

The Official (and only)
Newsletter Of The Steel
City Amateur Radio Club

All the (Amateur) news
that's fit to print

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**HAMVENTION SPECIAL! LOOK INSIDE FOR NEWS
ABOUT HAMVENTION 2008. ALSO, DON'T FORGET
ABOUT OUR NEXT BUSINESS MEETING: MAY 20,
8:00PM @ THE CLUBHOUSE. CU THERE!!**



KiloWatt Harmonics

Check us out on the web: <www.w3kwh.com>

May 2008

The BPL Battle: ARRL: 1, FCC: 0

The US Court of Appeals for the District of Columbia Circuit today (25 April) released its decision on the ARRL's Petition for Review of the FCC's Orders adopting rules governing broadband over power line (BPL) systems. The Court agreed with the ARRL on two major points and remanded the rules to the Commission. Writing for the three-judge panel of Circuit Judges Rogers, Tatel and Kavanaugh, Judge Rogers summarized: "The Commission failed to satisfy the notice and comment requirements of the Administrative Procedure Act ('APA') by redacting studies on which it relied in promulgating the rule and failed to provide a reasoned explanation for its choice of the extrapolation factor for measuring Access BPL emissions."

The Court agreed with the ARRL that the FCC had failed to comply with the APA by not fully disclosing for public comment the staff studies on which it relied. The Court also agreed with the ARRL that the Commission erred in not providing a reasoned justification for its choice of an extrapolation factor of 40 dB per decade for Access BPL systems and in offering "no reasoned explanation for its dismissal of empirical data that was submitted at its invitation."

The Court was not persuaded by the ARRL's arguments on two other points, on which it found that the Commission had acted within its discretion.

The conclusion that the FCC violated the APA hinges on case law. "It would appear to be a fairly obvious proposition that studies upon which an agency relies in promulgating a rule must be made available during the rulemaking in order to afford interested persons meaningful notice and an opportunity for comment," the Court said, adding that "there is no APA precedent allowing an agency to cherry-pick a study on which it has chosen to rely in part."

The Court continued, "The League has met its burden to demonstrate prejudice by showing that it 'has something useful to say' regarding the unredacted studies citation omitted that may allow it to 'mount a credible challenge' if given the opportunity to comment." Information withheld by the Commission included material under the headings "New Information Arguing for Caution on HF BPL" and "BPL Spectrum Tradeoffs." The Court concluded that "no precedent sanctions such a 'hide and seek' application of the APA's notice and comment requirements."

With regard to the extrapolation factor, the Court ordered: "On remand, the Commission shall either provide a reasoned justification for retaining an extrapolation factor of 40
(continued on page 6)

DX News & Views

(Information gleaned from various issues of the ARRL DX Bulletin)

- ◆ **UGANDA, 5X.** Michael, PA5M is QRV as 5X1DX while working for the UN World Food Programme. He is active in his spare time mainly in the evenings or on the weekends. QSL via PA7FM.
- ◆ **CROATIA, 9A.** Special event station 9A08P is QRV until December 31 in celebration of the city of Djurdjevac. Activity is on all bands and modes. QSL via bureau.
- ◆ **DEMOCRATIC REPUBLIC OF CONGO, 9Q.** Georges, 9Q1EK and Philippe, 9Q1TB are active at various times. QSL both calls via SM5DJZ.
- ◆ **PORTUGAL, CT.** In celebration of the 4th International Polar Year, special event station CQ4IPY is QRV at various times throughout the year. Activity is on 80 to 10 meters using CW, SSB, RTTY, SSTV and PSK31. QSL via CT1BWW.
- ◆ **PHILIPPINES, DU.** Ram, DV8AIK is QRV as 4D75D from Mindanao Island, IOTA OC-130, until the end of 2008 in commemoration of the 75th anniversary of the Philippine Amateur Radio Association. Activity is on 20 and 15 meters using SSB. QSL via bureau.
- ◆ **TAJIKISTAN, EY.** Jean is QRV as EY8/F4EOH from Dushanbe until the end of August. Activity is on 20 meters using SSB. QSL via operator's instructions.
- ◆ **SWITZERLAND, HB.** During the European Soccer Championship, a number of stations are QRV with the special prefix HB2000 until June 30. QSL via operators' instructions.
- ◆ **AUSTRIA, OE.** During the European Soccer Championship, a number of stations are QRV with the special prefix OE2000 until June 30. QSL via operator's instructions. In addition, look for special event callsign OE2008XQC to be active during International Marconi Day. QSL via OE1WHC.
- ◆ **CHRISTMAS ISLAND, VK9X.** James, N1YC and Bert, PE7T are QRV as homecalls/VK9X. Activity is mostly on 40 to 15 meters using CW and SSB. Their length of stay is unknown. QSL N1YC/VK9X via N5ID and PE7T/VK9X to home call.
- ◆ **NEW ZEALAND, ZL.** Members of the Wellington Amateur Radio Club are QRV as ZM80WB in commemoration of the 80th anniversary of the club. QSL via ZL2AOH.
- ◆ **IRAN, EP.** Hamid, EP4HR has been QRV on 17 meters around 1500 to 1600z. QSL via I2MQP.
- ◆ **WESTERN SAHARA, SO.** Mohamed, S01MZ has been active on 20 meters around 1700z. QSL via EA1BT.
- ◆ **TUVALU, T2.** Udo, DL9HCU is QRV as T20HC. The length of his stay is unknown. He is generally active on 20 meters around 0500 to 0800z and 17 meters around 0800 to 1000z. QSL to home call.
- ◆ **OPERATIONS APPROVED FOR DXCC CREDIT.** The following operations are approved for DXCC credit: Uganda, 5X1NH, 2007 operation; Burundi, 9UXEV, 2008 operation; Saudi Arabia, HZ1PS; Western Sahara, S05A, 2007 operation; and Syria, YK9G, 2008 operation.
- ◆ **OPERATION APPROVED FOR DXCC CREDIT: YA/LY1Y –** Afghanistan Operations in 2006 and 2007. If you had cards rejected for this operation send an e-mail to <dxcc@arrl.org> to be placed on the list for an update.

Kilowatt Harmonics,
May 2008

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Amateur Radio Club

Edited by Greg Babin,
KQ3DX

'KiloWatt Harmonics' is
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Dayton Hamvention 2008 News

(Info gleaned from the ARRL Bulletin, among other sources)

For those of you who are attending Dayton Hamvention 2008, here is a schedule of the forums for the HamFest, along with some other newsworthy notes. Hope to CU there!! 73 de KQ3DX

One of the many highlights at Dayton Hamvention is the myriad of educational and fun forums that take place the entire weekend at Hara Arena. The Dayton Amateur Radio Association has coordinated 46 unique programs that encompass nearly 80 hours of programs and activities for the thousands of people expected to attend these programs. Hamvention, the largest event of its kind, will be May 16-18 at Hara Arena in Dayton Ohio. Please keep in mind that the schedule may change before Hamvention.

Friday, May 16

9:15-10:45 AM - TAPR Digital Forum (Room 1)

9:15-10:15 AM - ARRL Public Relations -- Making It Work for You Locally (Room 2)

9:15-10:15 AM - Lightning Protection for the Shack (Room 3)

9:15-10:15 AM - National Frequency Coordinators Council (Room 5) 10:30-11:30 AM - ARRL Member Forum (Room 2)
10:30-11:30 AM - Teachers Workshop (Room 3) 10:30-11:30 AM - SATERN -- Salvation Army Team Emergency Network (Room 5)

11 AM-1 PM - D-STAR Forum (Room 1)

11:45 AM-1 PM - Kit Building (Room 2)

11:45 AM-12:45 PM - The Evolution of the National Traffic System (Room 3)

11:45 AM-12:45 PM - SHARES Forum (Room 5)

1:15-2:15 PM - Balloon Forum (Room 1)

1:15-2:15 PM - APRS - Automatic Position Reporting System (Room 2) 1-2:30 PM - Ham Radio and the Law (Room 3)

1-2 PM - QRP Forum (Room 5)

2:15-3:15 - Young Ladies Radio League (Room 5)

2:30-3:45 PM - Drake Forum (Room 2)

