

# FLEA-ESTA

## AARC Flea Market

8:00 AM to Noon, September 6, 2014

Breakfast and Lunch will be available on site at Sarpy County Fairgrounds, Springfield, Nebraska.

For more details as they develop, check the Fleas-Esta link at the AARC web site, <http://www.aksarbenarc.org/>

(HF Digital Modes continued from page 6.)

- *MixW* (Windows) Multimode/multifunction software that performs digital conversion and also logging contacts for contests.
- *Hellschreiber* (Windows) Written by Nino IZ8BLY, it is dedicated software that generates Feld Hell teleprinter-compatible signals.
- *Ham Radio Deluxe* (Windows, but may run under Linux using WINE) A suite of programs providing computer control for many common transceivers, it also includes mapping, satellite tracking, and functions for various digital modes. A commercial version (6.x) can be purchased at the HRD web site (<http://www.hrdsoftwarellc.com/>). The previous version (5.x) is freeware and can be downloaded from various places on the Internet, including Tomas's web site at <http://www.hfradio.org/> (scroll down).

Winding down, Tomas briefly covered techniques on interfacing computer sound cards to the radio before going back to the ulterior motive the mentioned at the beginning of his talk: He had provided a broad overview of the various modes of amateur digital communications with the hope of whetting the member's appetites for wanting more information—perhaps to the extent of forming a special interest group within the club. The SIG would use the information he'd presented as a foundation to do research, construction, and meet to discuss this form of communication. He invited interested people to contact him:

Email: [nw7us@nw7us.us](mailto:nw7us@nw7us.us)  
Websites: <http://nw7us.us/>  
<http://www.hfradio.org/>

His talk was interesting and educational. At its conclusion, a lively Q&A session followed.

Bill KC0SVZ

# Ham Hum

Volume LXIV, Issue 6

June 2014

## HF Digital Modes



Tomas NW7US

For the May meeting, Tomas Hood, NW7US, talked about the various operating modes available for HF digital radio. After introducing himself, he began by stating that there was an ulterior motive to giving his talk—which he would announce at the end of the meeting.

Tomas gave a brief history of digital radio; how Morse code was the earliest form of such communications—and the only one that can be understood by the human brain. He went on to describe the use of teletype in World War II and how, after

the war, hams would try to get surplus teletypes so they could experiment with RTTY. He briefly covered packet radio in the 70s, then went to the main part of his talk: the many digital operating modes that have evolved since then.

Throughout his talk, Tomas defined some of the terms used in digital communications; such as Digital Signal Processing (DSP), covers a group of operating modes that can be encoded/decoded by the sound card inside a personal computer. DSP is a step up from the Terminal Node Controller (TNC) that was used in early packet radio systems. Programming the sound card permits direct analog/digital conversion for modulating tones such as FSK (Frequency Shift Keying) and PSK (Phase Shift Keying). It also permits using advanced signal processing functions, such as Fast Fourier Transforms (FFT), that would otherwise involve using specialized hardware.

(HF Digital Modes continued on page 6.)

## FIELD DAY COMING SOON!

(See Page 8 for More Information)

### June Meeting: Fox Hunting

Bill True, WA9ASD, and John Gebuhr, WB0CMC, are teaming up to tell you what you need to know to track down and capture this elusive beast. Don't miss it.  
Friday, June 13th, 7:00 PM, Red Cross Building, 81<sup>st</sup> & Spring Streets, Omaha, NE.

HAM HUM is the official newsletter of the AK-SAR-BEN Amateur Radio Club, Inc. in Omaha, Nebraska. It is printed monthly and is distributed to members of the club, local disaster officials, local electronics outlets, and editors of other ham radio newsletters.

Articles about activities of members are solicited. The subject matter must be of general interest to radio amateurs and be understandable to a significant portion of the membership. No payment will be made to contributors and submissions will be subject to the usual editorial review. Articles containing statements that could be construed as libel or slander will not be accepted. No guarantee can be made that an accepted article will be published by a certain date. Send your contributions to Ham Hum, P.O. Box 24551, Omaha, NE 68124-0551 or email [hamhum@aksarbenarc.org](mailto:hamhum@aksarbenarc.org). Please contact the editor for permission to reprint anything appearing in the Ham Hum.

## Club Officers & Board Members

President	Adam Kavan	KDØMMG	402-598-1521	<a href="mailto:akavan@gmail.com">akavan@gmail.com</a>
Vice President	Mitch Saure	WBØGBI	402-455-6205	<a href="mailto:skyking195@aol.com">skyking195@aol.com</a>
2014 Secretary	Bill True	WA9ASD	402-426-2813	<a href="mailto:williamtrue@aol.com">williamtrue@aol.com</a>
2014 Treasurer	Dave Rice	NØJSB	402-571-8915	<a href="mailto:davegr@netzero.net">davegr@netzero.net</a>
2014-2016 Director	Russ Rosenquist	NØMNW		<a href="mailto:n0mnw@yahoo.com">n0mnw@yahoo.com</a>
2014-2016 Director	Barb Westcott	KCØHLB	402-510-0308	<a href="mailto:barbwestcott@cox.net">barbwestcott@cox.net</a>
Immediate Past President	Tomas Hood	NW7US	402-915-1771	<a href="mailto:nw7us@nw7us.us">nw7us@nw7us.us</a>

