



KARS KEY CLICKS



JOURNAL OF THE KANKAKEE AREA RADIO SOCIETY

Volume 87 Issue 4

Editors: K9NR, K9QT
Photos: W9IE
Contributors: W9IE, W9KVR, NV9X

April 2012

April Program To Feature Bicycle Mobile

The [April meeting](#) will be April 3rd, 7PM at St. Mary's Hospital. The best access is the west side ground level doors south of the emergency entrance.

After a brief business meeting, Will K9FO will present a program on bicycle mobile operation. Don't miss out!

ONLINE QST

Two new ARRL membership benefits will be introduced in June. In addition to the print copy of QST, all members will have access to an online, digital edition of QST at no extra cost. You will be able to access QST from anywhere--on nearly any computer, laptop, mobile device, smart-phone and tablet (including Apple iPad, iPhone, and devices using the Android operating system).

Also in June, members will gain access to archived issues of QST from December 1915 to the present (previously, only issues through 2007 were available to members). If you are familiar with the current periodicals archive (which serves images of pages), that platform will be expanded to include all of QST from December 1915 through December 2011.

BOARD MEETING

We are [meeting on April 17th at El Cam-pesino](#). 6 P.M. eat. 7 P.M. meet. All members and their families are welcome.

HAPPY BIRTHDAY

April 4 KC9OQQ
April 5 K9CWF
April 11 WB9WEC
April 17 N9MBR
April 25 W9IE
April 25 K9OZY
April 26 K9CS
April 28 N9NAH

If we miss your birthday or get it wrong, please let us know!



Will K9FO looks on while Don K9NR checks out his HT on the KARS service monitor at the March meeting "tune-up" night

KARS KALENDAR

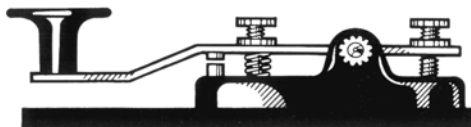
[April 3.....KARS General Meeting](#)
[April 15.....ARRL Rookie Roundup](#)
[April 17.....KARS Board Meeting](#)
[April 28.....Exam Session](#)
[May 1.....KARS General Meeting](#)
[May 5.....Indiana QSO Party](#)
[May 15.....KARS Board Meeting](#)
[May 18-20.....Dayton Hamvention](#)
[May 26-27.....CQWW WPX CW Contest](#)

The Kankakee Area Radio Society operates repeaters on:

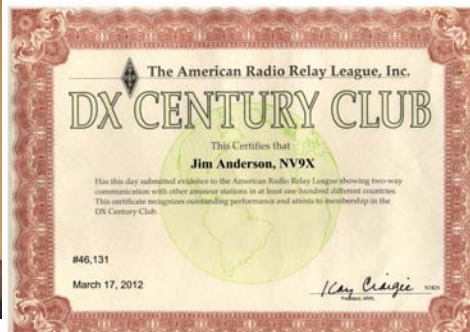
146.34/.94 107.2 PL Access
449.8/444.8 114.8 PL Access
145.130 107.2 PL Access

Additionally, KARS sponsors:

144.39 2 Wide Area APRS digi-peaters
145.53 KARS DX Cluster



W9AZ



KARS member Jim NV9X shows there is more to ham radio than ker-chunking repeaters. He bagged his [DXCC award](#)...issued March 17, 2012. If you are new to the hobby, the DXCC award is a highly coveted certificate issued for making confirmed contacts with at least 100 countries.

Jim is an active, well rounded operator who likes a bit of DXing, contesting and the occasional transmitter hunt.

Nice work Jim!

EXAM SESSION

An [exam session has been scheduled for 1PM Saturday, April 28th](#) at the QTH of Rollie N9RJM, 2595 E 1000 N Road, Kankakee.

Exams for all classes of license will be administered. Registration not required.

NCS FOR APRIL

The [net meets every Monday at 2100 hours local time](#). All stations with or without traffic are invited to check in.

April 2	N9LYE
April 9	N9FD
April 16	N9OE
April 23	N9RJM
April 30	N9FD

Don't forget the net!

Have you started your Dayton plans?

KARS HOMEPAGE—WWW.W9AZ.COM—KARS HOMEPAGE

REMOTE “VARACTOR TUNED” 160/80 METER LOOP RECEIVE ANTENNA

Ken Buser W9IE

I have made several attempts at building a Receive Loop for 160 meters. None have worked very well. The matching network has been a problem and I also determined that the ability to tune the loop was one of my downfalls.

This Loop Works on 160 and 80 meters and can be tuned from inside the shack. I can't take credit for the design but I did build it and made a few minor mods. The original article I found in the Sep/Oct 2009 National Contest Journal by Rick Karlquist, N6RK. Rick also will provide the Circuit boards for \$ 25.00. The special Amidon Ferrite core for \$ 3.00 Plus \$ 5.00 for shipping. All other parts are available thru Mouser on the Web and at Lowes or Menards.

Attached also are pictures of my construction along with links to Rick's original article. The boards are not necessary if you are good at your own perf board or other ways of circuit building. I built the Loop out of 20 feet of LMR 400 using PL259 connectors on the ends. The outer shield is removed for a length of 1/2 inch exactly in the center. The center section is then weather proofed using heat shrink.

