



# QSP



**November 2011**

**QSP On-Line at: <http://www.centalksarc.com/qsppage.htm>**

The November Meeting  
is  
Friday, Nov. 18, 2011  
@ 7:30 PM, at KWU  
Peters Science Hall  
Room 211

## November VE Report

**For the November 9th Session:**

We had NO Candidates, for the first time in quite a while!

**Host: Open**

**Program: Mark,  
KBØMQX**

Next Exam session is:  
**Wednesday December 14th, 2011, at 7:00 PM,** at the Saline  
County Sheriff's Office Classroom.

**Inside this issue:**

VE Report	1
Election Results	1
Sept. Meeting Minutes	2
Reminders	3
So You Want to Work DX?	4
HF Antenna Installation Hints	5—7
Contest Calendar for December	8
Birthday List	Back Page

Sid NØOBM VE Team Leader

## CKARC Election Results

Elections were held at the October CKARC Meeting.

2012 Slate of Officers:

President	Paul Collins,	KS1P
Vice President	John Burchill,	KCØJNK
Secretary	Alvin Wiechman,	WØME
Treasurer	Mitch Johannes,	KAØIFW

## Minutes of the October Meeting

The Meeting was called to order by Leon, WAØJFC at 7:30 PM with the Pledge of Allegiance, followed by a round of introductions with 18 members and guests present.

The Minutes were accepted as printed in QSP.

Treasurer's report by Mitch, KAØIFW: Checking account, is at \$1344.99 and the Savings account is at \$1048.64 for a total of \$2393.63.

The club received the WØERH news letter.

VE report by Sid, NØOBM: For the Oct session there were 3 candidates and all passed something. 1 New Tech, 1 Upgrade to General and 1 Upgrade to Extra

City of Salina Siren Test Net Nov 7th if Weather cooperates, the ARES meeting is Nov. 17<sup>th</sup> at 8:00 PM in the Emergency Management Office.

The November Club meeting will be on 18th this Month, the Friday BEFORE Thanksgiving, Not the Day After!

Stormspotter class for Saline County will be on Feb. 22<sup>nd</sup>, 2012 at the 4H Bldg. at 6:30 PM.

Repeater report Mark said both are working.

No old business

New business: Web Site bill \$72.75 coming due some time in Nov. and Sid needs a check.

Election Night Results for the Officers of the CKARC for 2012:

President Paul	KS1P
VP Pres. John	KCØJNK
Sec. Alvin	WØME
Tres. Mitch	KAØIFW

The December meeting will be on the 22nd of December at the Western Sizzlin Steak House on West Crawford at 6:30 PM and will include the installation of officers for 2012.

Thanks to hosts KØRY and Helen for cookies and drink.

Meeting adjourned 8:56 PM.

WØME

## Reminders

**City of Salina Siren Test Net, December 5th at 4:30 PM if the Weather cooperates!**

**ARRL-VEC Test Session** on Wednesday **December 14th at 7:00 PM.**

**Board meeting** follows the exam session on **December 14th** at 8:00 PM (or after Testing—which ever is later) in the Saline Co. Sheriff's Office Classroom.

**ARES Meeting** is **December 15th** at **8:00 PM** in **Emergency Management.**

**CKARC Meeting** is **December 22nd** at 6:30 PM at Western Sizzlin Steak House (on West Crawford)

There is a full **Calendar of Events** on the CKARC Web site <http://www.centalksarc.com>

## So You Want To Work DX?

Lou Giovannetti (KB2DHG) on November 12, 2011

There was a grand opening on 10 meters this weekend and I was fortunate to log several new countries. I have been into this hobby for over 25 years and to this day I still read all about antennas, amps and rigs to help get the very best performance out of your station. It occurred to me that very little is discussed about MUF (Maximum Usable Frequency) So Lets talk about MUF...Honestly I concur that the antenna is the most important part of any radio station. A good antenna with 5 watts works better than a bad antenna with 1000 watts. I think we can all agree on this?

How many of you use MUF to really find out what frequency is best to use at the time you are operating?