## Club Committees

Courtesy Committee	<i>(open)</i>			
Education	Mary Joseph	NØTRK	402-492-9156	<a href="mailto:n0trk@arrl.net">n0trk@arrl.net</a>
Field Day	Tomas Hood	NW7US	402-915-1771	<a href="mailto:nw7us@nw7us.us">nw7us@nw7us.us</a>
Flea-esta	Chris Rice		402-571-8915	<a href="mailto:davegr@netzero.net">davegr@netzero.net</a>
Membership	Mary Joseph	NØTRK	402-492-9156	<a href="mailto:n0trk@arrl.net">n0trk@arrl.net</a>
Monday Night .94 Net	Rich Swig	WAØZQG	712-256-7774	<a href="mailto:wa0zqg@hotmail.com">wa0zqg@hotmail.com</a>
Prizes	Rollie Miller	ABØNN	402-333-1606	<a href="mailto:ab0nn@arrl.net">ab0nn@arrl.net</a>
Public Service/Emergency	Jim Westcott	KAØKCV	402-510-0308	<a href="mailto:ka0kcv@cox.net">ka0kcv@cox.net</a>
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QSL Manager & Technical	Ed Edwards	KØIL		<a href="mailto:k0il@arrl.net">k0il@arrl.net</a>
Special Events Coordinator	Pat Joseph	KØCTU	402-492-9156	<a href="mailto:ppjoseph@cox.net">ppjoseph@cox.net</a>
Web Services	Mary Joseph	NØTRK	402-492-9156	<a href="mailto:n0trk@arrl.net">n0trk@arrl.net</a>

## Repeater Committee

Chairman	John Gebuhr	WBØCMC	402-932-3443	<a href="mailto:wb0cmc@cox.net">wb0cmc@cox.net</a>
Vice Chairman	Steve Schmitz	NØUP	402-306-2972	<a href="mailto:n0up@arrl.net">n0up@arrl.net</a>
Control Operator	Mary Joseph	NØTRK	402-492-9156	<a href="mailto:n0trk@arrl.net">n0trk@arrl.net</a>
Club Callsign Trustee	Corby Krick	KØSKW	402-540-5483	<a href="mailto:k0skw@k0skw.net">k0skw@k0skw.net</a>

## Other Contacts

ARRL Midwest Director	Clifford Ahrens	KØCA	573-221-8618	<a href="mailto:k0ca@arrl.org">k0ca@arrl.org</a>
ARRL Midwest Vice-Director	Rod Blocksome	KØDAS	319-393-8022	<a href="mailto:k0das@arrl.org">k0das@arrl.org</a>
EC Douglas County	Steve Schmitz	NØUP	402-306-2972	<a href="mailto:n0up@arrl.net">n0up@arrl.net</a>
EC Sarpy County	Dennis Mitchell	KCØYKN		
Exams/Vol. Council	Brian Zdan	KMØY	402-553-2610	<a href="mailto:bzdan@novia.net">bzdan@novia.net</a>
NE Section Manager	Matt Anderson	KAØBOJ	402-580-5515	<a href="mailto:ka0boj@arrl.org">ka0boj@arrl.org</a>
Official Observer Coordinator	Bill McCollum	KEØXQ	402-690-7965	<a href="mailto:ke0xq@cox.net">ke0xq@cox.net</a>

## Address Change?

If you've changed your mailing address, or would prefer to receive the *Ham Hum* via email, please contact Mary NØTRK (Membership) or Bill KCØSVZ (Publications) with your new information.

## AARC on the Web

**Club Web Site:** <http://www.aksarbenarc.org/>

**Facebook:** <https://www.facebook.com/aksarbenarc>

**Yahoo! Groups:** <http://groups.yahoo.com/group/AKSARBENTalk/>

## Saturday Night Coffee

When I arrived, many of the Perkin's Saturday Night Regulars were already there—along with some Irregulars: Pat KØCTU, Corby KØSKW, Caleb NØCALL, Margaret NØCALL, Thomas NØSTN, Mary NØTRK, Steve NØUP, and Ralph WØSMY. A bit later, Shelly KCØKAY and Andrew NØCALL arrived.

In addition, others were arriving and leaving throughout the evening (though some even elected to stay awhile). Among them were Marvin AEØEG, Rob AI7Q, Bob NBØB, Virginia NØVMH, and Frank WBØQQK. Most of them were there because Pat KØCTU had brought T-shirts for the people who'd volunteered to help out with the Nebraska State High School Track Meet at Burke High on May 23 and 24. (See Pat's article elsewhere in this issue.)

During all this bustle, we ate good food and talked about the usual range of topics for this time of year: OzarkCon in Branson, the Dayton hamfest, Field Day, MotoTRBO vs D-Star, Windows 3.1, coverage of the 1975 Omaha tornado, Star Trek, cats (outside cats, talking cats, cat vs horse), snappy answers to stupid questions, computer billing woes, and many others.

The AARC Coffee get-together is held at Perkins restaurant at the corner of 108th and L Streets in Omaha on the third Saturday of the month, starting at 6 PM. Everyone is invited.

*Bill KCØSVZ*

## OMMRS Volunteer Communicator Training on June 14<sup>th</sup>

The Omaha Metro Medical Response System organization will be holding a mini-training session in mid June. It will include an OMMRS Overview, with the main topic being "Message Handling and Logging in the OMMRS Environment."