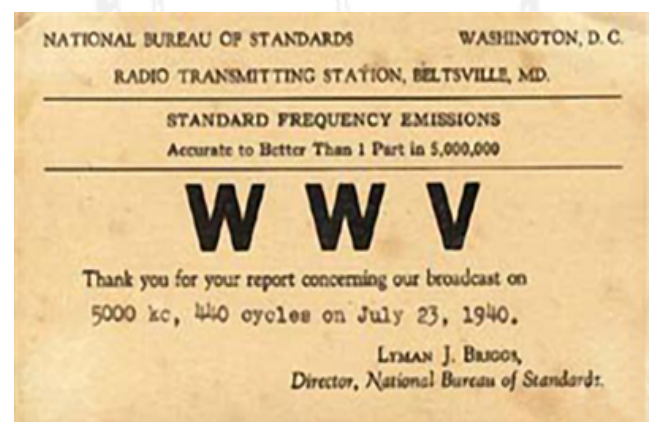
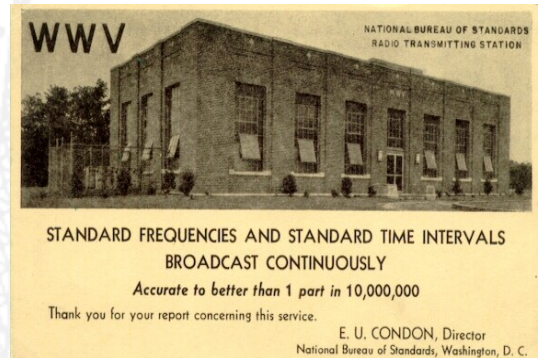
2:45-3:45 - Gordon West -- Digital Signal Processing Speakers (Room 3)

3:30-5 PM - Test Equipment for Hams (Room 5)

4-5 PM - Amplitude Modulation Forum (Room 2)

4-5 PM - 10-10 International Forum (Room 3)

(More Hamvention News continued on page 7)



April 2008 Business Meeting Minutes

The President WA3TTS, Mike at 8 PM, called the meeting to order. The Pledge of Allegiance was recited, followed by a Moment of Silence for our Silent Keys. 29 members and 3 guests answered the Roll Call. The Minutes of the March meeting was accepted as published in the April newsletter and the Treasurer's report was given by the Treasurer KA3YNO, Walt and accepted by the membership. There are 51 paid members to date.

Committee Reports

Clubhouse W3SVJ, Nate cleared some brush from the club land area and WA3VXJ, Karl did some clubhouse cleaning.

Technical N3EQP, John has not been able to get the printer working in the VHF room. W3ANX, George has donated a mike for the HF room, which does not have a working preamp.

Ways and Means WA3FWA, Joe will have the 50/50 raffle after the meeting. He described the radio gear donated by the late William Johnson, KA3LRE. The stuff will be auctioned at the May meeting. There are a number of MFJ accessories such as CW readers and there is a receiver (not transceiver). We hope to have a list of items before the meeting to post on Scarcmembers, at the clubhouse and in the newsletter.

Contest W3BC, Joe is working the 220 Mhz sprint contest this evening.

Public Service KA3JKS, Sue reported that the National Weather Service needs hams to operate at their Moon Township site when the Skywarn net is activated. All are welcome to their meeting on Wed. 4/23, 6 PM for volunteers. SATERN needs emergency net volunteers; call 412-922-1763. They are also offering free license upgrade classes in Green Tree and Point Breeze. Call 412-466-4586 for info and times. KA3MSE, Lloyd offered to get a public service speaker for a future meeting. Contact WA3PYU, Mike to volunteer for the Race for the Cure event that will occur on Mother's Day, May 11. The STPR Rally will be held on June 6 & 7 in the woods of North Central PA. See Mike's email for info to volunteer. N3EQP, John said that this race would be shown on SPEED TV. (Is this a lot of PS or what!)

WEB Site Mike has found that the PC's are getting RFI from 160-meter operation. A solution has not yet been found.

Old Business N3EQP, John will make up and post a list of library books as well as a method for checking out and returning the loaners.

New Business N3SBF, Richie has the best price for a 30-inch electric range from Daniel's Hardware store and the membership approved the purchase. We will look into getting a Tax ID number for sales tax exemptions on future purchases.

Good of the Order AI3J, Mark changed the clubhouse door lock combination. See the Treasurer, Walt to get the new numbers if your dues have been paid.

Motion to Adjourn by KB3NUQ, Bob.

50/50 raffle won by N3EVN, Jeff

Minutes submitted by the Recording Secretary, WA3FWA, Joe.

♦ **DON'T FORGET: DUES FOR 2008 ARE PAST DUE. IF YOU HAVEN'T PAID YET, STICK A CHECK OR M.O. FOR \$50.00 PAYABLE TO 'SCARC' IN AN ENVELOPE AND SEND IT TO: SCARC, P.O. BOX 281, CARNEGIE, PA. 15106. YOU CAN ALSO PAY IN PERSON AT THE NEXT BUSINESS MEETING (MAY 20). FOR YOUR CONVENIENCE, A DUES RENEWAL BLANK IS INCLUDED AT THE END OF THIS NEWSLETTER.**



The ARRL WPA Section Page

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This month has several opportunities for members to participate in various events. On Saturday April 19th the Atlantic Division will once again conduct an online webinar. The details of the webinar are available on the division website at www.atldiv.org and click the training tab. There you will find a listing of the upcoming webinars and the ability to register to participate.

We are only two short months away from field day and I am looking for field day sites to visit during that weekend. I will be traveling around the section on both days to visit with various clubs. Any group that would like me to try to stop by is asked to send me an invite and directions to their site or at least an address to put into the GPS. Field day is a great opportunity to see the many different ways amateurs can operate under less than ideal conditions in the event of an emergency. I am looking forward to hearing from section clubs.

Our ARES program is making progress in filling the field positions that are necessary to operate smoothly. John Szwarc, N3SPW is still looking for individuals to fill the positions of EC in the following counties: Butler, Cameron, Elk, Somerset and Westmoreland. Any individual interested in these positions can contact john at n3spw@arrl.net or can submit a FSD-156 form online at <http://www.arrl.org/FandES/field/forms/> scroll down and use FSD-156. John will then review the application as will the DEC of that area and forward to me for appointment.

The board of directors created a few new field appointments at the last board meeting. These positions are assistant DEC and SEC. Anyone interested in these positions may also complete the FSD form expressing your interest.

Don't forget the WPA Phone and Traffic net each evening at 6PM local time on 3983 KHz. Help us to handle traffic throughout the section.

See you at the hamfests!

73, John Rodgers N3MSE
W. Pa. Section Manager

-----Division Cabinet Meeting-----

The Atlantic Division leadership held its annual cabinet meeting in Binghamton, NY on April 5th. The Section Manager and/or section representatives from the Delaware, Eastern Pennsylvania, Maryland/DC, Northern New York, Western New York and Western Pennsylvania Sections participated in addition to several ARRL Special Service club representatives.

A big thanks goes to Steve Piotrowski KC2QZF and Ron Brodowski KC2P for
(continued on page 8)

The BPL Battle (con't from page 1)

dB per decade for Access BPL systems sufficient to indicate that it has grappled with the 2005 studies, or adopt another factor and provide a reasoned explanation for it." The studies in question were conducted by the Office of Communications, the FCC's counterpart in the United Kingdom, and were submitted by the ARRL, along with the League's own analysis showing that an extrapolation factor closer to 20 dB per decade was more appropriate, as part of the record in its petition for reconsideration of the FCC's BPL Order. The Court said that the FCC "summarily dismissed" this data in a manner that "cannot substitute for a reasoned explanation." The Court also noted that the record in the FCC proceeding included a study by the National Telecommunications and Information Administration that "itself casts doubt on the Commission's decision."

The briefs for the ARRL were prepared by a team of attorneys at Wilmer Hale, a firm with extensive appellate experience, with assistance from ARRL General Counsel Christopher D. Imlay, W3KD. Oral argument for the ARRL was conducted by Jonathan J. Frankel of Wilmer Hale. Oral argument was heard on October 23, 2007; the Court's decision was released more than six months later.

After reading the decision, General Counsel Imlay observed, "The decision of the Court of Appeals, though long in coming, was well worth the wait. It is obvious that the FCC was overzealous in its advocacy of BPL, and that resulted in a rather blatant cover-up of the technical facts surrounding its interference potential. Both BPL and Amateur Radio would be better off had the FCC dealt with the interference potential in an honest and forthright manner at the outset. Now there is an opportunity to finally establish some rules that will allow BPL to proceed, if it can in configurations that don't expose licensed radio services to preclusive interference in the HF bands."