I found that by reading these forecast and putting them to use I am able to make many DX QSO's and even state side solid contacts. If you can learn how to use the MUF forecast and apply them to your operating, you would be amazed how easy DX chasing can be...A search on the below site can yield you a wealth of information.

[http://www.weather.nps.navy.mil/~psguest/EMEO\\_online/module3/module\\_3\\_2b.html](http://www.weather.nps.navy.mil/~psguest/EMEO_online/module3/module_3_2b.html)

We've seen HF frequencies make use of the skywave mode that allows long distance transmissions. The specific frequency to use depends on ionospheric conditions, which are constantly changing. Choosing the best frequency to use for a given situation is not a trivial task. Most HF radio operators have a general idea how frequencies change as a function of the time of day, and they know that sometimes there are problems. But many of them don't understand the nature of the required frequency changes and the problems that sometimes occur.

This web page will describe how you can make the best choice for frequency. This requires the use of computer models that can be run locally or from model and observed data available on the Internet. In order to use these models and Internet sources, you need to know something about how the ionosphere affects HF radiation. You also need to understand the terminology that is used by the models and sources providing information on HF communications.

I am not going into all the details necessary to teach you how to use MUF, Just search the web and read and apply the information to get the most out of what band is the most active and you will soon be logging DX stations more than ever before.

*Borrowed from eHam.net*

## HF Antenna Installation Hints

from Don, W8AD on October 22, 2011

"Editor's Note: Due to the popularity of some of eHam's older articles, many of which you may not have read, the eHam.net team has decided to rerun some of the best articles that we have received since eHam's inception. These articles will be reprinted to add to the quality of eHam's content and in a show of appreciation to the authors of these articles." This article was originally published on: 11/12/2006

This article is for those who are new (and not so new) to HF and need good HF wire antenna installation information, for best performance and lowest SWR across the HF bands.  
Problem Solvers for Wire Antenna Installations

Of the many questions we get concerning HF wire dipoles and slopers, many deal with the same common issues of antenna installations and performance problems. Indeed, many of the problems turn out not to be problems at all when we are provided with additional information about the situation, SWR "runs" across each band and the installation "site" itself. Additional information from the customer provides useful clues in helping to solve the problems.

The questions we get seem to follow a fairly consistent pattern from those new (and not so new) to HF. Proper installation and operation of VHF/UHF antennas can be VERY different from proper HF antenna installation and that's where the "rub" can come in for those new to HF.

Due to the wavelengths of the VHF/UHF bands, coupling to surrounding objects is usually minimized by placing these antennas only a few feet or so from things in the close-in environment (roof tops, attics, gutters, other antenna, etc.). Now, here's where things greatly change when installing HF wire antennas.

The wavelengths of the HF bands are MUCH longer than those of the VHF/UHF bands, and coupling (and therefore antenna de-tuning) to surrounding objects can and does occur when HF antennas are placed close to surrounding objects that would not have affected VHF/UHF antennas. As an example, consider a 40 meter dipole (about 66 ft. Long) installed close to aluminum gutters (40-80 ft. long) along the side of your house and you'll see what we mean. Or consider this same dipole placed close to a roof top and within a few feet of attic wiring and HVAC ducting which can be "part" of the wavelength on HF. Installation SITE factors, therefore, are where most of the problems seem to lie with HF antennas, compared to VHF/UHF antennas, unless proper installation guidelines are followed.

Using fundamental antenna theory, and installation experience we have gained over many, many years of dealing with HF antennas may provide the answers you are seeking. No engineering formulas and complex theory here, just practical information gained from customers themselves, in addition to our own test results and operator knowledge as hams.

You're looking for the "how, why and what to do"! Some of the following points will be very basic for some of you, but in talking to many hams of all levels of experience, we hope you will find these points and suggestions useful and time saving.

A. Slopers (quarter wave) have a unique set of installation requirements compared to the typical half wave dipole. Basically, they require operation on a support/tower (35 feet or higher) with an HF size beam on top to act as a "capacity hat", sort of like an upside down vertical where the beam elements are like the radials of a ground mounted vertical. Also, there needs to be a good ground return path down the tower, and the sloper needs to be "in the clear".