It includes hands-on practice, so amateur radio operators are encouraged to bring their hand held radios.

There will be two opportunities to attend this training. Both sessions will present the same program:

- Saturday, June 14<sup>th</sup> in the Nebraska Room at the Methodist Hospital.
- Morning session at 10:00 AM to 12:00 PM
- Afternoon session at 1:00 PM to 3:00 PM

Again, the topics are the same for both sessions. Operators only need to attend one!

*Mary NØTRK*

## Courtesy Committee Chairperson Needed

Bill KEØXQ has stepped down as the Courtesy Committee Chair due to health reasons. The Club wishes to thank him for filling this position, plus serving in various other capacities—such as President and Vice President—over the years.

Anyone interested in taking over as the CC chairperson, please notify one of the club officers at the next meeting, or via the contact information on page 2.

## Want Ads

For Sale: Vintage ARRL Books The following six books are being sold by AARC. Contact any club officer at the next meeting, or send an email through the AARC web page (pictures available there, too): <http://tinyurl.com/bajwo5e>

- *The Radio Amateur's VHF Manual*. 1972. 352 Pages, softbound. Used. This vintage book provides a lot of information on VHF bands up to 440 MHz. This publication provides a lot of useful information. Price: \$2.00.
- *Understanding Amateur Radio*. 1971. Used. This item has over 290 pages with fully legible and clear pictures, schematics, and interesting information about ham radio. Item obviously shows some wear, but in good overall condition. Price: \$2.00.
- *The Radio Amateur's Handbook*. 1977. Softbound. Nice clean and well treated handbook. In good shape and all there. Spine and binding are good. See pictures on the AARC web page (URL above). Very Clean inside. Crease on the corner of the back cover. All Offers Considered. Price: \$10.00.
- *Specialized Communications Techniques for the Radio Amateur*. 1978. 208 pages. This book deals with developing areas of ham radio communications such as television, slow scan TV, fax, radioteletype, space communications, and advanced techniques such as time-division multiplexing. Lots of great info in this book. It is in great condition. Price: \$2.00.

For Sale: Icom IC-HM7 Preamplifier Built-In Dynamic Microphone . In excellent cosmetic condition with light signs of use. Wire and insulation is excellent—no drying/cracking, or kinks. PTT button has good positive spring action. Has an 8 pin connector installed. Price: \$30.00. Contact an AARC officer at the next meeting or send an email to the Club web site at <http://tinyurl.com/kuksffk>

For Sale: HK-3 by Ham Key This model was introduced in 1974 by Ham Key Company, It resembled the Brown Brothers model ST-A. Nice attractive key as a shack decoration or to put on the air. Price: \$30.00. Contact any AARC officer at the next meeting, or send an email through the AARC web page: <http://tinyurl.com/kuevyd1>

Job Opening: Ham Hum Editor Position available in March, 2015. Dangerous, but thrilling work. Club will supply the materials you need to print and distribute the issues. You must supply your own copy of Strunk & White's *The Elements of Style*. If interested, contact Bill KCØSVZ or any club officer at the next meeting.



## Prez Sez

Recently the board members decided that we wanted to do a survey of the membership; to allow us to align the activities offered with what the membership would like us to do. So far we have had 26 people return surveys and I wanted to share with you some of the things I learned from it.

Since we are a general club not dedicated to one form of operation or another, it is not surprising that we received a wide variety of answers. The most popular reason that people were attracted to ham radio was electronics (15 votes), the second most was technology (13), and the third was Public Service Work (11).

When it came to preparing for the license exams, most of the respondents studied by themselves. Out of those 18 people, 11 used the license manual. After that, there was a sharp drop off: only five people took a class. That makes me wonder if perhaps I should get a copy of the license manual to lend to people who are interested in learning more.

Our favorite face-to-face activity was attending meetings (16), I'm glad to hear that, but most of our surveys were from people who brought it to the meeting, so I would expect the results to be slanted that way. Still it was good to know that people enjoy the meetings. After that, we had hamfests (13), public service (11), emergency communication (11) and eating (8). Other activities mentioned were building things, general chatting, and field day.

I was surprised by the activities that people like to do at home. The number one response with more than half of the respondents was Listening (14). After that it was casual conversations (11), and public service (9). The other responses only had a few people pick them. I personally expected more people to choose DX (4), given that DX is one of the activities that is talked about the most.

The non-operating activities we enjoy are fairly evenly spread out. Putting up antennas (10) was slightly ahead of building equipment (9), reading (9), emergency communications (9), and flea markets (9). Knowing that we have people who enjoy the DIY style of ham radio makes me think we might want to give our members a way of showing off some of the neat stuff we are making.

We all joined AARC for pretty much the same reasons, we all wanted to talk to other hams, and AARC is one of the closest clubs to where we live. Thankfully we don't plan to move the club to another city, so we will continue to be a friendly place for everyone to come and socialize. Since these are the same things that people have said they like about the club; that we are a friendly, low-drama club that participates in a wide variety of activities. I feel that we are meeting the needs of the members that responded to our survey in these regards.

(Prez Sez continued on page 4.)

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*You may be a ham radio operator if...your call sign is listed on one or more of your hats, T-shirts, or other garments.*

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(Prez Sez continued from page 3.)