ARRL Chief Executive Officer David Sumner, K1ZZ, added: "We are gratified that the Court decided to hold the FCC's feet to the fire on such a technical issue as the 40 dB per decade extrapolation factor. It is also gratifying to read the Court's strong support for the principles underlying the Administrative Procedure Act. Now that the Commission has been ordered to do what it should have done in the first

place, we look forward to participating in the proceedings on remand, and to helping to craft rules that will provide licensed radio services with the interference protection they are entitled to under law."

ARRL President Joel Harrison, W5ZN, concluded: "I am very pleased that the Court saw through the FCC's smoke screen and its withholding of valid engineering data that may contradict their position that the interference potential of BPL to Amateur Radio and public safety communications is minimal. The remand back to the FCC regarding their use of an inappropriate extrapolation factor validates the technical competence of Amateur Radio operators and especially of the ARRL Lab under the direction of Ed Hare, W1RFI. We are grateful for the work of our legal team and especially for the unflagging support of the ARRL membership as we fought the odds in pursuing this appeal."

(From the ARRL Bulletin)



Dayton Hamvention 2008 (con't from page 3)

Saturday, May 17

9-10 AM - How Ham Radio Meets Boy Scouts, or Adventures with Elmer Baden-Powell (Room 2) 9-10 AM - MARS Tri-Service Forum (Room 3) 9-11:30 AM - Software Defined Radio Forum (Room 1) 9-11:30 AM - AMSAT Forum (Room 5)

10:15-11:15AM - Don't Tell Me It Can't Be Done! (Room 2)

10:15-11:15 AM - ARES Forum (Room 3)

11:30 AM-12:15 PM - ARRL Radiosport Forum (Room 2) 11:30 AM-1:45 PM - 2008 Ham Radio Town Meeting (Room 3)

11:45 AM-1:45 PM - ATV (Fast Scan Amateur Television) Forum (Room 5)

11:45 AM-2:15 PM - Contesting Forum (Room 1) 12:30-1:30 PM - RTTY Forum (Room 2)

1:45-2:45 PM - MIDCARS (Room 2)

2-3 PM - ARRL Technology Task Force (Room 5)

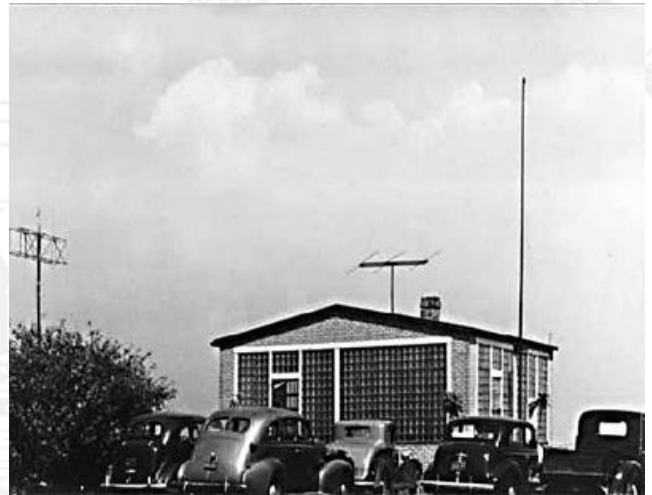
2-3:15PM - FCC Forum with Riley Hollingsworth (Room 3)

2:30-5 PM - DX Forum (Room 1)

3-5 PM - UHF/VHF/Microwave Forum (Room 2)

3:15-5 PM - Youth in Amateur Radio Forum (Room 5)

3:30-5 PM - SSTV Forum (Room 3)



Sunday, May 18

9:15-10:15 AM - ARRL and the Mars Desert Research Station (Room 1)

9:15-10:15 AM - Collins Radio Forum (Room 2)

9:15-10:15AM - The Role of Ham Radio in Red Cross Chapter Communications (Room 3)

9:30-11:15 AM - Bicycle Mobile Forum (Room 5) 10:30-11:30 - ARRL Digital Forum (Room 1) 10:30-11:30 AM - Techniques of the Best Operators (Room 2) 10:30-11:30 AM - Ohio MARS Forum (Room 3)

For more information on forums at the 2008 Dayton Hamvention, please visit the Dayton Hamvention Web site <<http://www.hamvention.org/hv2008/forums/index.html>>.

Something worth repeating from last month's newsletter: Major construction on two of the main roads feeding the Dayton Hamvention is threatening to cause significant disruptions. Hamvention Talk-In Chairman Rob Lunsford, KB8UEY, says Needmore Road, the main link from Interstate 75, will be reduced to one lane in each direction, and I-75 itself just north of downtown Dayton will be subject to lane closures during the Hamvention weekend. Lunsford has put together a list of recommended alternate routes, and plans to have it posted on the Hamvention website, <<http://www.hamvention.org/>>, in time for the big weekend in mid-May. (more Hamvention news continued on page 15)

ARRL WPA Section News (con't from page 5)

their excellent presentation of APRS; to Jim Cross WI3N, MDC Section Manager for his excellent presentation on Maryland/DC Section Legislative Efforts; and to Jason Bange KB3PFJ for his presentation on working with the Seventh Day Adventists youth organization -- 'The Pathfinders' to recruit new and younger amateur radio operators.

Some of the topics discussed were Training and Education Initiatives; Initiatives in recruiting new amateur radio operators; and the ARRL's goal of 30,000 new hams in 2008.

Atlantic Division Awards

The Awards Committee is reviewing the nominations received to select the recipients of the Atlantic Division Amateur of the Year and the Atlantic Division Technical Achievement Award for this year.

The awards will be announced at and presented to the winners at the Atlantic Division Convention in Rochester, NY at the end of May this year.

Grab and Go Kits

We have had some suggestions for a future division teleconference/webinar on grab and go kits within the Atlantic Division. We plan on featuring the top notch grab and go kits within the division with pictures and a component list of equipment and features of these kits.

If you would like to have your kit considered, please send pictures and information about your kit to grabandgo@atldiv.org. We are extending the deadline for submissions to May 31, 2008.

Conventions within the Atlantic Division

We have several conventions that have been approved. Those approved conventions are:

Atlantic Division Convention -- May 30 & 31 Rochester, NY

Eastern PA Section Convention -- July 4, Bressler, PA

Western PA Section Convention -- August 24 New Kensington, PA

EmComm East Emergency Communications Convention -- September 20, Rochester, NY

Division Travels

The last three weekends have been very busy. Both the Director and Vice Director were at the Timonium Hamfest, and once again the Baltimore Amateur Radio Club put on a great hamfest. We enjoyed meeting up with members, both new and familiar. Our Cabinet Meeting in Binghamton was well attended and was a source of good information and exchange of ideas.

This past Saturday was the Sussex Techfest in Georgetown, DE and this was the third year for this event. They have improved upon the preceding year, each year they've held this event. Sunday put us at an award presentation in Western New York for the Atlantic Division Grand Ole Ham Award. Circumstances dictated the need of an early presentation, but this was one of the most moving and inspiring presentations we've been involved in. We'll have more information on this presentation with the announcement of the other Atlantic Division awards.

73 de, Bill Edgar N3LLR,
Atlantic Division Director, &
Tom Abernethy W3TOM,
Atlantic Division Vice Director



Local, Club & Miscellaneous News

◆ From KA3MSE - Lloyd, Steel City ARC Liaison to the Allegheny Public Service Net comes the following news:

I traveled down to Skyview tonight to meet with John Rogers N3MSE and he confirmed his visit to us on May 20. He moved his schedule to accommodate us. N3MSE is John Rodgers, Section Manager of the Western Pennsylvania Section of the Atlantic Division of ARRL. As such, John is responsible for recruiting and appointing all of the officers that form the structure of the Amateur Radio Emergency Service (ARES) in this section.

Several months ago, our club membership expressed an interest in becoming more involved in public service operation, corporately as well as individually. Since John had expressed an interest in visiting clubs in the WPA Section, I sought and received approval from the membership to invite John to our regular May 20 business meeting. John graciously rearranged his schedule to accommodate us on this night.

ARES should be one of the options that we should consider since our club house, equipment and membership could greatly enhance ARES operations in Allegheny County and Western Pennsylvania. If we (as a club) should choose to come involved, we need to consider all of the factors that could impact us if we choose to become involved formally with ARES.

Emergency Communications involves a commitment, not only of resources but of personnel. We need to make a clear determination as to whether we are capable and willing to make that commitment. John should be able to help us find clarity in the matter so that SCARC can determine how to proceed.

