



North Ottawa Amateur Radio Club

SPARK

January, 2003

From Don Smith, N8HCS, President

Here is N8HCS

It looks as if winter has finally arrived, and with that comes a bunch of slippery problems. I don't like the cold very much the last few years, seems without any insulation it gets pretty cold on this young body. Perhaps I should be going south for the winter. Why would anyone want to be in Michigan during the winter? Typical morning: You get up and its about 5 degrees out, the furnace filter is dirty, and you are not getting the heat you are paying for- even with your new ten thousand dollar heating system, so you make a note to stop on the way home to get more filters, then ,trying to hurry and get ready for work, you discover that we had high winds last night, so there are drifts in the driveway and you don't have time to clean it out before you go to work. Well anyway, you quick shove some groceries and a cup of coffee down your neck, and put on what you think is your warmest coat and head out the door, figuring you don't need your hat and gloves because the car will be warm soon and you can run from the car to the workplace no problem, right? Wrong Because when you step out the door the first thing you discover (after the snot freezes in your nose) is that it is very slippery and after a couple of times of greeting the ground with your butt, you finally make it to the car, wind blowing, snow flying, and you try to unlock the frozen door on your car. After struggling with the frozen lock, you break off your key, and now what? So you remember the spare set in the house, so you go and repeat the process and finally you get back to the car only now you're working on the passenger side door where the wind and snow and ice have not been blowing all night, (why didn't you start their first?) Anyway you get in, put the key in the ignition and urr urr nothing, the battery is dead, not to worry though, because you spot your neighbor and he has jumper cables. You're already late and your heart is in your throat by now anyway, so you make your plea to your neighbor. He agrees to help, and after he gets stuck three times in your driveway he makes it to the car and you begin the jumping process. Finally after about 15 minutes the car starts and your neighbor is now late and his heart is in his throat you are ready to go. Well almost, remember the drifts? Don't forget the snow, so you rock the car out of the snow and after about ten minutes you're on the road and now on your way, finally you're at ease for a moment until you realize how late you are. Now twenty years ago you would probably just called in to work after you looked outside and seen how bad it was, but now you are as loyal to your job as an old blood hound is to his master so on you go. You arrive at work about an hour and a half late and doesn't it seem as if no one else had this problem, like it only snows at your house. So after punching in and everyone calls you part time and the boss rags on you for not having prepared you settle down to your job right? Wrong, now the boss is more mad cause you have to stop work go to the office and answer the phone, its your wife and now she is late, seems its all your fault too cause you ruttud up the driveway this morning, and she is stuck in the driveway and wants you to either come home and get her out or call a wrecker. Have a Happy Winter and see you at the club meeting Thursdayif it doesn't snow too much.

A great place to shop for connectors and antennas
By Andrew Young, N8ARY

This may sound like an advertisement, but I assure you it's not. I want to tell you about the best place I have found to buy connectors, adaptors, and antennas. This place has about anything you could ask for. I have bought SMA to BNC adaptors, BNC to SMA adaptors, TNC to BNC adaptors, and even antenna assemblies.

This guy's shipping is USUALLY \$1. YES, I SAID ONE DOLLAR! I picked up a 144/440 mag mount antenna for \$12 plus \$1 shipping and it already had the SMA connector on the end of the cable- NO ADAPTORS! Is that cool, or what? That'll get you into the IRLP AND the 2 meter repeater of your choice. The antenna is called a "micro-kiss" antenna and it comes in BNC or SMA. The name comes from the shape of its base, which looks like, and is only slightly larger than, a Hershey's Kiss.

The place is called D&L Antenna Supply and it's in Kansas. Their web address is <http://www.wavehunter.com> Les Sullins, WB0KFK is the owner and you can e-mail him at dandl@birch.net.

Treasurer's Report

Account Status as of December 19, 2002:

Beginning Balance of all accounts was \$5739.56, of which checking and savings totaled \$4884.71, and the NOARC endowment fund balance of \$854.75.

Income for the period: \$400.36 of which \$1.36 was interest on savings, \$6.00 was from September 50/50 drawing, \$250.00 from Club Dues, \$143.00 was profit from the GRARA HamFest.;

Expenses for the period: \$113.03; \$60.00 fro pre-registration for 2003 Dayton Hamvention, \$10.00 to State of Michigan for Corporate information fee, \$43.03 reimbursed to John Sundstrom for Sept/Oct newsletter fees, and a lock for PSK-31 display at Middle School.

