

SARA NEWS

**SCHENECTADY AMATEUR
RADIO ASSOCIATION, INC.**

**"SERVICE THROUGH
AMATEUR RADIO"**

FOUNDED 1930

K2AE REPEATERS

<http://www.k2ae.org/>

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May, 2012

General Meeting, May 7th, 2012 at 7 PM, Niskayuna High School Little Theatre

Confederate States Army Signal Corps

with Ray Wemple, KA2DVM

The May meeting will feature a program by Retired Police Sgt. Ray Wemple. KA2DVM, who will give a presentation on The Confederate States Army Signal Corps and Secret Service.

The SARA meeting will be held Monday, May 7th, 2012 at 7 PM in the Little Theatre of the Niskayuna High School on Balltown Road. Attendees should enter the school through the cafeteria entrance located on the side of the school, adjacent to the Nott Street Extension school parking lot.

Get Well Soon Dan

The Board and the membership of the Schenectady Amateur Radio Association is sending warmest Get Well wishes to our Secretary, Dan Fiorillo, KC2MER, who is recovering from a major operation. Get well soon, Dan!

Check out the website!

Keep up to date with the club at www.k2ae.org

From the Editor

Antje, N2OMA

A note from your editor: I will have the pleasure of attending this meeting and look forward to the presentation by Sgt. Wemple. Please come and talk to me if you have ideas about monthly features or would like to be involved in the process of putting together this newsletter.

Public Service

Ken, AA2CW

Crop Walk meeting at the Emmanuel Friedens Church on Nott Ter. Street in Schenectady around Noon on May 6, 2012.

Niskaday meeting 7:30 AM on May 19, 2012 at the Union Street Schenectady McDonalds.

Scotia Parade meeting 5:30 PM on May 23, 2012 at the Dunkin' Donuts in Scotia.

Please contact Ken Clikeman AA2CW at 861-6825 or email AA2CW2010@yahoo.com to sign up for these events.



Board Meeting

SARA Board Meeting, April 11th 2012

Attendees:

President, Hal Post, AK2E
 Vice President James Stewart, K2PK
 Secretary, Dan Fiorillo, KC2MER
 Board - Craig Wood, W2XAD,
 Ken Day, K2DAY, Frank Simon, WB2PUH
 Guests Dan Miller, President SMARA, KC2VEX
 James MacMurray, Secretary SMARA, N2UZQ,
 April MacMurray, VP SMARA KC2VWWW
 Dave Galletly, KM2O, John Fritze, K2QI

Called to order at 7:07 PM by President Post

Secretary's Report: given by Fiorillo accepted as published

Treasurer's Report: No report

Repeater: No action this month

Programs: VP Stewart continues to arrange and schedule programs for the monthly meetings. The May meeting will be presented by Retired Police Sgt. Ray Wemple. KA2DVM who will give a presentation on The Confederate States Army Signal Corps and Secret Service.

Old Business:

Field Day: SARA has been approved for the use of Niskayuna Sports site on Aqueduct Road.

SMARA representatives discussed the combined Field Day operation and how their membership is looking at the possibility of working together at the Aqueduct Road site. If there is agreement, details on particulars will need to be worked out to satisfy both clubs.

Old Generator: No action this month

Election Committee: The Election Committee has established a slate for the June Elections. Includes:

Jim Stewart, Pres, K2PK Craig Wood, VP, W2XAD
 Tim Long, Treasurer, W2UI Dan Fiorillo, Sec, KC2MER
 Board Members: Ken Day, K2DAY Hal Post, AK2E
 Frank Simon, WB2PUH Al Kozakiewicz, AB2ZY

Broughton Award: The Broughton Award Committee is looking for nominations for the annual Broughton Award.

Any member may nominate an individual. **Nominations must be into a Board member by the May SARA Meeting**

Training: Craig Wood will be conducting the license training over the repeater system. He could use some people to assist with this project.

New Business:

SARA has submitted sponsorship for the ARRL WW DX Contest, Plaque is for the Multi, Multi Winning Team. SARA W2PV Memorial Plaque.

Dave Galletly, KM2O and John Fritze, K2QI attended the Board meeting Making a pitch for a County Emergency Coordinator (EC). The coordinator would assist in planning frequency usage during a disaster involving local regions. Dave and John are in the Eastern New York Section, Hudson Division Dave is the Section Emergency Coordinator, John is the District Coordinator.