◆ From Mike, WA3TTS comes this update on the 50MHz N3LL Beacon:

Hi Folks: Carl has his beacon running at his second QTH in Green County in EM99uu, near Holbrook, PA with a 1,500ft hilltop location. Approximately 3 watts to a single 50 MHz Lowe's Loop on 50.0685MHz. This is the old N3LL beacon running a 2E26 final with a fresh tube (Well, as fresh as a NIB can be anyway). The beacon antenna is still low to the

ground, but I copy it north of Pittsburgh about 10DB above the noise with my single PAR loop antenna at 40ft and 1200asl. Eventually Carl says he will get the antenna up higher, but it is operational as of this weekend.

◆ Also from our club prez Mike, WA3TTS comes this request for volunteers:

Hello, my name is Dave Moore - KB3IEC, Communications Co-Chief for the Waste Management Susquehannock Trail Performance Rally® presented by Citizens & Northern Bank, in Wellsboro, PA (north-central PA). For decades, amateur radio enthusiasts have been helping provide safety and logistical support for STPR®. I am hoping that you can help us "get the word out" about our new and improved event. (Despite much law-enforcement effort, last year's event was marred by a serious alcohol related disruption.)

STPR® (<www.stpr.org>) is an auto race that takes place over 2 days (June 6 & 7), with about 14 hours of competition over hundreds of miles. Drivers travel at speeds reaching 100 MPH through closed and controlled forest roads. Rally teams navigate the generally smooth and twisty Pennsylvania State Forest roads in cars that range from all-out race cars to highly modified street cars.

STPR® is asking for your help getting the word out about this exciting public service opportunity. Net Control operators are needed, as well as hams with portable and/or mobile radios, and APRS & packet operators. You can work indoors or outdoors, maybe even ride in an official vehicle! We are hoping that your group members will bring their special skills and become one of the 400 plus volunteers, including 30-50 hams, who enjoy helping others, the sport & competition, and the camaraderie of participation.

All volunteers are invited to the Friday evening welcome party, Saturday after-event party, and the awards presentation. Each will receive a collectors pin, lunch voucher and event bumper sticker - and some of the best seats in the house to watch! Pre-registered volunteers will also receive an event T-shirt.

(More local/miscellaneous news continued on page 11)

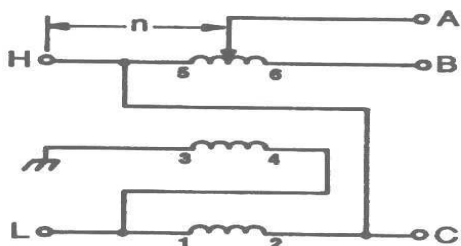
The Beginner's Help Desk

The Unbalanced-to-Unbalanced Transformer (UNUN)

By Michael Sapp, WA3TTS

Most hams are familiar with 1:1 or 4:1 baluns used with dipole antennas. The balun is a balanced to unbalanced transformer. The counterpart to the balun is the unun, which has unbalanced input and output ports. Ununs are useful for matching unbalanced antennas such as verticals, inverted-Ls and end-fed wires to unbalanced feed lines--- a.k.a. coax. They also can be used as a range extender for an unbalanced coaxial feedline tuner, or simply used as a substitute for a coaxial feedline tuner. These are very useful tools for the ham shack but I am surprised how many amateurs are unaware of them or simply do not understand how they can be useful in a ham radio station. The low-impedance unun is also ideal for mobile or portable operation with a short whip antenna to achieve a reasonable match. For example, the monopole of my 40M ground plane has a radiation resistance in the 5 ohm range on 160 meters, where it is only 1/16 wave long.

Here is an example of a basic multi-match unun that is relatively easy to build and offers several impedance transformations in a small package.



This unun schematic is from Chapter 15 of Jerry Sevick's "Understanding, Building, and Using Baluns and Ununs". It offers the following transformations:

B to H: 50 to 22.22 ohms

H to B: 50 to 112.5 ohms

A to H: 50 to 35 ohms

H to A: 50 to 72 ohms

A to L: 50 to 8.7 ohms

B to L: 50 to 5.6 ohms

C to L: 50 to 12.5 ohms

The "book" design called for a total of 6 trifilar turns on a type K core with a permeability (μ) of 250. Not having any "K" toroids on hand I decided to see if I could use a Type 43 toroid, as I have plenty of these in my junkbox inventory.

It turns out that a type 43 toroid has a permeability factor (μ) of 850, which is far from the 250 μ value of the K core but I wanted to see if I could compensate with a different turns ratio. Here is where things get interesting.

The typical toroid unun is a transmission line transformer (TLT), so the schematic should NOT be viewed as an autotransformer. Autotransformers exchange energy via magnetic flux, whereas the transmission line transformer exchanges energy electrically (Transverse Electric and Magnetic mode). In this electric mode the phase angles add or subtract, hence the voltage changes and resultant impedance transforms. Losses in TLTs are very low. The magnetic flux cancels in the toroid core leaving only wire resistance and some miscellaneous loss factors. Losses of .05db or less are typical for TLTs. An autotransformer would be worse by a factor of ten.

In an unun, the wire turns on the toroid core comprise a transmission line section that ideally should be halfway between the input and output impedance values { remember $Z(\text{match}) = \text{SQR-RT}(Z_{\text{in}} * Z_{\text{out}})$ }. The presence of the toroid core makes the parallel wire transmission line look much longer. How much?

The effective transmission line length is simply the length of the wire transmission line wrapped on the core times the square root of the permeability:

$$L(\text{eff}) = L(\text{line}) * \text{SQR-RT}(\mu)$$

If we stay with a similar toroid size then we don't even have to mentally unwrap the transmission line section and measure its length to find the new length for a different permeability factor. For example, the original design called for 6 turns on a 1.25 inch core with a permeability of 250 for a low power design, and 5 turns on a slightly larger type K core for a high power design.

(Continued on page 13)

Local/Miscellaneous News (con't from page 9)

Along those lines, I would like to send an invitational/recruitment message to you for inclusion on your website or for transmission via your email chain/listserv. We are expanding our efforts to inform a wider set of hams about this exciting opportunity. I am sending a PDF version (attached file) of our radio recruitment message. More information is included in the attachment. (I have included the attachment at the end of the **electronic version** of the newsletter.) Please do not feel pressured by this request; we realize that web-server space and bandwidth, time and upkeep issues, etc. all combine to make your job difficult at times.

Thank you for your consideration of these issues!

- ◆ From KA3LNG & N3DOK comes the following blurb for those of you who are eagerly awaiting your first call or maybe even your upgraded call:

Buckmaster has a new service for people who have taken the Amateur Exam. They will contact you by email with your call sign. You must sign up at the website listed below.

HamCall FCC New Callsign Notification Service <<http://hamcall.net/cgi-bin/notify.exe?newcallnotifyform=1>>

Buckmaster main website: <<http://hamcall.net/>>

Fill out this form and you will be notified when there is a FCC transaction with your name and ZIP code. This service is intended for new USA hams who have taken their exam and are waiting to find out what their callsign will be, but can be used to watch for other FCC transactions as well. All information must be filled out correctly. Use the exact name spelling and ZIP code that you use on the FCC forms. For example, if you entered Robert as your first name on the FCC forms, be sure to enter Robert in this form, not Bob or Bobby. What you enter must exactly match the FCC data.

- ◆ **YET ANOTHER REASON TO BE AT THE MONTHLY BUSINESS MEETING AT THE CLUBHOUSE IN MAY:**

The "Ways and Means" committee will be holding a little auction after the May meeting. These are a few estate items from Bill Johnson Jr.,KB3DFE,sk.

These are the main items that the "Ways and Means" committee will be auctioning off at the end of the May meeting.

- ◆ MFJ 8100W, World Band Receiver. This is a little regenerative radio still in the box with the manual.
- ◆ ICOM R75 wide band table top receiver.
- ◆ TIME WAVE ANC-4 noise canceling antenna phaser.
- ◆ PSR-4C (SCI SPECO) 13.8 volt 4 amp DC supply.

There is an assortment of "RG" coax connectors as well as battery packs and "wall wart" chargers, digital VOM testers etc. Help this stuff find a home on the cheap! (Thanks to Nate, W3SVJ for the advance notice on this auction.)

- ◆ Presented for your enjoyment and also, as an encore to the Dayton Hamvention is the annual Breezeshooters HamFest. This year, it'll be held on June 1st at the Butler Farm Show Grounds from 8AM to 3PM rain or shine. For more details, check out the flyer at the end of the newsletter. Lots of nice prizes are gonna be raffled off, and lots of nice vendors will be there too. So, come on out on June 1st, see and be seen!!