Metal guy wires that are not "broken-up" with insulators, and other wire antennas on or near the tower can cause serious problems (SWR and tuning). SWRs are most likely going to be a problem if these precautions are not considered. Sometimes, an external wide range tuner can help. It has been written that it's a lucky thing for a sloper to work correctly at all, since the support tower, guy wires and other attached antennas are a part of the sloper circuit. And, that can be true. However, with proper installation, a quarter wave sloper can be a very effective low band 160/80 meter DX antenna for those with limited space and lower height capabilities. We have many reports of multiple DXCC awards on these bands with quarter wave slopers.

B. Dipoles are a relatively simple design and usually easy to install and tune with good SWR, but they too require some thought for proper operation. Dipoles operating on 20 through 10 meters should be at 30 feet, or more, in the air. Dipoles operating on 160/80/40 meters should be at least 40 feet in the air for good SWR and at least average performance. Of course, there are exceptions to these numbers based on the customer "site". Higher heights on the low bands significantly improve performance. We have many customer reports of good operation at lower heights, but that depends on how high the "site" is electrically above ground at what's under the antenna. We can't predict that. Even at decent heights, both slopers and dipoles need to be in a clear "site", electrically uncluttered. See "Location" below.

C. Site Location. These antennas need to be as far as possible from any surrounding metal objects. Our tests, and those of customers, show that any antenna wire should be at least 15-20 feet from gutters and metal house siding or fascia. Metal guy wires should be "broken-up" with insulators at non-resonant lengths. Odd as it may seem, attics have a certain capacity characteristic (attic wiring and HVAC ducting) and antenna wires should be no closer than 10-15 feet from any roof top, even if it's a nonconductive roof material. Antenna wires should be at least 20 feet from other similar frequency HF antennas, even verticals.

Power lines must be avoided at all costs, and any antenna that may fall as a result of a storm or support failure must be positioned to NEVER fall across a power line. To reduce power line noise pick up, the antenna must be as far as possible from a line run. 30 feet, or more, is preferable.

A low frequency dipole (80/40 meters) can be put up to within 10 feet or so under a higher frequency (20/15/10 meters) beam with little if any problems. In an inverted-V configuration, the end of the wires should be about 8-10 feet, or higher, from the ground. The center feed point of an inverted-V should be offset from a metal support or tower leg by about 18 inches, on a nonconductive arm, to minimize coupling and thus higher minimum SWR. It is also IMPORTANT to note that antenna wires should not touch, or come closer than about 4-6 feet from any tree branch/limb or leaves. This may not be readily known but they can really upset resonant frequency or SWR.

If a dipole is fed with balanced line, the balanced line itself should be at least 6 feet from any metal objects, throughout the length of its run. It should never touch any metal, like window or door frames, as it enters the property. Of course there are exceptions, but this is generally the

case. Close coupling of any metal to balanced line can significantly upset the system. Also, balanced line running down along side a metal tower leg or mast can cause serious coupling problems. If the balanced line is feeding a tower mounted dipole, it should come away from the tower at about a 45 degree angle and not near any guy wires or other wire antennas.

D. Attic installations. We have many successful customer reports of attic installations. HOWEVER--and this is a BIGGIE! Attic installations and performances (SWR) are unpredictable due to the fact that HF antennas in attics can be upset by attic wiring and heat/air ducting being nearby. Also, metal gutters and roof/wall material can be a factor. The height above ground (single story, multistory) is also an important consideration as with any "site" conditions. Depending upon your residence, RFI coupling into stereos, TVs, burglar alarms and even garage door openers can also be a problem, particularly with high power. Due to the coupling effect of attic installations, an external wide range tuner is usually required for proper SWR tuning and operation.

These ideas are passed along to answer some of the questions we get concerning HF wire antenna installations. It is not meant to get into antenna theory and design as there are volumes and volumes of antenna books available from a variety of sources. However, it is interesting to note that in all those volumes, there is very little about antenna installation "site" information. There is information about antenna height Vs angle of radiation and patterns, but that's about it. It's probably because all the theory assumes antennas that are theoretically "in the clear" and in free space (called isotropic). The problem is, that's usually not too practical!

