



# KARS KEY KLICKS



JOURNAL OF THE KANKAKEE AREA RADIO SOCIETY

Volume 85 Issue 4

Editors: K9NR, K9QT  
Photos: K9NR  
Contributors: K9NR, W9NDW

April 2010

## APRIL MEETING FEATURES WEATHER SPOTTING

The next KARS meeting will be Tuesday, April 6th, 7PM at the public meeting room at St. Mary's Hospital. Enter via the main south entrance.

With the return of spring comes the storm season. With the storm season comes spotter activation. The next KARS meeting program will include an overview of spotter operations by John K9BYT. Also featured will be a tour of the new EmComm toolbox used during the Chicago Marathon.



An SRO crowd at the March KARS meeting enjoyed an excellent video presentation on how antennas work.

### COMMUNICATIONS FOR MS BIKE RIDE

The DuPage County Amateur Radio Emergency Service (ARES) has agreed to help support the communications needs for the National Multiple Sclerosis Society's "Bike MS: Tour de Farms". Tour de Farms is a two-day fundraising bike ride through the cornfields of beautiful DeKalb, Illinois. It is one of the longest running non-profit cycling events in Illinois with 2010 being the event's 28th year! Last year, over 1,900 participants and volunteers came out to Northern Illinois University and raised more than \$1.1 million for MS research and for services for persons living with MS.

This year's event will be held on June 12-13, 2010 and complete information on the event can be found at [http://bikeild.nationalmssociety.org/site/PageServer?pagename=BIKE\\_ILD\\_homepage](http://bikeild.nationalmssociety.org/site/PageServer?pagename=BIKE_ILD_homepage).

Please note that this is not an "ARES Project," but rather an amateur radio project. The DuPage County Amateur Radio Emergency Service (ARES) is just providing the organizational structure to put this all together.

If you can commit to part or all of either day, or to both days, please contact me, Kent W9NDW, directly via email at [em-comm@comcast.net](mailto:em-comm@comcast.net) now! We need approximately eighty (80) operator days, not including relief operators, unexpected emergencies and the like. So while you are at it, invite your fellow amateur radio friends to join you in volunteering.

### KARS KOMM TRAILER WORK

Field Day is rapidly approaching and there is much work to be done on the new KARS EmComm Trailer. Bill N9OE is spearheading the project and needs your help.

We'll be stripping out unneeded equipment, doing necessary repairs and adding operating positions and other appointments necessary to an emergency communications trailer.

There will be a little carpentry, power wiring, antenna wiring, computer wiring and just some plain old fetch and carry.

Call Bill and volunteer to help and be a proud part of KARS latest efforts in service to the public.

### KARS KALENDAR

- April 6.....KARS General Meeting
- April 18.....ARRL Rookie Roundup
- April 20.....KARS Board Meeting
- May 1.....Indiana QSO Party
- May 4.....KARS General Meeting
- May 14-16.....Dayton Hamvention!!!
- May 18.....KARS Board Meeting
- May 29-30.....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

*Also, co-sponsors:*

- 145.130      107.2 PL Access

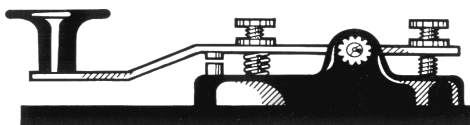
*Additionally, KARS sponsors:*

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

### HAPPY BIRTHDAY

- April 4      KC9OQQ
- April 5      K9CWF
- April 11     WB9WEC
- April 17     N9MBR
- April 25     W9YNI
- April 25     K9OZY
- April 26     K9CS
- April 28     N9NAH

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



# W9AZ

### NCS FOR APRIL

- April 5      KC9FAV
- April 12     N9LYE
- April 19     K9FO
- April 26     N9OE

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

## Have you started your Dayton plans?

# KARS HOMEPAGE— WWW.W9AZ.COM —KARS HOMEPAGE

## A 40 METER ROTATABLE MOXON ANTENNA

By Don K9NR

The ice storms of 2008/2009 had taken out the K9NR/K9QT 40 meter beam and the venerable KLM KT-34A. Since everything had to come down, I decided it was a good time to also upgrade the aluminum farm.

The CC 204CD 40M Yagi was a good antenna for the money. However, being a shortened, loaded antenna, it had shortcomings. Among these were narrow SWR bandwidth, poor F/B ratio and a tendency to interact with a nearby 15M antenna.

I was intrigued by W6NL's conversion of the newer CC XM240 40M Yagi to a Moxon design. Howard AK9F had built a 20M wire Moxon for our sojourn to southern Indiana a few years ago and it made a very good accounting of itself in the Indiana QSO Party. W6NL had an extensive write up of

the conversion process and I decided to "go for it."

Building and converting the antenna was a time consuming process. While smaller than a full size 40M Yagi...this is a BIG antenna!

It is mounted on a Rohn 45 tower at about 95ft. At that height it will exhibit a desirable low angle of radiation.

### PERFORMANCE

Performance from the start was impressive. In six subsequent contests including at least two thousand contacts on 40 meters, the antenna exhibited a vastly better F/B than the stock loaded Yagi design.

The SWR from 7000 to 7300 kHz is below 1.5:1.

There is no apparent interaction with the Bencher tri-bander mounted five feet above it.

Without the loading coils, the radiation efficiency should be substantially better than the stock antenna.

Ken W9YNI and I performed the measurements in the polar plot below. The large rear lobe is likely due to our close proximity. Ken's receive antenna would have been sensitive to the Moxon's pattern at approximately zero degrees elevation. The main lobe of the Moxon mounted at 95ft would be around 20-30 degrees elevation.

Like any 40 meter gain antenna, the Moxon is large and it's supporting tower and rotor must be commensurate to the task.

For further on the Moxon antenna design read W4RNL's article in the June 2000 issue of QST. 73