We were asked to improve the club by providing more hands-on activities, and more events that we do together as a club. I'm glad to say that we have some plans for both of these that we will announce once we have the details ironed out. This ties into our programs, most of our respondents like that they are informative, and given by members interested in what they are talking about.

Using this input, I look forward to keeping the parts of the club that people enjoy, and figuring out new ways to serve the members. If you haven't completed your survey yet, it is not too late! If you would like a digital copy you can email me at akavan@gmail.com and I will send one to you. Also, feel free to contact any member of the board with any ideas or suggestions you may have. I look forward to talking to you all soon.

*Adam KDØMMG, President AARC*

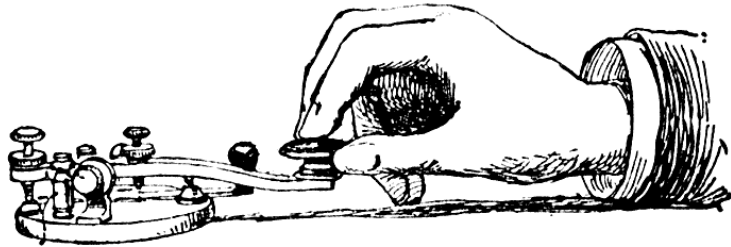


## Veep Speaks

Our program for June will be on Fox Hunting by Bill WA9ASD and John WBØCMC, who are both experienced fox hunters. They will be demonstrating equipment and techniques for the hunt. Be sure to attend to see this fascinating topic.

Our thanks goes out to all who helped with storm spotting this last Tuesday during the very severe thunderstorm that hit our area. All these public-spirited hams help keep all of us safe. I hope that everyone's property (including ham antennas) made it through OK. At my QTH there was a lot of quarter size hail and one hailstone we found measured 2.25 inches. One leg of my trap dipole broke turning it into an inverted "L" fed at the top. It still loaded up on 40 meters and I was able to work W1AW/4 (in Alabama) in a good sized pileup.

*Mitch WBØGBI, Vice President AARC*



## Club Calendar

- Jun 11** 7:30 PM LARC Meeting, 4647 Superior St., Lincoln, NE.
- Jun 13** 7:00 PM AARC Meeting. Red Cross Building, 81<sup>st</sup> & Spring St, Omaha, NE.
- Jun 14** 11:00 AM HBQRP, Bredeaux Pizza, 1425 Silver St., Ashland, NE.
- Jun 18** 7:00 PM Heartland Hams, 403 Railroad Ave., Glenwood, IA.
- Jun 19** 7:30 PM BARC Meeting. Masonic Hall, 1908 Franklin St, Bellevue, NE.
- Jun 21** 6:00 PM AARC Coffee. Perkins Restaurant, 108<sup>th</sup> & L Streets, Omaha, NE.
- Jun 24** 6:30 PM AARC Directors' Meeting. Village Inn, 78th & Dodge Streets, Omaha, NE.
- Jun 26** 7:30 PM PARC Meeting. 1900 E. Military Ave, Fremont, NE.
- Jun 26** 7:30 PM SWIARC Meeting. 705 N 16<sup>th</sup>, Council Bluffs, IA.
- Jun 28** **Field Day – See page 8 for details.**
- Jun 29** **Field Day – See page 8 for details.**
- Jul 9** 7:30 PM LARC Meeting, 4647 Superior St., Lincoln, NE.
- Jul 11** 7:00 PM AARC Meeting. Red Cross Building, 81<sup>st</sup> & Spring St, Omaha, NE.
- Jul 12** 9:00 AM PARC Flea Market, St. Charles Parish, 8<sup>th</sup> & Locust St., North Bend, NE.
- Jul 12** 11:00 AM HBQRP, Bredeaux Pizza, 1425 Silver St., Ashland, NE.
- Jul 16** 7:00 PM Heartland Hams, 403 Railroad Ave., Glenwood, IA.
- Jul 17** 7:30 PM BARC Meeting. Masonic Hall, 1908 Franklin St, Bellevue, NE.
- Jul 19** 8:00 AM Warrensburg Hamfest, Johnson Co. Fairgrounds, Warrensburg, MO.
- Jul 19** 6:00 PM AARC Coffee. Perkins Restaurant, 108<sup>th</sup> & L Streets, Omaha, NE.
- Jul 22** 6:30 PM AARC Directors' Meeting. Village Inn, 78th & Dodge Streets, Omaha, NE.
- Jul 24** 7:30 PM PARC Meeting. 1900 E. Military Ave, Fremont, NE.
- Jul 24** 7:30 PM SWIARC Meeting. 705 N 16<sup>th</sup>, Council Bluffs, IA.
- Jul 29** 6:30 PM AARC VE Session, Red Cross Building, 81st & Spring St, Omaha NE.
- Aug 22** Joplin Hamfest (through Aug. 23). Joplin, Missouri.
- Sep 6** Flea-esta. Sarpy County Fairgrounds, Springfield, NE.
- Sep 27** 3900 Club Hamboree. Firefighters Hall, 2108 Franklin St, Bellevue, NE.

For more details and the latest updates, see the *Calendar* section of the AARC web site (<http://www.aksarbenarc.org/>).