(There is NO commercial content here. These thoughts apply to ANYONE's HF wire antennas (good info for beams too). Pick whichever one is best for you.)

Welcome to HF, and have fun!

Don, W8AD, Alpha Delta Communications, inc.

*Borrowed from eHam.net*

## November 2011 Contest Calendar

### From the WA7BNM Contest Calendar

<http://www.hornucopia.com/contestcal/index.html>

QRP ARCI Topband Sprint	0000Z-0600Z, Dec 1
ARRL 160-Meter Contest	2200Z, Dec 2 to 1600Z, Dec 4
TARA <b>RTTY</b> Melee	0000Z-2400Z, Dec 3
Wake-Up! QRP Sprint	0600Z-0629Z, Dec 3 and 0630Z-0659Z, Dec 3 and 0700Z-0729Z, Dec 3 and 0730Z-0800Z, Dec 3
TOPS Activity Contest	1600Z, Dec 3 to 1559Z, Dec 4
AWA Bruce Kelley Memorial <b>CW</b> Contest	2300Z, Dec 3 to 2300Z, Dec 4 and 2300Z, Dec 10 to 2300Z, Dec 11
ARS Spartan Sprint	0200Z-0400Z, Dec 6
NCCC Sprint Ladder	0230Z-0300Z, Dec 9
ARRL 10-Meter Contest	0000Z, Dec 10 to 2359Z, Dec 11
CWops Mini-CWT Test	1300Z-1400Z, Dec 10 and 1900Z-2000Z, Dec 10 and 0300Z-0400Z, Dec 11
SKCC Weekend Sprint	0000Z-2400Z, Dec 11
NAQCC Straight Key/Bug Sprint	0130Z-0330Z, Dec 14
CWops Mini-CWT Test	1300Z-1400Z, Dec 14 and 1900Z-2000Z, Dec 14 and 0300Z-0400Z, Dec 15
NAQCC-EU Monthly Sprint	1800Z-2000Z, Dec 14
NCCC Sprint Ladder	0230Z-0300Z, Dec 16
AGB-Party Contest	2100Z-2400Z, Dec 16
RAC Winter Contest	0000Z-2359Z, Dec 17
<b>Feld Hell</b> Sprint	0000Z-2400Z, Dec 17
OK DX <b>RTTY</b> Contest	0000Z-2400Z, Dec 17
Lighthouse Christmas Lights QSO Party	0001Z, Dec 17 to 2359Z, Jan 1
Croatian <b>CW</b> Contest	1400Z, Dec 17 to 1400Z, Dec 18
Stew Perry Topband Challenge	1500Z, Dec 17 to 1500Z, Dec 18
ARRL Rookie Roundup, <b>CW</b>	1800Z-2359Z, Dec 18
QRP ARCI Holiday Spirits Homebrew Sprint	2000Z-2400Z, Dec 18
Run for the Bacon QRP Contest	0200Z-0400Z, Dec 19
DARC Christmas Contest	0830Z-1059Z, Dec 26
SKCC Sprint	0000Z-0200Z, Dec 28
CWops Mini-CWT Test	1300Z-1400Z, Dec 28 and 1900Z-2000Z, Dec 28 and 0300Z-0400Z, Dec 29
NAQCC Straight Key/Bug Sprint	0130Z-0330Z, Dec 29

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<http://www.centralksarc.com>

Your copy of QSP is Here!

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@ 7:30 PM, at KWU

**QSP On-Line at:**  
<http://www.centralksarc.com/qsppage.htm>

**SUBMISSION DEADLINE FOR THE DECEMBER QSP IS DEC. 14, 2011**

## **CKARC December Birthdays**

<b>NØKSC</b>	<b>Dirk</b>	<b>Speed</b>	<b>12/3</b>
<b>NØYET</b>	<b>Eric</b>	<b>Boyle</b>	<b>12/7</b>
<b>KBØMQX</b>	<b>Mark</b>	<b>Boyle</b>	<b>12/7</b>
<b>F/Member</b>	<b>Kelley</b>	<b>Bieberle</b>	<b>12/10</b>
<b>KØDIX</b>	<b>Fred</b>	<b>Gamer</b>	<b>12/29</b>