Meeting was adjourned at 8:05PM

Submitted by Secretary Dan Fiorillo, KC2MER
 Board meetings are open to SARA members. Board meetings are held on the 2nd Wed. of each month at LT's

The Treasurer Speaks

Tim, W2UI

Hello All, K2AE is now located on the ARRL's Field Day Locator Map. Check it out and find out where we're going to be! Yipee...

P.S. Dues cheerfully accepted!

EGARA Hamfest 5/12/12

Please join the East Greenbush Amateur Radio Association for this great hamfest. It's at the East Greenbush Fire Department, 68 Philips Road, Rennselaer NY 12144. For more information check out their website at

<http://www.w2egb.org>

Or contact Tom, KC2FCP kc2fcp@nycap.rr.com



The Missing Word

Bob Raffaele, W2XM

April's SARA News carried an article ("Basic Antenna Design" by Dan Reynolds, AA0NI) which emphasized the importance of "resonance" when establishing the length of an antenna. I do not disagree with Dan about this. However, having a resonant antenna on every band could require an expensive and troublesome installation.

Design becomes simpler if one realizes that the ANTENNA (I mean the radiating element) itself need not be resonant. The author omitted a word; it is the antenna SYSTEM that must be resonant. AA0NI describes resonance accurately as the antenna's length being the appropriate fraction of a wavelength, but that's only one way of achieving this desired condition. A dipole that is 1.25 wavelengths long (instead of 0.5 wavelength) can be part of a resonant antenna system by using an antenna tuner (aka a "Transmatch").

An antenna tuner does not change the electrical length of that radiating element at the far end of the transmission line; nor does it change the characteristic impedance of the feed line. Installed and tuned properly, an antenna tuner allows the transmitter to see a 50-ohm load while interfacing to the near end of the feed line. Amateur transmitters are designed to deliver power into a 50-ohm load.

The antenna tuner does not change the match between the feed line and the radiating element. There may be a mismatch at this point and a high SWR may exist on the feeders. This is unacceptable if coax with a solid or foam dielectric is used, because the dielectric material absorbs RF energy when there is a high SWR. However, the high SWR IS acceptable when low-loss (typically 400-ohm nominal) open-wire feeder is used.

The impedance at the transmitter end of open-wire feeders leading to a dipole is usually unknown. Except in the rarest of cases, impedance is different at different places along the length of a feed line, even though that coax may be clearly marked "50 ohms." For this reason, a tunable impedance-matching device (called an "antenna tuner"

or "Transmatch") is used.

A transmitter is connected to an SWR meter, which is connected to the antenna tuner, which is connected to the low-loss open-wire feed line, which is terminated by the radiating element, a dipole, whose length is NOT critical (it should be APPROXIMATELY a half-wavelength or longer). An SWR reading of 1:1 assures you that the antenna system is resonant; all matching has been done correctly.

The SWR meter says 1:1, which tells you that there is no power getting back to the transmitter. The SWR on the open-wire feed line is likely quite high, but that's fine because the open wire has no dielectric that will turn RF into heat; ignore the tiny effect of the plastic spacers.

What happens when the RF hits the dipole? Some is absorbed and radiated, and some gets reflected back to the tuner, where it is reflected back toward the antenna, where part of it is absorbed and radiated, and part of it goes back to the tuner, where it is reflected back to the antenna and, except for what's lost as heat, all RF energy leaving the tuner gets radiated within about a millionth of a second (after bouncing back and forth on the feed line). [How about RF going back through the tuner and on to the transmitter? That is "phased out."] 'Remember I mentioned that 1.25-wavelength dipole (which, by itself, is NOT resonant)? Used with a tuner and open-wire feeders, that antenna will have gain over a half-wave dipole! This is because it has a more directive radiated pattern. This is the same reason why a 5/8-wavelength whip has gain over a 1/4-wavelength whip; in the case of your mobile antenna, high-angle radiation is sacrificed for the sake of low-angle radiation. That coil at the base of the 5/8-wavelength antenna is a VHF version of an antenna tuner.