## Obscure Q Codes

*Some Q signals that never made it to the ARRL's official list. As with regular Q signals, each can be a statement or a question, depending on whether a question mark follows it.*

- QAW – I hear alternator whine / Do you hear alternator whine?
- QBO – Don't sit next to that guy in the meeting / Buddy, can you spare some soap?
- QBQ – I know a good BBQ place / Do you know a good BBQ place?
- QBR – I need a beer / Do you need a beer?
- QFH – This frequency is MINE! - go elsewhere / Is this frequency hogged?
- QNB? – is supposed to mean "How many buttons does your radio have?" A reply of the form QNB 45/15 means "45, and I know what 15 of them do."



## Area Nets

### Monday

7:00 PM 145.290 South-West Iowa ARES Glenwood, IA.  
8:00 PM 144.250 NE Missouri SWOT.  
9:00 PM 146.940 AARC Chat Net. Ak-Sar-Ben ARC Omaha, NE.

### Tuesday

7:00 PM 147.360 QCWA Net, Chapter 210 (seasonal, October through March).  
8:00 PM 50.200 6m SSB Net.  
9:00 PM 145.310 Washington Co. ARES Washington Co, NE.

### Wednesday

7:00 PM 146.670 Dodge Co. ARES Dodge Co, NE.  
7:30 PM 7.122 CW Four State QRP Comfortable Net.  
8:00 PM 3.564 CW Four State QRP Comfortable Net.  
8:00 PM 145.310 Saunders Co. ARES Saunders Co, NE.  
8:30 PM 7.122 CW Four State QRP Comfortable Net. (*Depends on band conditions.*)  
9:00 PM 3.580.5 PSK Four State QRP Comfortable Net.  
9:00 PM 146.820 Pottawattamie County ARES Council Bluffs, IA.

### Thursday

8:30 AM 7.122 CW Four State QRP 40M Morning Net.  
7:30 PM 145.310- Lincoln/Omaha SATERN Net. Ashland, NE.  
8:00 PM 28.350 10-Meter Net.  
8:00 PM 144.250 2-Meter SSB Net.  
8:00 PM 146.360 Heartland DX Association.  
9:00 PM 28.305 10-Meter Net.

### Saturday

12:00 PM 146.82 Swap Net Council Bluffs, IA.  
8:30 PM 3.921.000 QCWA Chapter 20.

### Sunday

8:00 AM 3.902.500 Swap Net.  
8:30 AM 3.896.000 3900 Club.  
8:30 PM 443.925+ (103.5 tone) IRLP Net.  
9:00 PM 146.940- Douglas Co. ARES net, KØUSA repeater.

Please let us know of any updates or corrections to the above.

## AARC Equipment Loaner Program

Ak-Sar-Ben Amateur Radio Club members who are in good standing and possessing an active FCC issued US Amateur Radio License may borrow one of two Icom HTs. Each radio is a basic two meter transceiver with an NiMH battery and charger. It is perfect for when you need to borrow a rig to help with that community service event, or if you are just itching to get on the air as you shop for your new radio.

Other equipment includes an ARRL *Introduction to Morse Code* CD set and (in the near future) an MFJ-259B antenna analyzer. A policy for the antenna analyzer is still being set—see the AARC web page at <http://www.aksarbenarc.org/main/> for its status.

You can check out a radio for one month at any Club meeting and return it at the next. Alternately, you can contact the equipment committee at [equipment-committee@aksarbenarc.org](mailto:equipment-committee@aksarbenarc.org). For more details, see the AARC web page listed above.

*de AARC Equipment Committee*

## Club Meeting Minutes – May 9, 2014

*Bill WA9ASD, Secretary AARC*

By 7:10 PM there were only three board members present so it was decided that there could be no business meeting. As a result an informal meeting was begun with only announcements and no business transacted. There were 24 members in attendance.

The treasurer reported that we are ok.

There were no reports from the President and Vice President.

On the Babcook cycling event will be coming up. There is no definite communications need for this yet.

OMMRS will hold training sessions in the morning and the afternoon on June 14 at Methodist Hospital in the Nebraska Room. On June 28 in the morning there will be a MARE.

Field Day is coming up June 28 and 29. There will be a meeting of shack captains on Monday May 12 or Tuesday May 13 at the Village Inn at 78th and Dodge.

Bill, KCØSVZ announced that he will be retiring as *Ham Hum* Editor in the spring of 2015. Anyone interested in becoming *Ham Hum* Editor should contact him to work on the transition.

There will be a VEC Testing Session at Midlands Hospital on Saturday, May 10. There will be another testing session at the Red Cross on May 27 at 6:30 PM.

Name tags for members who responded to the club survey are available on one of the tables.

The Grand Prize for Flea-Esta will be announced at next month's club meeting. It will probably be either an antenna analyzer or a dual-band HT.

The Heartland Amateur Radio Association will be holding their flea market at The Heartland Museum of Military Vehicles near Lexington NE. on May 31 from 8:30 AM until 3 PM.

The Pioneer ARC will be holding their flea market on Saturday, July 12 from 9 AM until 12:30 PM in the St. Charles Parish Center in North Bend. This a great little flea market with good food.

Coffee and cookies are available in the kitchen. Please help yourself and donate to offset the cost of this.

Please make your donations for any area repeater to Dave, NØJSB. The club will make sure your donation gets to the proper repeater operator.

At 7:35 PM there were no more announcements to be made and the Door Prize extravaganza began.