- ◆ Also in May is the Rochester (NY) HamFest. It'll be held on May 30-31, at the Fair and Expo Center, formerly called the Monroe County Fairgrounds, on Route 15A in Rochester, NY. This will also double as the ARRL Atlantic Division Convention. For more info, check out their website: <www.rochesterhamfest.org> Talk-In: 146.88 (PL 110.9). You can also shoot an E-Mail to: <rochfst@frontiernet.net> for more info. For those attending, here is a schedule of events: **Friday, May 30:** 6:00 a.m. -- 7:00 p.m. -- Outdoor Flea Market Open, 12:00 noon - 5:30 p.m. -- Dome Air Conditioned Exhibit Hall Open, 6:30 p.m. -- Annual Awards Dinner RIT Inn, Saturday, May 31: 6:00 a.m. -- 7:00 p.m. -- Outdoor Flea Market Open, 8:30 a.m. -- 5:30 p.m. -- Dome Exhibit Hall Open, 9:00 a.m. -- 5:30 p.m. -- Programs



FCC/ARRL News & Regulatory Matters

◆ TEN NEW SATELLITES SUCCESSFULLY PLACED IN ORBIT

Ten satellites reached orbit April 28 aboard an Indian PSLV-C9 rocket launched from the Satish Dhawan Space Center. The primary payloads were India's CARTOSAT-2A and IMS-1 satellites. In addition to the NLS-5 and RUBIN-8 satellites, the rocket carried six CubeSat research satellites, all of which communicate using Amateur Radio frequencies. All spacecraft deployed normally and appear to be functional at this time.

The SEEDS satellite is designed and built by students at Japan's Nihon University. When fully operational, SEEDS will download telemetry in Morse code and 1200-baud FM AFSK packet radio at 437.485 MHz. The satellite also has Slow-Scan TV (SSTV) capability. Several stations have reported receiving SEEDS CW telemetry and the team would appreciate receiving more reports from amateurs at their ground station Web page.

AAUSAT-II is the creation of a student team at Aalborg University in Denmark. It will downlink scientific telemetry at 437.425 MHz using 1200 or 9600-baud packet.

Can-X2 is a product of students at the University of Toronto Institute for Aerospace Studies, Space Flight Laboratory (UTIAS/SFL). Can-X2 will downlink telemetry at 437.478 MHz using 4 kbps GFSK, but the downlink will be active only when the satellite is within range of the Toronto ground station.

Compass-One was designed and built by students at Aachen University of Applied Sciences in Germany. The satellite features a Morse code telemetry beacon at 437.275 MHz. Compass-1 will also provide a packet radio data downlink, which will include image data, at 437.405 MHz.

Cute 1.7 + APDII is a satellite created by students at the Tokyo Institute of Technology. This satellite will not only provide telemetry, it will also offer a 9600-baud packet store-and-forward message relay with an uplink at 1267.6 MHz and a downlink at 437.475 MHz.

Delfi-C3 was designed and built by students at Delft University of Technology in the Netherlands. It includes an SSB/CW

linear transponder. The satellite will be in telemetry-only mode for the first three months of the mission, after which it will be switched to transponder mode. Delfi-C3 downlinks 1200-baud packet telemetry at 145.870 MHz. The linear transponder, when activated, will have an uplink passband from 435.530 to 435.570 MHz and a corresponding downlink passband from 145.880 to 145.920 MHz. (From the ARRL Bulletin)

◆ NO MORE MID-ATLANTIC QSO PARTY

The Mid-Atlantic QSO Party has come to an end this year. "Thanks to all participants and everyone who did help along the way. It was a fun contest, although troubled by pretty bad conditions most years.

We'll be sorry to see it go. Hope to catch you all on the other big contests! 73 from the Mid-Atlantic QSO Party Committee." (Thanks, Walter WO2U) (From the ARRL Bulletin)



Propagation Report

This week we had a couple of brief sunspot appearances – 991 and 992 – but they were both from Solar Cycle 23 and their emergence was fleeting.

On Wednesday, April 23, the planetary A index rose to 32 due to a solar wind and south-pointing Interplanetary Magnetic Field (IMF). Expect geomagnetic conditions to stabilize this weekend, but to again become active on May 2. Sunspot numbers for April 17-23 were 0, 0, 13, 12, 0, 13 and 13 with a mean of 7.3. The 10.7 cm flux was 69.2, 70.2, 71, 70.8, 70.9, 71.3 and 70.7 with a mean of 70.6. Estimated planetary A indices were 8, 6, 5, 4, 4, 5 and 32 with a mean of 9.1. Estimated mid-latitude A indices were 7, 5, 6, 1, 3, 4 and 17, with a mean of 6.1. For more information concerning radio propagation, visit the ARRL Technical Information Service Propagation page <<http://www.arrl.org/tis/info/propagation.html>>. To read this week's Solar Report in its entirety, check out the W1AW Propagation Bulletin page <<http://www.arrl.org/w1aw/prop/>>.

(From the ARRL Bulletin)



The Beginner's Help Desk (con't from page 10)

$$L(\text{eff}) = 6T * \text{SQR-RT250}$$

$$L(\text{eff}) = 6T * 15.81$$

$$L(\text{eff}) = 94.87T$$

By substitution: $94.87T = L(\text{line}) \text{ SQR-RT}(850)$
 $94.87T = L(\text{line}) 29.15$

Dividing both sides of the equation by 29.15 gives us an L (line) of 3.25T

So a three turn version of the above unun on a type 43 toroid of similar dimensions is going to be pretty close to the original design in terms of the available transformations.

I built the first version in a small PC card frame to test the unun, and the MFJ259B analyzer confirmed that it worked pretty much as the original Sevick design---perhaps shifted to more optimal performance below 10MHz given the higher toroid core permeability. RCA jacks were used for connections. But the number 14 Thermaleze magnet wire is rather tough to work with---especially connecting to the RCA jacks. That was solved by using 18 gauge stranded jumper wires with heat shrink over the solder connections to the thermaleze on each end. Each piece of 14-gauge Thermaleze is 6 inches long and one line is tapped at the midpoint. The photos show the transmission line section prepared before winding and the completed transformer. The wire ends are color-coded for convenience, but it is still a good idea to label the wire ends (1) through (6) to avoid a mistake during assembly.



On the second prototype the frame enclosure was changed to 1-inch wide brass, which is available at hobby stores for about a \$1 a foot. I kept the RCA connector approach. These connectors are fine for a few hundred watts on HF and are quick-change to ease changing bands, antennas, etc. One might also note on the schematic that the path from ports H to C is a bypass for 50 ohms. If you take a 4 to 6 foot PL259 jumper cable and cut it in half, you can add RCA plugs to the cut ends and have a set of patch cables for the unun. The unun can remain in-line for 50 ohm to 50 ohm pass-through situations, without having to remove it from the feed line when no transform is required. To keep the RCA jacks on the unun frame from loosening with repeated use, they were epoxied in place after initial unun testing. A few QSOs on 10.1 MHz found the unun to load up my 7MHz ground plane just fine. No toroid core heating was detected using a non-contact thermometer when running 100 watts output from my HF transceiver.

(Continued on page 14)

The May Birthday Bunch

A 'Happy Birthday' goes out to all those in our club celebrating birthdays this month:

Elliot, KB3LY	9th
Ralf, DL4ZAA	27th
Dave, N3DFK	21st

Many happy returns to you all. Feel free to pick out a nice birthday present for yourself at the Dayton Hamvention!!
 Tell the XYL that KQ3DX said it was OK with him.

Credits/Thanks

Thanks to all my contributors for the month of May:

W3SVJ, WA3TTS, KA3LNG, N3DOK, WA3FWA, N3MSE, N3LLR, W3TOM, KA3MSE, WB3HDI & ARRL

Thanks to all for your fine efforts. They help to keep our newsletter an interesting and informative read.

That's it for May. CU next month for more news from the world of Amateur Radio. 73 de KQ3DX et al.