Ending balance of all accounts: \$5897.64 of which checking and savings total \$5172.04, and the NOARC endowment fund total balance is \$725.60

Please note the chart below represents the status of all club funds at the end of the period:

General Fund:	\$4897.04
Repeater Fund:	\$0
Digital Fund:	\$275.00
Endowment Fund	\$725.60

Total all funds \$5897.64

This period there were no expenses incurred for the Te-Ne-Ke project, and no revenues. The total revenue generated to date are \$4402.36. This IS reflected in the general account balance in the above ledger. Please continue to support this important project!!

The following is a list of people who HAVE paid NOARC dues for the year 2003. If your name is NOT on the list, please make note of it, and fill out the form below, and include it with your payment. Thank you!

Call	First Name	Last Name
N8LBG	Woodrow	Al rich
AB8CD	Dan	Anderson
N8VWH	Dennis	Berens
N8ACK	Douglas	Beverly
KB8ODC	Eugene	Camfield
N3WJF	David	Cross
KC8THM	David	Fischer
KC8UNY	John	Fischer
KC8ULC	Thomas	Fischer
N8PFB	Harold &Fitz	Fitzgerald
WZ8S	Thomas	Fitzpatrick
N8111	John	Fuller
KC8OPL	Randy	Goldberg
KF8VN	Alan	Groen leer
WA8MTJ	Glen	Hinkle
KC8HLN	Joe	Irwin
N8PFC	Bmd	King
KC8OVS	Jason	Mackay
N8KYO	Louis	Meisch
KB8ODB	Donald	Meyer
WB8BSZ	Jack	Olger
KC8FQH	Jeffrey	Olson
WA8ITM	Larry	Park
AH2C	Leo	Ross
KC8SKS	Craig	Schell
WBFDE	Casey	Smith
KA8PJN	Clarence	Smith
N8HCS	Don	Smith
N8YQD	John	Sundstrom
NF8L	Dick	Tan is
KC8TOD	Greg	Vii lerot
N8KCW	Dan	Whisman
KF8NS	Dean	Whitney
N8ARY	Andrew	Young

NOARC Club dues: Single: \$30.00 per Year, Family: \$40.00 per year. Please mail to: NOARC PO Box 44, Ferrysburg, MI 49409

Name:..... Call:.....

Address:.....State:.....Zip.....

Email Address (if available).....

Amateur Radio areas of interest:.....

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History of The Cubical Quad

as reported by W6SAI and W2LX in "All About Cubical Quad Antennas", Radio Publications Inc. 1972

In the year 1939 a group of radio engineers from the United States traveled to the South American republic of Ecuador to install and maintain the Missionary Radio Station HCJB, at Quito, high in the Andes mountains. Designed to operate in the 25 meter short-wave broadcast band with a carrier power of 10,000 modulated watts, the mission of HCJB was to transmit the Gospel to the Northern Hemisphere, and to tell of the missionary work in the wilds of Ecuador. To insure the best possible reception of HCJB in the United States a gigantic four element parasitic beam was designed, built and erected with great effort and centered upon the heartland of North America.

The enthusiasm of the engineers that greeted the first transmission of Radio HCJB was dampened after a few days of operation of the station when it became apparent that the four element beam was slowly being destroyed by an unusual combination of circumstances that were not under the control of the worried staff of the station. It was true that the big beam imparted a real "punch" to the signal of HCJB and that listener reports in the path of the beam were high in praise of the signal from Quito. This result had been expected. Totally unexpected, however, was the effect of operating the high-Q beam antenna in the thin evening air of Quito. Situated at 10,000 feet altitude in the Andes, the beam antenna reacted in a strange way to the mountain atmosphere. Gigantic corona discharges sprang full-blown from the tips of the driven element and directors, standing out in mid-air and burning with a wicked hiss and crackle. The heavy industrial aluminum tubing used for the elements of the doomed beam glowed with the heat of the arc and turned incandescent at the tips. Large molten chunks of aluminum dropped to the ground as the inexorable fire slowly consumed the antenna.

