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# St. Paul Radio Club Ground Wave

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## KØAGF

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## NEWS AND NOTES FOR JUNE 2013 — Volume 73, Issue 6

### Presidential Ponderings

#### THINGS PAST

It's been a pretty good year for the club.

Jeff Iverson finished off the year with a presentation on radio receivers, and got an enthusiastic reception from the club members. We've covered: Getting Started with Digital Modes; working your rig with software (Ham Radio Deluxe); what's available in new equipment (Chinese radios) and how the market is affected; older equipment (Jeff's Receiver History and our Oscilloscopes 101); and operating techniques (mobile VHF/UHF and DXCC experiences).

We are trying to cover the vast landscape of interesting topics. We're willing to draw from the experiences of other clubs, especially the Mining Club, with whom we share members. If you have ideas for topics that you would like to have presented, and you know of someone who can do the presentation, please let us know.

#### THINGS PRESENT

As mentioned before, my interests lie in the Public Service arena rather than DXing (and other areas) and the 2013 season has taken off already. The Ironman ride, the ADA tour-de-cure ride, the Minneapolis Marathon, these are behind us already. The MS-150 and MS TRAM, the Lake Elmo regatta and Ojibway road rally, the Cystic Fibrosis ride and ADA Walk-a-thon, and of course, the Twin Cities Marathon--all of these are

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### Field Day 2013

June 22-23, 2013

Tartan Park

Field Day Planning Meeting

6:00 p.m. June 18th

MARC Trailer

### Dale's Details

June 2013 FD QRZ

Now that we all understand that Field Day is ALWAYS the "fourth full weekend in June", we won't mention it again. Some calendar analysis will show you that this is the earliest date FD can fall on, June 22/23. The latest would be on 28/29 as the yearly cycles move about and leap years mess it up again. Makes it hard to plan for long term, but, as an Emergency Preparedness Exercise, it's easier to plan for than a real emergency--they are short notice and really hard to plan for!

What else is FD for amateur radio operators? The King of Hobbies offers so many facets for individuals to read about first, then observe in action or demonstration, and finally get in-

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### The Minnesota Cup

by Skip Jackson, KSØJ

The Minnesota Cup was created to spur friendly competition among Minnesota amateur radio clubs to work hardest Field day at making contacts, getting bonus points and organizing a GOTA station. The Cup was initially the idea of KØMD and KØBUD as a way to spur friendly competition between the Rochester Amateur Radio Club and the Twin Cities FM Club. Both clubs did very well, with RARC placing number 2 in the nation and number 1 in Minnesota and the TCFMC placing number 2 in Minnesota.

This year, the sponsors have asked the ARRL Field Organization to promote the cup to all Minnesota Field Day stations. Two cups will be awarded to the Field Day entries placing highest in the 2-A and the 3-A categories. The RARC will be competing in the 3-A category and the TCFM club will be competing in the 2-a category. The posted score in the ARRL final tally will determine the winners. The Cups will be presented at an appropriate meeting by the Minnesota Section manager or his designee after the final scores are posted.

Let's go all out for Field Day to put Minnesota on the Map and see if you can bring home the Minnesota Cup!

*Skip Jackson, KSØJ, is the Minnesota Section Manager for the ARRL*

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ahead of us this summer.

I would like to extend a "shout out" to a few of our members that seem to be working all of these events and more: Ralph and Janet Bierbaum, Ed and Linda Jacobson, and a few whose names I can't remember now.

In radio, we LEARN new things for ourselves, we EDUCATE others, to spread the joy of amateur radio, and we SERVE others--one of our charter mandates from the FCC.

If you are interested in trying out Public Service events this summer, give the folks above a call.

#### THINGS FUTURE

We have the 2013 Field Day, June 22-23, with the Mining Club. The chair person is Ed Jacobson (WBØVHF).

The famous and fabulous MAGIC yard sale is coming up July 13<sup>th</sup>. Details available on the web at <http://www.magicrepeater.net/fest.htm>.

We're looking into one (or more) special events for later this summer – any interest in a foxhunt? Send an email to your club officers and let us know what you would like for an activity.

George, KØGCP

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involved with if they desire. Club activities during FD will vary from location to location. Over the 22 years I've been involved with SPRC and MARC, we have maintained the CW, SSB, VHF station bases. We have experimented and tried Digital, Satellite and QRP when members stepped up and led the way. We have been located in many different sites, some rustic and some pleasant, but always a challenge to situate the group in.

We have tried and tossed many antenna systems, relying on the rules of trial and tribulation for an outcome. I recall the double Bazookas

that Ed Van Cleve, WØVC, made up. Lots of nice wire and connectors, cut for 40M, tunable to other bands. Center mast feed with one east west and one north south. One year I designed a balloon lifted vertical, \$52 in helium up in a puff of wind before it got off the ground. We strung about an eighth mile long wire out across the valley once, storms came in and it did a wonderful job at collecting electrical charge...damn near lit the camper on fire!