Questions, comments, criticism? All appreciated. Oh... here's something...after proofreading my work, K2PK writes that he has used a tuner with coaxial cable quite successfully. I have no argument; perhaps I was too harsh using the word "unacceptable." Jim's radiated power was less than it could have been, but a low-power signal can certainly circle the globe.



cut along dotted lines & tape to front of refrigerator

FIELD DAY 2012

Schenectady Amateur Radio Association

June 23rd and June 24th

SAVE THE DATE

Cut along dotted lines & tape to front of refrigerator

This year there will be changes. Who isn't tired of mud up to your axles, or your knees, or both? SARA will be conducting Field Day this year from the Niskayuna Sports Complex off Aqueduct Road in Niskayuna. Some of you will remember that this site is the former Union College Gerling Center. A few of you will remember that this site is the former Locomotive Club and the location of many SARA Field Days (the garage is still there). We will be using their large pavilion, picnic tables, bathrooms, kitchen, charcoal grill, large athletic fields, trees, and paved parking areas. No more porta-potti rental! The antenna layout is up in the air (pun intended). The operating tent has to remain somewhat centralized so the available coax will reach. The available trees may allow something a bit unusual. The crank-up tower and triband beam will be there in the mix. C100 will have a close home on the pavement. The new site is close to our storage location, an added benefit, and has a nice view across the river overlooking the Schenectady Airport.

As always, setup will begin on Friday, June 22nd at 2:00PM. Many hands will be needed to make the work easier. Setup will continue the following Saturday AM to finish what we couldn't complete on Friday. We'll be ready for our first contact at 2:00PM on Saturday, June 23rd. On the air operations will continue for 24 hours until 2:00PM on Sunday, June 24th. Teardown will start promptly at 2:01PM. Many hands will make this chore easier and rapid. We will have a Get-On-The-Air station staffed with seasoned experts to help the newbie and rusty oldie.

We tried! Representatives of SARA and SMARA discussed details at length regarding combining resources, and submitting a combined score. Fears and a few issues could not be overcome. We would have had more fun. Perhaps next year.

So there you have it folks. Those are the plans. Stay tuned for further details.

73, Tim, W2UI

Board Of Directors

Pres: Hal Post AK2E ak2e@arrl.net 306-6817
 VP: James Stewart K2PK k2pk@arrl.net 399-1867
 Sec: Dan Fiorillo KC2MER fiorillo.dan@verizon.net 356-3595
 Treas: Tim Long, W2UI, tlong1@earthlink.net 399-7454

Directors

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 Craig Wood, W2XAD, w2xad@nycap.rr.com, 370-5224
 Frank Simon, WB2PUH, simonf072@strose.edu, 477-5255
 Ken Day, K2DAY k2day@nycap.rr.com, 858-2056

Standing Committees

SARA News: Antje Dirksen-Post N2OMA,
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 Elmer: Tim Long, W2UI, tlong8@nycap.rr.com, 399-7454
 Antenna Party: Tim Long, tlong8@nycap.rr.com, 399-7454
 K2AE Trustee: Hal Post AK2E ak2e@arrl.net 381-6817
 Rprtr: Scott Krone N2YCA n2yca@nycap.rr.com 273-1610
 RFI/TVI: Rudy Dehn W2JVF w2jvf@juno.com 372-6139
 Public Service Events: Ken Clikeman AA2CW
AA2CW2010@yahoo.com 861-6825
 VE Team: Bill Mischler KG2AC kg2ac@juno.com 982-0144

FCC Exam Registration (518) 982-0144



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Schenectady Amateur Radio Association, Inc.

MEMBERSHIP
APPLICATION/RENEWAL FORM

Regular Dues	\$20.00	\$ _____
Spouse	\$5.00	\$ _____
Student	\$5.00	\$ _____
Repeater Donation		\$ _____
Initiation Fee	\$5.00*	\$ _____
Name _____		Call _____
E-mail _____		
Street _____		
City _____	State _____	Zip _____
Phone _____		
ARRL _____	RACES _____	ARES _____ MARS _____

Send to SARA, PO Box 449, Schenectady, NY 12301
 July, 2010 through June, 2012

SARA/K2AE Repeaters

Status	ON AIR	ON AIR	OFF AIR	ON AIR
Band	6-Meters	2-Meters	1.25-Meters	70-Centimeters
User TX	52.570 MHz	147.660 MHz	222.460 MHz	449.200 MHz
User RX	53.570 MHz	147.060 MHz	224.060 MHz	444.200 MHz

Schenectady County Emergency Net

Band	Repeater	Time	NCS
70cm	444.200Mhz+	1:00 PM	Raleigh K2RI
2m	147.060Mhz+	1:30 PM	Raleigh K2RI
75m	3953KHz	2:00 PM	TBA

Schenectady County Emergency Net

SARA members act as Net Control Stations for the Schenectady County Emergency Net (SCEN) on Sunday afternoons. The nets are open to all amateurs; ARES RACES membership is not required to participate. The purpose of the nets is to train, pass any traffic that you might have and any announcements of general interest.