### *Want to Use KØUSA 146.940 for Community Service Events?*

The KØUSA repeater is an open system and is available for any licensed ham radio operator to use. We welcome other clubs and organizations to use it for providing communications support for nonprofit activities. To avoid scheduling conflicts, the Club asks that you obtain permission from the AARC Repeater Committee *at least 72* hours in advance. To submit your request, please click the *KØUSA Use Request Form* link on the AARC web site: <http://tinyurl.com/msodyvh>

A couple of other terms that he defined was the two types of digital communication: Chat, and Information. Chat mode is real-time, keyboard-to-keyboard exchange. Information mode is sending a block of data, waiting until it's acknowledged, then sending (or receiving) another block.

Tomas then talked about the various digital protocols used in digital communication and some of their salient features. (Due to space limitations, only a few are described here.) He started with the TOR modes (Teleprinting Over Radio) that most hams are familiar with: AMTOR (FSK), PACTOR (FSK), G-TOR (Golay TOR, an FSK mode named after its inventor), and PACTOR II (a PSK mode that's faster, but not popular with hams). He then went on to describe:

- *PSK31*. It is popular with hams—especially on Field Day-- and is built-into a lot of HF rigs. It uses DSP techniques and lends itself to chat. A lot of hams will use macros instead of live chat to communicate, but Tomas recommends live chat. Its bandwidth is only 50 Hz, but conditions must be good for a solid QSO—characters can be dropped in marginal conditions.
- *MT63* is a reliable mode in high noise environments. It can operate from 50-200 wpm, but requires more bandwidth than PSK31.
- *THROB*, designed by LG Sear, G3PPT, is a DSP mode protocol using FFT technology to overcome sensitivity and propagation problems—yet maintains reasonable speed.
- *MFSK16* is an advancement to THROB. It also uses FFT, has a 316 Hz bandwidth, and can transfer data at 42 wpm. A related mode, MFSK8, is slower, but more reliable.
- *JT65* is a protocol designed by Nobel Prize winner Joe Taylor, K1JT. It's intended for weak, slowly-varying signals, such as associated with moonbounce and troposcatter. It can decode signals many dB below the noise floor and is able to successfully recover messages that are partially lost. Data transfer can be slow, so it's used primarily for information exchange rather than chat. However, it's becoming more popular with hams.
- *Olivia*, designed by Pawel Jalocha in 2003. Compared to PSK31, it is slower and has a wider bandwidth, but is still one of most superior of digital modes. It's very good at ignoring noise—it can be decoded even when the signal is 10-14 dB below the noise floor. It's popular on HF but also works well on VHF/UHF. It is Tomas's favorite digital mode and has, in his words, "a beautiful sound." (You can hear and see an example on his YouTube page at <http://tinyurl.com/194rs14>)

After covering some of the popular operating modes, Tomas discussed PC sound card software. This included:

- *FLDigi* (Linux, OS-X, Windows, others) Modulates/demodulates many of the above modes.

# Contest Calendar

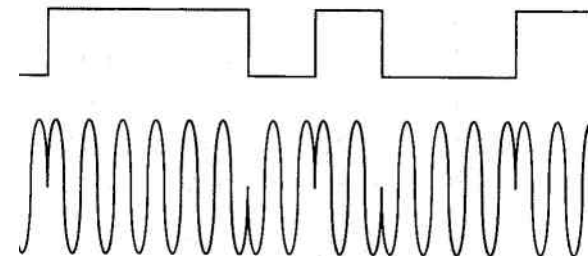
## June 2014

NAQCC Straight Key/Bug Sprint	0030Z-0230Z, Jun 11
CWops Mini-CWT Test	1300Z-1400Z, 1900Z-2000Z, Jun 11 and 0300Z-0400Z, Jun 12
DRCG WW RTTY Contest	0000Z-0759Z, 1600Z-2359Z, Jun 14 and 0800Z-1559Z, Jun 15
Asia-Pacific Sprint, SSB	1100Z-1300Z, Jun 14
Portugal Day Contest	1200Z, Jun 14 to 1159Z, Jun 15
GACW WWSA CW DX Contest	1500Z, Jun 14 to 1500Z, Jun 15
REF DDFM 6m Contest	1600Z, Jun 14 to 1600Z, Jun 15
ARRL June VHF Contest	1800Z, Jun 14 to 0259Z, Jun 16
CWops Mini-CWT Test	1300Z-1400Z, 1900Z-2000Z, Jun 18 and 0300Z-0400Z, Jun 19
NAQCC Straight Key/Bug Sprint	0030Z-0230Z, Jun 19
All Asian DX Contest, CW	0000Z, Jun 21 to 2400Z, Jun 22
AGCW VHF/UHF Contest	1400Z-1700Z, Jun 21 (144) and 1700Z-1800Z, Jun 21 (432)
Kid's Day Contest	1800Z-2359Z, Jun 21
CWops Mini-CWT Test	1300Z-1400Z, 1900Z-2000Z, Jun 25 and 0300Z-0400Z, Jun 26
Ukrainian DX DIGI Contest	1200Z, Jun 28 to 1200Z, Jun 29
His Maj. King of Spain Contest, SSB	1200Z, Jun 28 to 1200Z, Jun 29
ARRL Field Day	1800Z, Jun 28 to 2100Z, Jun 29
10-10 Int. Spirit of 76 QSO Party	0001Z, Jun 30 to 2400Z, Jun 6