The Beginner's Help Desk (con't from page 13)

MFJ259B Measurements Frequency vs. SWR

Ports	Ratio	Load*	Band>	1.8	3.75	7.0	10.1	14	18	21	28 (* std value carbon resistor)
A>H	50:35	33		1.1	1.0	1.0	1.0	1.1	1.1	1.1	1.1
H>A	50:72	75		1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
H>B	50:112.5	100		1.2	1.1	1.1	1.2	1.2	1.2	1.3	1.3
B>H	50:22.22	22		1.0	1.1	1.1	1.1	1.2	1.3	1.3	1.4
C>L	50:12.5	10		1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.5
B>L	50:5.6	5.5		1.2	1.3	1.6	1.9	2.3	2.8	3.2	4.5
A>L	50:8.7	7.5		1.2	1.2	1.4	1.5	1.7	1.9	2.1	2.6

Note: Since it was not possible to have matched resistors for each transform and termination, there is a difference between measured SWR and the perfect 1:1 situation. For example, in the C>L data the ideal SWR would be 12.5/10.0 or 1.25:1. The higher SWR readings on the B>L and A>L transforms are due in part to stray capacitance at these low Z levels at higher frequencies. The accuracy of the MF259B at low Z level measurements should also be considered. Similar low-z measurements were noted on a commercial version of the W2FMI Multi Match Unun sold by <www.cwsbytemark.com>

◆ REVERSING UNUN PORTS

Careful reading of Mr. Sevick's books indicates that unun's can be used in a reversed orientation when the transform stays within a 2:1 range for TLT operation. That makes some sense if you recall the Z match line section value should be something reasonably close to the square root of $Z_{in} * Z_{out}$.

The unun may "work" at some higher reverse ratios but the broadband TLT mode will not hold---it will revert to autotransformer operation with the magnetic flux not entirely canceled in the toroid core at a given frequency. There may be a transition zone and narrower bandwidth for low loss operation versus an abrupt change in operating mode where the TLT "ends" and the autotransformer "begins"---this is my best guess. There is room for investigation here at that would involve watching toroid core temperature vs. applied power and load condition. Measuring throughput losses in decimal fraction dBs would be the ideal observation but that is challenging with equipment available to most amateurs. Factors like shunt capacitance of the transformer windings and self-resonant effects need to be considered for reversed high ratios. Below are two sets of MFJ259B SWR measurements for reversed higher-ratio unun operation:

Frequency vs. SWR

Ports	Ratio	Load*	Band>	1.8	3.75	7.0	10.1	14	18	21	28 (* std value carbon resistor)
L>A	50:450	470		1.6	1.2	1.4	1.8	2.4	3.2	3.8	5.9
		390		1.5	1.0	1.3	1.7	2.2	2.9	3.5	5.2
L>C	50:200	200		1.5	1.2	1.4	1.7	2.1	2.7	3.2	4.8

(continued on page 16)

More Dayton Hamvention News (con't from page 7)

- ◆ **The 2008 Dayton Hamvention Awards Committee has named QST Contributing Editor and author H. Ward Silver, N0AX, as its 2008 Amateur of the Year.**

The committee said Silver's "books and teaching materials have helped many become hams." Tom McDermott, N5EG, will receive Hamvention's Technical Achievement Award to recognize his technical contributions that helped digital ham radio expand. Emery McClendon, KB9IBW, was named the recipient of the Special Achievement Award for starting Amateur Radio Military Appreciation Day (ARMAD) in 2003 as a way for Amateur Radio to express support and appreciation for our service men and women. The winners will be feted at a dinner held May 17 at the Marriott Hotel in Dayton.

Silver, an ARRL Life Member, was first licensed at age 17 in 1972 as WNOGQP and upgraded to Amateur Extra and changed his call sign to N0AX in 1976. A contester and DXer, he is on the DXCC Honor Roll.

Silver's award nomination cited his "many contributions, including 'Ham Radio for Dummies,' his first effort to show that becoming a ham does not have to be a difficult challenge. His additional books, magazine articles and his 'Hands On Radio' column in QST have all helped many hams develop their knowledge and skills." Silver was awarded the ARRL's Bill Orr, W6SAI, Technical Writing Award in 2003. He is also the editor of the ARRL's Contester's Rate Sheet and the ARRL Antenna Design Course. Silver has also written feature articles and product reviews for QST and compiles QST's "Contest Corral" column.

Silver, who lives on Vashon Island near Seattle, Washington, worked closely with community leaders and the Vashon-Maury Island Radio Club (W7VMI) to provide effective emergency communications. According to the awards committee, radio club members, along with the fire district and the Community Emergency Response Team (CERT), have created one of the "best local communications systems in the state of Washington."

Calling it "really, really nice and a complete honor" to be named Amateur of the Year, Silver told the ARRL that "It's a humbling experience to even be nominated, much less be

chosen. To whomever is responsible for the nomination and to the Hamvention Committee, thank you. Receiving the award would be impossible without readers, colleagues, mentors and friends -- so it's just as much for them as it is for me. Being recognized will keep my fires lit to go on producing, strive for better accuracy and clarity and figure out how to make it all be fun, too. I'll just try to act like I deserve it -- most of the time."

The Hamvention Technical Achievement Award goes to Thomas C. McDermott, N5EG, for his "more than 20 years of involvement in projects which further the development of Amateur Radio." According to the awards committee, McDermott co-developed the TexNet packet switching network in 1986; based on datagram routing, it covered much of the South Central United States in the 1990s.

McDermott, an ARRL Life Member, received ARRL's Doug DeMaw, W1FB, Technical Excellence Award in 2004. Licensed for almost 40 years, McDermott is a member of the IEEE and holds a bachelor's in electrical engineering. His Amateur Radio interests lie in HF digital communications, hardware and software design, and an occasional HF contest.

McDermott was the founder of the Texas Packet Radio Society. As part of that group, he designed the hardware and some of the protocols for the TexNet packet switching network; he has been involved in numerous Tucson Area Packet Radio (TAPR) projects and has written a textbook on wireless communications. McDermott holds eight patents.

Emery McClendon, KB9IBW, is to receive the Hamvention award for Special Achievement for his efforts in starting Amateur Radio Military Appreciation Day (ARMAD) in 2003. He said he started ARMAD "as a way to have Amateur Radio serve as a tool for the people of our communities to be able to express 'live' support and appreciation for our troops, veterans, retired military and first responders." McClendon, of Fort Wayne, Indiana, became an Amateur Radio operator 16 years ago. His interest in organizing Military Special Events derives from his four years of service in the US Air Force and two years in the Indiana Air National Guard. (continued on page 17)

The Beginner's Help Desk (con't from page 14)

It appears that it may be possible to achieve some hi-z matches on the 75~80m band, but caution is advised. I'd be leery about exceeding QRP power levels (5~10W) without carefully monitoring toroid temperature as the mode of operation is likely "autotransformer" instead of TLT. There are better ways to achieve higher ratio transforms (i.e. "Don't try this at home!").

◆ SUMMARY

The unun is probably one of the most under-utilized but very effective antenna accessories available to amateur radio operators. For example, many HF radio auto-tuners have a 3:1 SWR limit, but this unun easily converts 12.5 to 50 ohms (4:1) and allows for such a tuner to handle a short vertical or random wire radiator, particularly on the lower HF bands. To get the most out of this TLT, it is best to use it either at the antenna feed point or with an electrical half-wave multiple of coaxial feedline at the lowest operating frequency back to the transmitter location. The half-wave multiple feedline length will repeat the antenna feed point impedance in the shack, making this a "known" variable for antenna tuning purposes. Adding or subtracting short lengths of coax (8,16,24 feet, etc.) from this half-wave feedline length between the antenna and unun can then fine tune the unun match in the shack (See the ARRL Handbook chapter on transmission lines, the section titled "The Transmission Line as an Impedance Transformer"). If you recall the effective length equation we used earlier in this article for permeability of the toroid, the TLT unun is simply replicating a longer length of coaxial line transformer in a physically smaller configuration.

Thermal heating is a potential concern with toroid core, particularly when one is used in a circuit that is reactive and not an ideal match (i.e. >1.5~2.0 to 1). But the temperature issue is easily monitored with a low cost non-contact IR thermometer. Harbor Freight Tools sells a low cost IR thermometer in the \$10 range and I have purchased their larger IR Thermometer "gun" for \$30. These are handy little tools to have around for many applications other than toroid temperature monitoring. They can easily measure a 1 or 2 degree temperature change to keep a TLT from a potential thermal runaway situation.

References:

[Understanding, Building, and Using Baluns and Ununs](#), J. Sevick W2FMI, CQ Communications, Inc.

[A Tutorial on Transmission Line Transformers](#), C. Trask, N7ZWY, Sonoran Radio Research.

[Transmission Line Transformers](#), J. Sevick, W2FMI, ARRL Publications, 1987.

[Designing Wideband RF Impedance Transformers](#), A Ferreira, Microwaves & RF, March 2007.

[The ARRL Handbook](#), 1985.