The support is made from 3 sections of 1 " Gray Schedule 80 PVC 38 inches long. The 4th section should be made longer depending on how you want to support the Loop Frame or if you want to connect to a rotor. I placed PVC T's on each of 3 ends to run the Loop thru for support. The four PVC tubes are then connected with a PVC 4 way cross in the center. The Varactor controlled tuning box is at the bottom of the Loop and the Loop ends with the PL259's are connected to it.

The loop takes on the shape of a Square. I then later found out I could run 3/4 inch Black Portable water hose thru the loop ends and then run the LMR 400 with connectors on it thru the Hose.

This held the shape of a circle and looked great as you can see in my pictures. This is not really mandatory. Loop size is not critical as long as it is close to the design dimensions.

Here are some of my changes to Rick's article:

1. I used PL259's for all connectors rather than F fittings which he mounted to the circuit board. This worked great but did make my construction a little more difficult.
2. The Loop end shields are common in the tuning box but the coax out the bottom to the Receiver is NOT. In place of a connector that had to be insulated from the box I brought out a short length of RG8, an external connector and barrel on the end to then run the feed line to the receiver.
3. My mount to connect the box to the PVC is a little different also.
4. Inside the Shack I did not use his circuit board that provides for either an external 12 volt supply or 9 volt battery. I eliminated the voltage regulation and opted to just use the 9 volt battery which should last for many months. I then just mounted the parts in a small box and used a terminal strip and it was finished. I also added a 1000 ohm resistor and LED to indicate when it was turned on.
5. I built the High RF environment version using 8 varactors. The varactors are tuned with an adjustable bias voltage sent up the feed line from the control circuit in the shack.
6. As you can tell from the Pics I also mounted the Loop on a Rotor. I operated the ARRL 160 meter CW contest and used only the loop for receive. With my shunt fed tower or Inverted L the noise floor ran around S9 +. Using the Loop it was an S2. Signals were easy to copy and without all the noise to listen to. This is what Signal to Noise Ratio is all about.
7. My frame size is somewhat smaller than Ricks because of the Circle construction. The diameter of a 20 foot circle is smaller than the square he used.

Look at the pictures and read Ricks article (3 or 4 times) it takes a few readings to digest it all. The boards are set up for other modifications like fixed capacitance or varactor tuning. There is also a wealth of information on Receive Loops and design considerations in the article and on Rick's

web site. Rick also provides a parts list with Mouser part numbers, etc.

Then Start Building...If anyone takes on the project and needs help, give me a call. I'll be happy to share what I can or what I have learned.

Ken W9IE

Links for Ricks Article,

www.n6rk.com

www.n6rk.com/loopantennas/NCJ_loop_antenna_N6RK.pdf

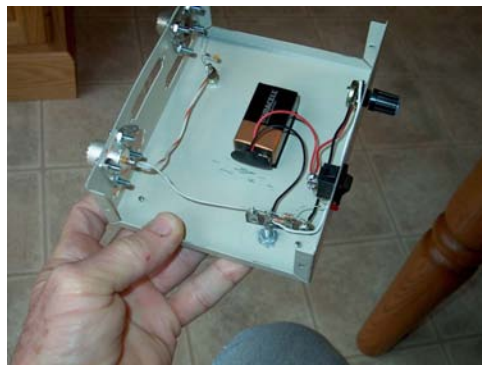
www.n6rk.com/forsale/pcbboards/loop_antenna.html



Loop antenna in place. Note that the antenna is mounted in a rotor at the bottom and is not hanging from the tree bough



Inside view of the varactor tuning box showing neat layout and straight-forward construction



View of the in-shack control box for remote tuning the loop antenna. The box is a “re-cycled” parallel/serial computer type switch box.

KARS HOMEPAGE— WWW.W9AZ.COM —KARS HOMEPAGE

KUDOS TO THE W9GRS OPERATORS!

The [2011 School Club Roundup results are out and the gang down at Glenn Raymond School in Watseka continue their winning ways](#). Science teacher Troy W9KVR led his elite crew of testers to a third place finish in the top ten! The ops at W9GRS scored 60,065 points!

Stats:	QSO's	205
	States	36
	VE Provinces	4
	DX	36
	Clubs	2
	Schools	25
	Hours	18
	Ops	23

Nice work to Troy & Company!

Cave Safe Troy!



Just some of the KARS members getting ready to head out for the [2011 Dayton Hamvention](#)

More great photos of KARS members doing what they do best...having fun!



A view of the [KARS March General Meeting](#)



It's "tune-up" night! KARS members gather round the test equipment



Is Dayton really big? There are six other halls as packed with exhibitors as this one and that doesn't include the exhibitors and vast flea market outside!



The KARS Motorola service monitor



In the background John N9LYE instructs Craig N9FD in semaphore communications!!!!??



This is a balloon view of the Hara Arena taken at last year's Hamvention showing the building complex and huge surrounding flea market. Every bit of those buildings are used! See more at:

www.hamvention.com

It's only about 46 days till Dayton!