## July 2014

RAC Canada Day Contest	0000Z-2359Z, Jul 1
Venezuelan Ind. Day Contest	0000Z, Jul 5 to 2359Z, Jul 6
DL-DX RTTY Contest	1100Z, Jul 5 to 1059Z, Jul 6
Marconi Memorial HF Contest	1400Z, Jul 5 to 1400Z, Jul 6
DARC 10-Meter Digital Contest	1100Z-1700Z, Jul 6
ARS Spartan Sprint	0100Z-0300Z, Jul 8
FISTS Summer Sprint	0000Z-0400Z, Jul 12
IARU HF World Championship	1200Z, Jul 12 to 1200Z, Jul 13
NAQCC Straight Key/Bug Sprint	0030Z-0230Z, Jul 17
DMC RTTY Contest	1200Z, Jul 19 to 1200Z, Jul 20
North American QSO Party, RTTY	1800Z, Jul 19 to 0559Z, Jul 20
CQ Worldwide VHF Contest	1800Z, Jul 19 to 2100Z, Jul 20
RSGB IOTA Contest	1200Z, Jul 26 to 1200Z, Jul 27

Sources: <http://www.hornucopia.com/contestcal/index.html> & <http://www.aksarbenarc.org>



## May Door Prizes

With a fanfare of trumpets, French horns, and drums, Door Prize Hero Rollie ABØNN returned this month to dispense a new batch of goodies to the eagerly awaiting crowd. This time, there was *Arduino Projects for Dummies* by Brock Craft, a 2014 ARRL calendar (still good for half a year), a can of QD

Electronic Cleaner from CRC Industries, a pair of Midwest Quality Max Performance work gloves, a Pittsburgh 25 ft. x 1 in. tape measure, the Brown Bag Prize, and the much-coveted Mr. Reeh Door Prize.

Pat KØCTU drew the tickets.

The first item to be awarded was the calendar, which went to Marvin AEØEG. Next, Pat pulled out a ticket belonging to Brian KDØSVD, who won the work gloves. The electronic cleaner went to Don WBØVGB, while Jim WBØBIK got the Arduino book.

Jim KGØHQ won the Brown Bag Prize, which—upon opening—turned out to be a 10" cable cutter.

The Mr. Reeh Door Prize—donated by the ever mysterious man of mystery, Anton Reeh, UNIQUE—was awarded to Adam KDØMMG. Unwrapping it, he (and the rest of the club) discovered that it was an LF-601 filter from Bud Radio, Inc. In addition, it was still in its original box with a World Radio price tag on it (but not marked).



KDØMMG with LF-601 Low Pass Filter

Bill WA9ASD, who has a vast encyclopedic knowledge of all things ham related, looked at it and said that it is "...a tunable low-pass filter rated at up to 1 kW for bands up through 10 meters. It was reviewed in 1955 by QST, who proclaimed that it works. It sold for \$13.95."

Included with it was a little hand-written sign stating "Solve your channel 2 TVI problems."

Though such a feature could be useful when operating high power on 6 meters, it probably isn't enough to convince someone to buy it at a ham fest in today's mostly-cable world. *[Interestingly, a quick check on the net shows this item selling for \$24-\$40, depending on its condition. -ed]*

Note that the proceeds for each month's tickets go for buying next month's prizes. Also, all tickets are kept and included in the Grand Prize drawing in December.

Bill KCØSVZ

## The 2014 Nebraska State High School Track Meet

Pat KØCTU

For over thirty years, the Ak-Sar-Ben Amateur Radio Club has been assisting the Nebraska State High School Track Meet by relaying time sensitive messages from the field events. These messages consist of preliminary event results, plus requests to call athletes to an event that they have not yet reported to. Both of these messages are forwarded to the people behind the public address system microphones.

Health and welfare traffic concerning the athletes and the audience is also a key concern. We have one of our operators on staff at the on-site medical facility at all times to deliver any messages of medical nature so that they can dispatch a team to the area. There are times when things don't go quite right at some of the events and we help to get the traffic through to those who can answer the questions that come up.

This year, the Track Meet was held on Friday, May 27th and Saturday the 28th. We had a great time and witnessed a few records being broken in many different events. We also had some great weather with overcast skies, warm temperatures, and no rain. Mary NØTRK was in the control booth with Bob NBØB on Friday, and with Rob AI7Q on Saturday. On duty in the medical tent was Jim KAØKCV on Friday, and Bob NBØB on Saturday.

On the field there are four different events that we were watching over. They were High Jump, Triple Jump, Long Jump, and Pole Vault. Each event is a competition among one of four school classes. Also, each event was either Girls or Boys. There is also the Discus and Shot Put. That means 48 events that we cover over the two days.



Second Day Crew for the Nebraska State High School Track Meet: W7CAM, WDØGCN, NBØB, KDØFJQ, KØCTU, AI7Q, NØVMH, KØSKW, WDØGCN, and AEØEG. Not shown are NØSTN, NØUP, and NØTRK. (Photo courtesy of NØTRK)

Thanks to our great staff of volunteers, some of which were there all day on both days.