◆ **THIS SPACE RESERVED FOR YOUR ARTICLES AND PICTURES:** Don't forget; Ye Olde Editor is constantly on the lookout for pictures and articles, especially of a local nature. Whether it's a submission for Shack-Of-The-Month, or local news to keep our members apprised of all the goings-on in Amateur Radio around the tri-state area, I WANT IT!! So, take that pen (or keyboard) in hand and send me something for the newsletter! Not only will I appreciate it, but so will our club members. Also, if you are still receiving the newsletter via U.S. Mail, consider having it sent electronically. All you need is the Adobe Acrobat Reader, and that is a FREE download!! To download the latest version, go to: <http://www.adobe.com/products/acrobat/readstep2.html?promoid=BUIGO>. Shoot an E-Mail to: KQ3DX@hotmail.com and I'll see to it that you get added to the mailing list. Thanks/73 de KQ3DX et al.

Dayton Hamvention News (con't from page 15)

McClendon is active with two local Amateur Radio clubs; he also gives presentations about Amateur Radio to community groups. His activities, including ARMAD, have resulted in many TV, radio and media stories during the past five years, giving exposure to the Amateur Radio community.

Hamvention Chairman Carl Rose, K8CPR, praised the winners, saying: "On behalf of the Dayton Amateur Radio Association and Hamvention 2008, it is my pleasure to congratulate this year's award winners. I ask all hams to join me in recognizing the outstanding contributions and the many years of service the winners have given to the Amateur Radio Service."

◆ MORE DAYTON HAMVENTION FORUM NEWS

The 2008 Dayton Hamvention Contest Forum will be held on Saturday, May 17, from 11:45 AM to 2:15 PM in HARA Arena EDT Room 1. The forum will be moderated by Doug Grant K1DG. The topics span history to cutting-edge technology:

"Passing the NCJ torch" by Carl Luetzelschwab K9LA and Alan Dewey K0AD "When giants walked the bands - the early days of multi-multi" by Doug Zwiebel KR2Q "SDR and Contesting - The Future is Now" by Pete Smith N4ZR and the CW Skimmer "Beamforming on 160 Meters" by Victor Kean K1LT "Contesting with 28 Miles of Feedline" by John Battin K9DX (Remote station operation) "The Great 2008 Contest Technology Debate" by Barry Merrill W5GN, and Bob Naumann W5OV (Thanks, Doug K1DG)

◆ Digital contesters may want to put this on their Dayton to-attend list:

Shelby K4WW announces the 2008 Dayton RTTY Forum from 1230 to 1330 on Saturday, May 17 - in Room 2 at Hara Arena. Speakers will be Ed WOYK and Fred WW4LL. Ed will talk about the history of the NA RTTY Sprint contest, operating techniques for beginner and seasoned contesters, and an overview of the log submittal and log checking process for Sprint. Fred will report on recent WPX M/M operations at W8JI.

◆ ADDITIONAL HAMVENTION TRAFFIC UPDATES:

Hamvention Traffic Updates: With less than 20 days before the 2008 Dayton Hamvention, there is one small hitch, according to Hamvention organizers: road construction, and lots of it. "One of the main surface streets used by attendees of Hamvention every year is Needmore Road since it is almost a straight shot from I-75 (exit 58) to Hara Arena," said Hamvention Talk-In Chairman Rob Lunsford, KB8UEY. "Unfortunately, a rebuild project has begun on this roadway right in the travel path to Hara; it will be down to one lane each way for during Hamvention." There is also construction at the north end of the Downtown Dayton area (about the 53 to 56 mile markers on Interstate 75), Lunsford said. "In this area, the Ohio Department of Transportation has started a multi-year, multi-phase reconstruction of I-75 in which there are lane restrictions, bridge replacements and various other adjacent projects. These projects are much overdue and will, in the long run, drastically improve travel in the area. Unfortunately, for now we are faced with these projects in high volume areas that are already prone to trouble from even the slightest traffic issue. To assist everyone involved we are asking that those attending Hamvention please try to avoid these areas if possible.

Our hope is that if we minimize our traffic in the area, and a problem does occur, we do not make it worse with our increased traffic flow." Lunsford said that individuals traveling on I-70 will not need to make any changes from years past. For more information or if you have questions feel free to contact Lunsford via e-mail <talkin@hamvention.org>. Once in the Dayton area and you find you need assistance, Lunsford advises tuning to 146.940- for further assistance.

Directions to Hara Arena can be found on the Dayton Hamvention Web site <<http://www.hamvention.org/hv2008/accommodations/directions08.htm>>.



Check out our newest member!!



Well, we have our new cooking apparatus on the hill and it looks great!
True to his word, Rich N3SBF was waiting at the club for me to unload it from the back of Carol's truck!

So as of 4/23/2008 Steel City is the proud owner of a new gleaming white stove which will get a work out soon!

Thank you's go out to Rich N3SBF and Carol KB3GMN for doing the leg/homework on the stove and for bringing it to the clubhouse. To Uncle Natey W3SVJ with an assist from Karl WA3VXJ for the needed goodies to give the electrons a low resistance path from the panel to the stove. A successful 'test burn' was conducted and all is in order! Bob KB3NZX for lending a helping paw unloading and getting it into the clubhouse. Kurt KA3LNG for filling out the warranty cards and being the first to actually READ the manual !!

Myself and Karl VXJ maneuvered stuff around the kitchen, bleached the floor and our nasal passages, and adjusted everything to look just so. Joe WB3AGB for being a good sport by volunteering for a roasting! We're gonna need a bigger pan! (check out Joe getting 'roasted' on the back cover!)

If I missed anyone, my apologies.

And with a bit of luck and 'measure twice cut once', we will have some further refinements to the countertop for the old base cabinet the stove displaced. Adding some much needed space to work on. I plan to have the top completed by next business meeting night at the latest. Till next time....

Bob WB3HDI



April 2008

S	M	T	W	T	F	S
	1	2	3	4	5	
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

May 2008

June 2008

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 <i>SkyView 2M Net WACOM Business Meeting</i>	2	3 <i>10-10 Int. Spring Contest, CW 7th Call Area QSO Party Indiana QSO Party New England QSO Party</i>
4 <i>WASH Net 10-10 Int. Spring Contest, CW 7th Call Area QSO Party Indiana QSO Party New England QSO Party</i>	5 <i>Breezeshooters Net</i>	6 <i>WACOM 2M Net WACOM 10M Net Skyview Business Meeting</i>	7 <i>SCARC Social Nite Alleg Co. ARES Net</i>	8 <i>SkyView 2M Net WASH Business Meeting</i>	9	10 <i>FISTS Spring Sprint</i>
11 <i>Mother's Day WASH Net</i>	12 <i>Breezeshooters Net</i>	13 <i>WACOM 2M Net WACOM 10M Net Foothills ARC Meeting</i>	14 <i>SCARC Social Nite Alleg Co. ARES Net NHARC Business Meeting</i>	15 <i>SkyView 2M Net</i>	16 <i>DAYTON HAMVENTION</i>	17 <i>DAYTON HAMVENTION Armed Forces Day MARAC SSB QSO Party His Maj. King of Spain Contest, CW</i>
18 <i>DAYTON HAMVENTION WASH Net MARAC SSB QSO Party His Maj. King of Spain Contest, CW</i>	19 <i>Breezeshooters Net Run for the Bacon QRP Contest</i>	20 <i>SCARC Business Meeting WACOM 2M Net WACOM 10M Net Skyview Social Nite 2 Rivers ARC Business Meeting</i>	21 <i>Alleg Co. ARES Net</i>	22 <i>SkyView 2M Net</i>	23	24 <i>CQ WW WPX Contest, CW</i>
25 <i>CQ WW WPX Contest, CW MI QRP Memorial Day CW Sprint WASH Net</i>	26 <i>Memorial Day Breezeshooters Net MI QRP Memorial Day CW Sprint</i>	27 <i>WACOM 2M Net WACOM 10M Net</i>	28 <i>SCARC Social Nite Alleg Co. ARES Net</i>	29 <i>Skyview 2M Net</i>	30 <i>Rochester (NY) Hamfest</i>	31 <i>WASH Club Breakfast Rochester (NY) Hamfest Kids Roundup</i>