My best antenna (1993/4) is in a bin at the shack, a 5 element, 40M log periodic with a 50 foot wire beam and a 70 foot reflector. You have to have space to put it up, and it fits between the light poles in the parking lot at the FD site. The first time it was used, we found enough man power to get two 40 foot masts up on the high side of a bluff to the north of 3M center. We draped it down toward the pond and used trees to lift the other side. It hung at a swinging angle of 30 to 40 degrees, so a vertical/horizontal attribute, pointed straight East. It was a late install on Saturday afternoon, so once it was installed; we took it to the SSB station which was working with a dipole and a vertical.

When our shift came up, my son Kirk, NØQND--our current network provider, changed over to the Log. Retuned the radio, tuner, mic and everything else, the band was quiet. On FD, the band is quiet? I said give a call. He did: CQ CQ FIELD DAY WØMR. He was answered immediately, with a pile up! I checked the Squelch and it was very low, therefore no sound. Corrected the settings and let him rock and roll for a couple hours with contacts from all directions and most reporting "great signal". We hung it up a few years ago, but the wind kept it inactive, anyone willing to try again??

Radios have improved with spectrum scopes, filters to the nth degree, bridged to computer logging software that controls and records everything

we do. We even network the stations so everyone can see the big picture at each station. This year we can try our newly purchased Mark V, or stay with the Icom-756 Pro II. Vhf will probably use a FT- 897.

We will have two RVs for stations again, and if anyone has a hard cover shelter the VHF could use it would be appreciated. Otherwise we tent them in like previous years. The generators are getting tuned up, with the 12 Gallon tanks so no refueling worries. All the details will be covered at the June 18<sup>th</sup> meeting at 6pm at the Mining Amateur Radio Club trailer.

For food, my growing team of Joe, George, Jay and Rachael, will keep a

## Circuit Builders

by Orcy Lyle, WØQT

Different years bring different groups of people to the Circuit Builders lab. This past fall, winter, and spring, the core group consisted (besides myself) of three hams who had built Heathkits back in the day. Two of these hams were interested in learning kit building. Daniel Kelley, KCØQHZ, worked on an ARRL kit which had items for soldering practice and also contained a project which contained a blinking LED and a buzzing speaker. Daniel completed all except for some work on the speaker.

George Power, KØGCP, St. Paul Radio Club President, chose a United Microsystems sound card interface, to use for connecting radio and computer for the digital mode. I happened to be working on one of these myself, since I am converting my digital station to QRP with small components. Building the interface was quick and easy. The fun began when doing the cables, which run from the interface to the radio and PC. The system with this interface has more cables than other interfaces, since all the cables in this

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unit run into/out of the interface, rather than the audio cable running from the radio speaker to the computer line in or mic jack. Most of the cables for this interface are RCA connectors on one end and, running to a 6 pin mini-din (for Yaesu) and a serial connector. I have my cables figured out and still need to finish them before Field Day. I think George is still working on his cables also.

The third member of the core group, Lee Bellefeuille, KDØVAS, spent part of his career as an electrical contractor, a good background for ham radio and building. Before coming to the lab, he already had built a marine radio and an Elecraft K1. He consulted with Mert Nellis, WØUFO about a question he had about the marine radio, and planned to see Mert again with questions regarding the K1.

Quite a bit was accomplished in the lab during the season. Now for a summer break.

## Fall Tech License Class

A Technician licensing class will be held on Tuesday nights beginning on September 24. The class will again be at Highland Park Junior High School on the corner of Montreal and Snelling.

The class will begin at 6:30 pm, and end at 8:30. It is open to anyone 11 years old or older who wants to get into amateur radio. The last class session will be on November 12.

There is a \$10 administrative fee for the class, and each student will need a copy of the ARRL Ham Radio License Manual, Second Edition (red cover). Copies will be available for sale on the first night of the class, and are also available now at Radio City in Mounds View and many Barnes and Nobles stores. Copies are also available at many public libraries. Students must preregister for the class at the St. Paul

Community Education website, [www.commed.spps.org](http://www.commed.spps.org).

Each class session will be taught by a different instructor, drawn from the pool of St. Paul Radio Club members. Persons interested in teaching one night should contact Allan Klein, WØNLY, at [allankmn@cs.com](mailto:allankmn@cs.com). "Teaching is fun. It's only one night, plus a few hours of preparation. ARRL provides some great Powerpoint slides that cover everything on the exam, and they are easy to follow," said Klein. "We provide the slides, a computer and a projector. All the instructor has to provide is some enthusiasm for the subject and a few hours of prep time."