Our staff: Mary NØTRK, Bob NBØB, Ronnie WDØGCN, Steve NØUP, Bill W5UZQ, Lynn WBØPRH, Marvin AEØEG, Arvin KØIT, Ryan KDØFJQ, Jim KAØKCV, Cam W7CAM, Tom NØSTN, Rob AI7Q, Corby KØSKW, Virginia NØVMH, Brenda NØWAA, and Pat KØCTU.

And most important, thanks to Larry Bock, KCØR, who initiated our involvement in the Track Meet many years ago. He wasn't able to be with us this year. We look forward to seeing him next year.



# AARC FIELD DAY

Tomas Hood, NW7US

June is Field Day month! Ever since the first Field Day in 1933, 81 years ago, people from many walks of life flock to a nearby park, farmer's field, or other off-the-power-grid location, to test their ability to communicate in a simulated emergency. Licensed and non-licensed individuals from around the United States and now the world grab their field equipment, and agree to join others in a team effort to do better than any other group in the same classification. In short, Field Day is part educational event, part operating event, part public relations event – and ALL about FUN! The most important part of field day is YOU. Yes, YOU are welcome to be a part of this exciting weekend. There's a fair amount of diverse modes and styles of operating. There are even antenna-building and deploying activities that you can be a part of.



This year, we (the Ak-Sar-Ben Amateur Radio Club of Omaha, Nebraska - <http://www.aksarbenarc.org/main/>) are demonstrating amateur radio on the grounds of the Douglas County Crime Lab at 15345 W. Maple Road in Omaha. Field Day operation time runs from Saturday, June 28th at 1:00 PM local time, and is finished at 1:00 PM local time on Sunday, June 29th. Before and after is setup and tear down. You don't have to stay the whole time, just come out when you can!



KDØMMG Operating Field Day 2012. (Photo courtesy of NW7US)

many contacts into our record of contacts (or, "log book").

We have a good number of stations (individual transceiver stations within the Field Day operations site) planned for our operations, this year. The plan is to have voice operations going for the entire period, as well as stations using Morse code and other digital modes. There's diversity in styles and modes, so come out and see it, first hand. The majority of operations will be on the shortwave, or high frequency, amateur radio allocations. Some of our station operators will be in "contest" mode, trying to get as

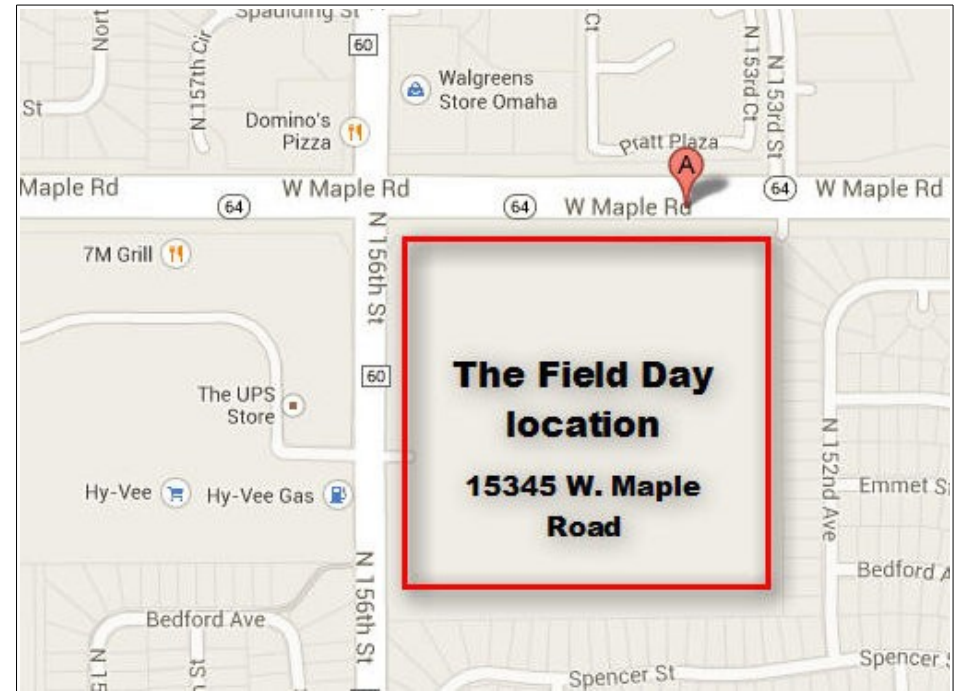
(AARC Field Day continued on page 9.)

(AARC Field Day continued from page 8.)

Other station operators are taking a more relaxed approach. You can see all of this in operation, for yourself. Please plan on attending. Even if you are there for a half-hour, or if you wish to be there for the entire event, you are important to us. Drop us a quick email if you plan on attending.

Please email the Field Day coordinator with your questions about Field Day, and announcements of your intentions on helping out, or other Field Day related correspondence. Use [fieldday@aksarbenarc.org](mailto:fieldday@aksarbenarc.org) and Tomas, NW7US, will response as quickly as possible.

Tomas NW7US, AARC Field Day Committee Chair



## BOARD MEETING NOTICE

The next AARC Board Meeting is scheduled for June 24, 2014, 6:30 PM at the Village Inn on 78th and Dodge Streets. Unless noted otherwise, Board meetings take place at that time and location on the fourth Tuesday of the month. For any changes to this schedule, check for an announcement at the next club meeting, or on the AARC web page at <http://www.aksarbenarc.org/>.