relative costs and benefits of the proposed changes in this section, as well as those of alternative approaches.”

“The ARRL has an RF Safety Committee, consisting of experts in the field,” explained ARRL Chief Executive Officer David Sumner, K1ZZ; “The committee members, as well as Board members and staff are reviewing the lengthy document and will formulate a response.”

Comments will be accepted until 90 days after the *R&O*, *FNPRM* and *Notice of Inquiry* are published in the [Federal Register](#) (this can take up to six weeks after its release by the FCC). Reply comments will be accepted until 150 days after publication in the *Federal Register*.



ARRL Helps Clarify FCC's Document

Bob, WA3PZO, contacted ARRL President Kay Craigie, N3KN, about the proposed changes and possible impact on hams living in an urban environment. Bob received an email from Dave Sumner, K1ZZ, ARRL Chief Executive Officer on April 11. Dave gave me permission to share this with you...

“Reading through the FCC's 201 page document is a tough slog. I managed to finish doing so today, skipping over the parts that clearly had no relevance to Amateur Radio.

The FCC has not adopted any changes in its RF exposure limits and has not proposed any, although it has opened a Notice of Inquiry into that aspect. The principal change proposed with respect to the Amateur Radio Service is to remove the existing power-based exemption from performing a routine RF environmental evaluation. So, amateurs who are now exempted from the evaluation requirement because they run (for example) 50 watts or less on 10 meters and VHF would have to go through the calculation and take the steps necessary to comply with the limits, such as observing a duty cycle over a time-averaged 30 minute period. (The example the FCC used in paragraph 138 did not take time averaging into account.)”

Clearly we will all have to do a station evaluation. Check out the ARRL web site on [RF-Exposure](#).



The ORIGINAL
"Social Network"
Ham Radio!

www.Hello-Radio.org

Amateur radio 70 years ago this month, April 1943

The FBI has notified the Civilian Defense Corps that a new crop of highly trained Nazi saboteurs is about to graduate from a crack saboteur school in Berlin. These men and women may be sent to the US to hamper war work, undermine production, destroy factories and destroy out utilities. The watchful cooperation of every American citizen is needed if these saboteurs' activities are to be neutralized. Since before Pearl Harbor, more than 218,000 have been turned into the FBI and approximately 13,000 apprehensions have been made. For instance, a Connecticut amateur radio operator, driving through the countryside, noticed a partially concealed "amateur radio antenna" in an area where no known amateur radio station is known to exist. The FBI investigation disclosed it was operated by a Nazi spy. The FBI wants all leads no matter how "insignificant", all reports are investigated.

The Civilian Defense Corps continues to expand into April 1943 with more War Emergency Radio Service stations being licensed by the FCC. The Civilian Defense Corps and the public were shown the value of the WERS recently during a surprise blackout test in Ft Wayne Indiana. In one case the telephone communication system was for a half an hour unable to maintain contact between the control center and the district control center. The War Emergency Radio Service station in the district control center reported to the control center and within three minutes was handling all the traffic on the circuit, thus forcefully demonstrating the need and practicality of WERS in an actual emergency.

The military has appealed to the radio amateurs for certain radio apparatus which they need to work in foreign parts. The main requirement is for 1000 watt phone

transmitters. The transmitters must be a factory built standard model and must be able to operate on the full kilowatt input power. Please register your set with the ARRL stating the make and model number; the condition and any alterations that have been made; frequency range; and name your price fully crated and delivered to a local transportation agency. The military is also looking for volt-ohm-milliammeters if it reads 0-1000 volts ac or dc and ohms up to 1 megohm. The models needed are Triplett, Weston, Jackson, Hickok, Precision and Radio City Products. Send make and model number along with your price packed for shipment to Apparatus Bureau, American Radio Relay League, 38 LaSalle Rd, West Hartford, Conn.

The military is also facing an acute shortage of copper scrap in 1943. The mines are running at 100% of capacity but the scrap refineries are operating at only one fifth of capacity. A call has been sent out to the nation's radio amateurs to dig out and turn in all the scrap copper and brass they can spare. The need is most for copper wire. Amateurs are off the air for the duration so now is the time to turn in the wire used in your antennas. You can replace it after the war ends. Turn in to your local scrap dealer or during the next scrap drive.

On the Japanese occupied Alaska warfront, the Japanese occupied islands of Attu and Kiska have been hit many times leading up to the invasions planned for May(D-day). By the end of April, 1943, Adak, now the center of Allied Army, Air Force, and Navy operations in the Aleutians, was maintaining a garrison of 19,067 Army personnel and 7,811 Navy. At Amchitka, where there were 10,260 US and Canadian Army and 903 Navy personnel, a 5,000-foot bomber strip had been completed during the month. This enabled America's air power to finally begin a significant presence in the war. Many of the buildings in the Main Japanese Camp area on Kiska, as well as part of the

submarine base, had been destroyed, but despite the 1,000 sorties made by American planes during April, new Japanese construction on Kiska and Attu rapidly replaced damaged structures. By the end of the April 640 tons of bombs had been dropped.