## Tailgate Swapfest 3M Sun Sale

by Dale Maroushek, NØPEY

These June 1st events are over, so I guess this is a review, they are past news. I did not have a chance to attend the Tailgate but I talked to many buyers and sellers that came up to join us at the Sun Sale. The weather cooperated and we had a good morning to make money for the Mining Club.

With the addition of a mini donut machine, which produced 149 bags of the delightful nibblers, the food sales doubled! Joel picked it up at an Auction for \$36. He is planning to bring it out to Field Day for us, if possible. Our dual membership folks, Ed and Linda, Leon, Skip, Tim, Ron, Dale and others, help maintain this intracub relationship that benefits both. Special thanks to Joe Clysdale for joining the fun—he scored some plants. I found a new pair of shoes—Dr. Scholl's and a perfect fit!

This is our third year handling this event; we have a good plan and repeat staff, so it flows nicely. If you are interested in joining the Mining Radio Club, for the small cost of \$8 a year, look for information at the Field Day table or at the June 18<sup>th</sup> FD planning meeting at the Mining ARC trailer at 6:00 p.m.

## Choosing an Antenna Analyzer

By Dan Romanchik, KB6NU

A reader recently e-mailed me stumped by antenna analyzer choices. In order of increasing purchase price this is what hee turned up:

- \* Autek RF-1 - \$139.95
- \* Autek RF-5 - \$229.95
- \* Rig Expert AA-54 - \$340.00
- \* Palstar ZM-30 \$399.99
- \* W4RT Electronics MiniVNA \$399.99
- \* Rig Expert AA-230PRO \$690.00
- \* Timewave Tech. TZ-900S \$899.99

Other than asking a fellow ham, how does one find out which one is the best antenna analyzer without paying an arm and a leg?

I noted that he had actually missed several other good choices:

- \* Autek VA1 - \$199.
- \* MFJ 259B - \$240.
- \* YouKits FG-01 - \$250.
- \* Comet CAA500 - \$450.

The Autek VA1 is actually the antenna analyzer that I first purchased. The MFJ 259B is arguably the most popular antenna analyzer on the market. MFJ has several other models with different feature sets. The YouKits FG-01 is a very cute, little analyzer with a small graphical display. It is made in China and sold in the U.S. by TenTec.

So, how do you choose just one from this list? Well, I think the first thing that you have to ask yourself is how you're going to use the analyzer. If all you're going to do is to check the SWR of your HF dipoles, then buy the Autek RF-1. It's the least expensive unit, is reasonably accurate, and is small and lightweight, making it easy to use outside where your antennas are located.

If you want to do some more serious frequency analysis, then you should be looking at the W4RT miniVNA or, if you have more cash, the Timewave TZ-900s. These instruments can help you do a lot more in-depth analysis of your antenna system. The software for the miniVNA, for example, will easily plot the SWR of a multi-band vertical antenna from 3 - 33 MHz.

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## Membership Meeting May 3, 2013

A meeting of the St. Paul Radio Club membership was called to order on May 3, 2013, at 7:31 PM by President George Power, KØGCP.

Signed in on Members sheet: 30  
Signed in on Guests sheet: 0

Secretary's Report: (Jeff Iverson, WB9DAN) The minutes were approved as printed in the *Ground Wave*.

Treasurer's Report: (Allan Klein, WØNLY) All funds are solvent. Members may request details from Allan. Still need to pay banquet expenses, field day expenses, and class expenses.

### Committee Reports:

**Education** (Allan Klein, WØNLY) Planning on having a Tech class next Fall and a General class next Spring through the St. Paul Community Ed. System.

Membership (Dale Maroushek, NØPEY) We have 98 members on record.

Circuit Builders (Orcy Lyle, WØQT) The lab will not be open tomorrow. VE exams are scheduled.

Website (Tom Bredemus, KCØINP) Now has pictures from banquet.

Old Business:

Everyone enjoyed the banquet.

Ralph will be going to Dayton and will pick up Field Day gear – get orders to him.

Field Day with Mining. June 22-23 Ed Jacobson is chair of the event.

Most committee chairs are covered – still need SSB chair.

We did have a table at Mid-Winter Madness thanks to Allan, WØNLY.

New Business:

Arrowhead (Duluth/Superior) hamfest is May 4; Twinslan Tailgate hamfest/Everything under the Sun Sale is June 1; Magic Yard Sale is July 13.

The business meeting was adjourned

at 7:57 PM.

The program was Jeff Iverson on the "History of Receivers."