May 2008

S	M	T	W	T	F	S
			1	2	3	
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

June 2008

July 2008

S	M	T	W	T	F	S
	1	2	3	4	5	
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 <i>Breezeshooter's Hamfest</i> WASH Sun. Net 9PM Kids Roundup	2 <i>Breezeshooter's Net</i> RSGB 80m Club Championship, Data	3 <i>Skyview Business Meeting</i> WACOM 2M Net WACOM 10M Net	4 <i>SCARC Social Nite</i> Alleg Co. ARES Net	5 <i>Skyview 2M Net</i> WACOM Business Meeting	6 <i>NCCC Sprint Ladder</i> Digital Pentathlon	7 <i>SEANET Contest</i> Alabama QSO Party IARU Region 1 Field Day, CW RSGB National Field Day
8 WASH Sun. Net 9PM SEANET Contest Alabama QSO Party IARU Region 1 Field Day, CW RSGB National Field Day	9 <i>Breezeshooter's Net</i>	10 <i>Foothills ARC Business Meeting</i> WACOM 2M Net WACOM 10M Net	11 <i>SCARC Social Nite</i> Alleg Co. ARES Net NHARC Business Meeting NAQCC Straight Key/Bug Sprint RSGB 80m Club Championship, CW	12 <i>Skyview 2M Net</i> WASH Business Meeting	13 <i>NCCC Sprint Ladder</i> Digital Pentathlon	14 <i>Flag Day</i> ANARTS WW RTTY Contest ARRL June VHF QSO Party West Virginia QSO Party Portugal Day Contest Asia-Pacific Sprint, SSB
15 <i>Father's Day</i> WASH Sun. Net 9PM ANARTS WW RTTY Contest ARRL June VHF QSO Party West Virginia QSO Party	16 <i>Breezeshooter's Net</i> ARRL June VHF QSO Party SARL Youth for Amateur Radio Run for the Bacon QRP Contest	17 <i>SCARC Business Meeting 8PM</i> <i>Skyview Social Nite</i> 2 Rivers ARC Business Meeting WACOM 2M Net WACOM 10M Net	18 <i>Alleg Co. ARES Net</i>	19 <i>Skyview 2M Net</i> RSGB 80m Club Championship, SSB	20 <i>NCCC Sprint Ladder</i> Digital Pentathlon	21 <i>Summer Begins</i> All Asian DX Contest, CW Feld Hell Sprint SMIRK Contest
22 WASH Sun. Net 9PM All Asian DX Contest, CW SMIRK Contest	23 <i>Breezeshooter's Net</i>	24 WACOM 2M Net WACOM 10M Net	25 <i>SCARC Social Nite</i> Alleg Co. ARES Net BCC QSO Party SKCC Sprint	26 <i>Skyview 2M Net</i>	27	28 <i>ARRL Field Day</i> WASH Breakfast His Maj. King of Spain Contest, SSB Ukrainian DX DIGI Contest Marconi Memorial HF Contest
29 <i>ARRL Field Day</i> WASH Sun. Net 9PM His Maj. King of Spain Contest, SSB Ukrainian DX DIGI Contest Marconi Memorial HF Contest	30 <i>Breezeshooter's Net</i>					

54th Annual

LARGEST HAMFEST IN THE TRI-STATE AREA

BREEZESHOOTERS

THIS IS AN ARRL SANCTIONED HAMFEST

HAMFEST 2008 and COMPUTER SHOW

Web Site: <http://www.breezeshooters.net>

Email: hamfest2008@breezeshooters.com

General Hamfest Chairman : **Bob Benna N3L WP (412) 366-0488**

BUTLER FARM SHOW GROUNDS

SUNDAY * June 1, 2008 * 8 AM to 3 PM

TABLE SELECTION ON A FIRST COME FIRST SERVED BASIS SO APPLY TODAY!

Indoor Tables are **\$20.00 per table** and may be reserved by calling Rey Whanger, W3BIS at (412)828-9383 Phone/FAX or send to: 120 Cove Run Rd. Cheswixk, PA 15024 - Table reservation **Cut-off Date is May20th**

Icom, Yaesu, Kenwood & MFJ prizes from **KJI Electronics**

** \$5.00 PER PERSON
ADMISSION DONATION

CHILDREN UNDER 12 ARE ADMITTED FREE

TAILGATE/FLEA MARKET
SPACES AVAILABLE AT
\$5.00 PER SPACE

FARM SHOW GROUNDS OPEN AT
5:00 PM SATURDAY MAY 31, 2008
FOR VENDOR AND TAILGATER SETUP

MAIN PRIZE DRAWING AT 3:00 PM ~ WINNERS NEED NOT BE PRESENT TO CLAIM MAIN PRIZES

1st	FT-950	Yaesu Xcvr 160M-6M	6th	MFJ-259B	SWR ANT. ANALYZER
2nd	TS-480	Kenwood Xcvr 160M-6M	7th	RS-35A	ASTRON 25A P.S.
3rd	IC-706MK II	Icom Xcvr 160M-70cm	8th	IC-2200H	65W 2M FM MOBILE
4th	IC-91AF	Icom 5W 2M/440 FM HT	9th	TIGERTRONICS	RIG INTERFACE
5th	IC-T908	Icom 5W 6M/2M/440 FM HT	10th	G5RV	80M-10M ANTENNA

TEN (10) HALF HOUR PRIZES consisting of 10 Yaesu 2M VX - 150 Hand Helds
HAND HELD DRAWING STARTS AT 10:00 AM

PRIZES SUBJECT TO AVAILABILITY OR SUBSTITUTION

Drawing for Laptop Computer: Mobile Processor, 512MB RAM, 80GB HDD, DVD-ROM/CD RW, 15" Display, Wireless Lan, Windows XP or Vista Home

MAIN PRIZES - ADVANCED TICKET SALES

HAM PRIZES	\$2 EACH	3 FOR \$5	7 FOR \$10	15 FOR \$20
COMPUTER	\$2 EACH	3 FOR \$5	7 FOR \$10	15 FOR \$20

SEND SELF ADDRESSED

ADVANCE TICKET SALES

STAMPED ENVELOPE TO:

BREEZESHOOTERS HAMFEST

P.O. BOX 100158

ENCLOSED CHECK IN THE AMOUNT OF:

PITTSBURGH, PA 15233 -0158

Send THE TICKETS INDICATED. MAKE CHECK PAYABLE TO THE BREEZESHOOTERS, INC., (MAIL DEADLINE MAY 20, 2006)
PRIZE CLAIM TICKETS RETURNED IN YOUR SASE! Stub will be returned with your name, address & phone number

NAME _____ CALL _____ PHONE NO. _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

The Steel City Amateur Radio Club
(412) 787-0777

2M Repeater:
147.030/147.630MHz (PL 123.0)

70cm Repeater:
444.450/449.450MHz (PL 103.5)

WA3TTS Beacon: 144.300MHz
(CW)

ATV Repeater: 426.250MHz
(Currently off-line. Contact AA3EE
for more info.)

1296MHz Beacon: 1296.269MHz
(CW) 1W

We're on the web!

www.w3kwh.com

The Steel City Amateur Radio
Club is an ARRL-Affiliated
organization



I HOPE HE BASTES ME
ONCE IN A WHILE...

Our new stove is in place and is ready to go!! Check out the
article and additional pictures inside on [page 18](#). Also check
out all the Hamvention news/updates inside too!



Steel City Amateur Radio Club
P.O. Box 281
Carnegie, Pennsylvania 15106
Phone 412-787-0777
Editor: Greg Babin, KQ3DX
<KQ3DX@hotmail.com>
<www.w3kwh.com>

SCARC DUES RENEWAL FORM FOR THE CALENDAR YEAR 2008

NAME _____ **CALL** _____

ADDRESS _____

CITY _____ **STATE** _____ **ZIP** _____

PHONE NUMBERS:

Day _____ **Evening** _____

BIRTHDATE _____ **LICENSE CLASS** _____ **Exp** _____

EMAIL: _____

Would you like the newsletter E-Mailed to you ? (Circle One) **YES NO**
(Please provide E-Mail address above)

Please indicate if you are also an ARRL Member. (Circle One) **YES NO**

ARRL information is requested to keep our ARRL affiliation current

Membership rates for 2008:
Regular Member : \$50.00
Retired member (Over 65) \$50.00
Additional Family Member \$15.00
DX Member \$15.00

Payment by check payable to: STEEL CITY AMATEUR RADIO CLUB is preferred. Please indicate your call sign on your check. Your cancelled check serves as your receipt. Payments can be mailed to the P.O. Box on the back of the newsletter or to the treasurer.

Walt Adkins KA3YNO, Steel City Amateur Radio Club
476 First Street, Heidelberg, PA 15106 OR
SCARC, P.O. Box 281
Carnegie, PA 15106

**Of course payment will be accepted on Wednesday evenings and on the meeting nights
Your early renewal assures your continued access to the clubhouse and permits better
planning of club activities.**