On Sunday, April 18th, 1943 22 P-38's (some flown by Royal Canadian Air Force pilots) and 37 P-40's hit Kiska 9 times. The Japanese submarine base and gun emplacements on North Head were bombed and gun emplacements near the submarine base were silenced.

On Monday, April 19th, 1943 9 missions involving 14 B-24's, 12 B-25's, 32 P-40's, and 23 P-38's were flown to Kiska. The first mission was weathered out of the primary target, Attu, and directed to Kiska. Bombing and strafing concentrated on 4 grounded ships and the submarine base area where fires were started. One ship, believed to serve as a power station, was set on fire.

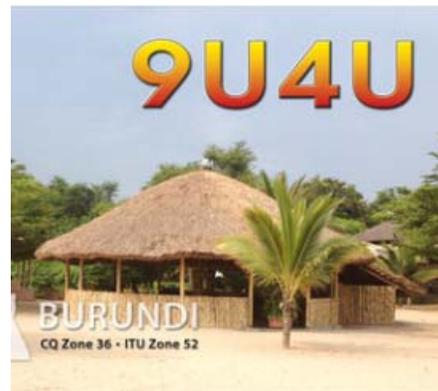


"Amateur Radio 70 Years Ago this Month" is a monthly feature during the 70th anniversary years of WWII. Past monthly posts can be found on my W.E.R.S Yahoo group at:
http://groups.yahoo.com/group/war_emergency_radio_service

On the Air!

WA3PZO continues to work new prefixes on HF. This month he submitted an application for working 500 different prefixes and is already working towards the magic 600 Honor Roll level. The CQ WPX Honor Roll recognizes the operators and stations that maintain a high standing in confirmed, current prefixes. Only 103 hams from around the world have made the CQ WPX SSB Honor Roll.

N3ZZK received a QSL card from 9U4U in Burundi.



In 2013 British hams celebrate 100 years of the Radio Society of Great Britain with the special call sign, G100RSGB.

QSL Cards received by WM3PEN from the QSL Bureau.

13 Colonies

CQ WPX 2010

PY1SX

TG9IRP

F4EPR

IW1FGY

IR2M

DL6MRS

OE7FMH

IO5O

DL5RU

HG10P

**HARC To Have Table at Warminster Hamfest
Sunday, May 5, 2013
Middletown Grange Fairgrounds
Wrightstown, PA**

HARC will host 2 tables at the Warminster Hamfest. We'll be promoting the Club, offering card checking for Worked All States and having space to sell stuff. We'll be looking for help to staff the table during the day and if you have something you would like to sell bring it along. The Club will accept items that you would want to donate all proceeds to the Club. If you want to place an item on the table to sell we will ask for 10% up to a maximum of \$10. If you help at the table there will be no charge. Doors open for vendors at 6 AM and buyers at 7 AM.

World Amateur Radio Day April 18

Amateur Radio: Entering Its Second Century of Disaster Communications

Newington, CT, USA. 4/9/2013 -- The 2013 theme "Amateur Radio: Entering Its Second Century of Disaster Communications" highlights the continuing importance of radio amateurs in disasters as they find ways to communicate world wide without relying on commercial systems. There are well over 700,000 "ham radio" licensees in the USA and about 2 ½ million worldwide. This international community of wireless communications devotees will celebrate World Amateur Radio Day on April 18th as they recall the technical advances their Amateur Radio Service has made and their ongoing services to neighborhoods in crisis.

The International Amateur Radio Union (IARU) and its member societies representing more than 160 countries around the world celebrate World Amateur Radio Day each year on April 18, the anniversary of the founding of the IARU. This is the 88th anniversary of the foundation.

Today's hams continue to explore new frontiers. Radio amateurs are finding ways to

use frequencies at the fringes of the radio spectrum while developing marriages of radio and the internet and experimenting with new forms of digital communications. Ham radio operators are "amateurs" only because they are unpaid volunteers, but their skills and contributions to the world are of the highest order.

HARC Elections

There were no contested races for any of the HARC Board so the current officers remain in place. See page 2 for a list of officers.

Military Cross Band Test May 11

The Army, Air Force, Navy, Marine Corps, and Coast Guard are co-sponsoring the annual military/amateur radio communications tests in celebration of the 63rd Anniversary of Armed Forces Day (AFD).

Although the actual Armed Forces Day is celebrated on Saturday, May 18, 2013, the AFD Military/Amateur Crossband Communications

Test will be conducted 11 May 2013 to prevent conflict with the Dayton Hamvention (17-19 May 2013), which is the same weekend as the actual Armed Forces Day.

The annual celebration features traditional military to amateur cross band communications SSB voice and Morse Code tests. These tests give Amateur Radio operators and Short Wave Listeners (SWL) an opportunity to demonstrate their individual technical skills, and to receive recognition from the appropriate military radio station for their proven expertise. QSL cards will be provided to those stations making contact with the military stations. The operating schedule and frequencies are posted at:

<http://www.usarmymars.org/home/announcements>



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

Club meeting: April 25



HOLMESBURG AMATEUR RADIO CLUB 2013 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) _____