Respectfully submitted,  
Jeffrey A. Iverson, WB9DAN, Secretary

## Board Meeting May 10, 2013

A meeting of the St. Paul Radio Club Board of Directors was called to order on May 10, 2013, at 7:01 PM by President George Power.

### BOARD MEMBERS PRESENT:

George Power, KØGCP, President  
Joe Clysdale, KDØJCC, Vice-President  
Dale Maroushek, NØPEY, Past President

Jeff Iverson, WB9DAN, Secretary  
Jay Maher, At-large Board Member  
John Faughn, KDØCAC, At-large Board Member

### COMMITTEE CHAIRS AND OTHER INTERESTED MEMBERS PRESENT:

Orcy Lyle, WØQT

Field Day preparations – final planning meeting is with Mining Club at Tartan Park on 6/18. Field Day is June 21, 22, 23

Volunteer replacement – We need Repeater Committee chair and Club Historian. Outgoing Repeater Chair, Joe Zwirn, WØXL, recommends we upgrade to a Kenwood or Icom repeater.

Summer events – maybe a Fox hunt? Orcy will consult; George and Jay are perhaps willing to chair an event.

St. Thomas calendar for 2013-2014 looks good – no holiday conflicts with our preferred meeting dates. We just need to get on the schedule. We will try to get the room down the hall we used one time last year that was a little more comfortable.

Education – Allan is thinking of a Technician License class for Fall/General

for Spring. Offering through the St. Paul Community Ed. worked well.

Program ideas for future – Jay

Membership report – Dale – We have 99 members on the books – renewals start again in September.

Newsletter – Ground wave deadline for next issue is June 7.

We will need to elect two at-large Board members next November.

The next Board meeting will be August 9.

The meeting was adjourned at 7:48 PM.

Respectfully submitted,  
Jeffrey A. Iverson, WB9DAN, Secretary

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Next, you need to consider what bands you'll be using it on. Many antenna analyzers only cover the HF bands. That's a bummer if you like operating 6m, or like to experiment with VHF/UHF antennas. A friend of mine bought the Palstar antenna analyzer after talking to the company at Dayton. At the time, they said that they were planning to come out with a model that covered 6m, as well as the HF bands. Unfortunately, they never did come out with a 6m version, and he was sorely disappointed.

Asking your fellow hams about the antenna analyzers they have is actually a good way to figure out what's best for you. If you ask nicely, they might even let you borrow their analyzers or come over and show you how it works on your antennas.

The March 2012 QST contains an in-depth review of four analyzers (available online to ARRL members), including the Comet CAA-500, MFJ-266, RigExpert AA-54, and the Youkits FG-01. Each analyzer reviewed had various plusses and minuses. Even if the unit you are considering was not reviewed, the article provides a guide to the kinds of questions you should be asking as you go through the selection process.



St. Paul Radio Club, Inc.  
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## ADDRESS CORRECTION REQUESTED

Meeting locations at UST are subject to change due to changes on The University of St Thomas campus.

Sat June 15	9AM SPRC breakfast. Midway Perkins on University Ave east of Snelling.
Sat June 15	After Breakfast. Circuit Builders. OSS 415 UST Campus*
Tues June 18	7 PM Field Day Planning meeting with Mining Club at Tartan Park
June 22-23	Field Day 2013, Tartan Park
Sat June 22	6 PM SPRC Field Day Picnic, Tartan Park
Sat June 29	9AM Circuit Builders. OSS 415 UST Campus*
Sat July 6	9AM Circuit Builders. OSS 415 UST Campus*
Sat July 13	8-11AM 10 <sup>th</sup> Annual Magic Repeater Yard Sale. 37 W. Hatch Ave, St. Paul, MN
Sat July 20	9AM SPRC breakfast. Midway Perkins on University Ave east of Snelling.
Sat July 20	After Breakfast. Circuit Builders. OSS 415 UST Campus*
Sat July 20	8-Noon Chippewa Valley ARC Tail Gate Swap Fest. Eagles Club Parking Lot, Village of Lake Hallie, WI.
Sat July 27	9AM Circuit Builders. OSS 415 UST Campus*
Sat Aug 3	9AM Circuit Builders. OSS 415 UST Campus*
Fri Aug 9	7PM SPRC Board meeting, OSS 121 UST campus (Alternate location is OSS 415)
Sat Aug 10	9AM Circuit Builders. OSS 415 UST Campus*
Sat Aug 17	9AM SPRC breakfast. Midway Perkins on University Ave east of Snelling.
Sat Aug 17	After Breakfast. Circuit Builders. OSS 415 UST Campus*
Sat Aug 24	9AM Circuit Builders. OSS 415 UST Campus*

\*Circuit Builders is each Saturday morning if someone is available to open the lab and there is no conflicting activity. Check the SPRCCB Google Group to confirm that the lab will be open.