The corona discharges were so loud and so intense that they could be seen and heard singing and burning a quarter-mile away from the station. The music and programs of HCJB could be clearly heard through the quiet night air of the city as the r-f energy gave fuel to the crowns of fire clinging to the tips of the antenna elements. The joyful tones of studio music were transformed into a dirge of doom for the station unless an immediate solution to the problem could be found.

It fell to the lot of Clarence C. Moore, W9LZX, one of the engineers of HCJB to tackle this problem. It was obvious to him that the easily ionized air at the two mile elevation of Quito could not withstand the high voltage potentials developed at the tips of the beam elements. The awe-inspiring (to the natives) corona discharges would probably disappear if it were possible to operate HCJB at a sea level location. This, however, was impossible. The die was cast, and HCJB was permanently settled in Quito. What to do? Moore attacked the problem with his usual energy. He achieved a partial solution by placing six-inch diameter copper balls obtained from sewage flush tanks on the tips of each element. An immediate reduction in corona trouble was noted, but the copper orbs detuned the beam, and still permitted a nasty corona to spring forth on the element tips in damp weather. Clearly the solution to the problem lay in some new, different approach to the antenna installation. The whole future of HCJB and the Evangelistic effort seemed to hinge upon the solution of the antenna problem. The station could not be moved, and the use of a high-gain beam antenna to battle the interference in the crowded 25 meter international short-wave broadcast band was mandatory. It was distressingly apparent to Moore that the crux of the matter was at hand.

The Birth of the Quad

In the words of W9LZX, the idea of the Quad antenna slowly unfolded to him, almost as a Divine inspiration. "We took about one hundred pounds of engineering reference books with us on our short vacation to Posoraja, Ecuador during the summer of 1942, determined that with the help of God we could solve our problem. There on the floor of our bamboo cottage we spread open all the reference books we had brought with us and worked for hours on basic antenna design. Our prayers must have been answered, for gradually as we worked the vision of a quad-shaped antenna gradually grew with the new concept of a loop antenna having no ends to the elements, and combining relatively high transmitting impedance and high gain."

A Quad antenna with reflector was hastily built and erected at HCJB in the place of the charred four element beam. Warily, the crew of tired builders watched the new antenna through the long operating hours of the station. The vigil continued during the evening hours as the jungle exhaled its moisture collected during the hot daylight hours. The tension of the onlookers grew as a film of dew collected on the antenna wires and structure, but not once did the new Quad antenna flash over or break into a deadly corona flame, even with the full modulated power of the Missionary station applied to the wires. The problem of corona discharge seemed to be solved for all time.

The new Quad antenna distinguished itself in a short time with the listeners of HCJB. Reports flooded the station, attesting to the efficiency of the simple antenna and the strength of the signal. In his spare time, Moore built a second Quad antenna, this one to be used in the 20 meter band at his ham station, HC1JB, in Quito.

At a later date, after Moore had returned to the United States, he applied for a patent covering the new antenna. The fact that the Quad-type antenna radiated perpendicular to the plane of the loop was deemed by the Patent Office to be of sufficient importance to permit the issuance of a patent to Clarence C. Moore covering the so-called Cubical Quad antenna.

To understand the characteristics of the antenna, it is convenient to borrow the description of the Quad element given by W9LZX - "a pulled-open folded dipole."

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This interesting account is taken from William I. Orr's book, "All about Cubical Quad Antennas". In it, technical details are addressed at length. However, there are only two pages devoted to the four element, full sized quad. Orr calls it the "Monster Quad". We now know why.

This article Submitted by Ben Docter, K8AR..... Thanks, Ben!!!!

Upcoming Hamfests:

1 Feb 2003 **Negaunee, MI**
Contact: Robert Serfas, N8PKN
743 Grove Street
Marquette, MI 49855
Phone: 906-226-9782
Email: n8pkn@aol.com

15 Mar 2003 **Marshall, MI**
Contact: John Malinowski, N8BGM
20577 Division Drive
Marshall, MI 49068
Phone: 269-781-4540
Email: N8BGM@aol.com

8 Feb 2003 **Traverse City, MI**
Contact: Robert Serfas, N8PKN
743 Grove Street
Marquette, MI 49855
Phone: 906-226-9782
Email: n8pkn@aol.com

(NOARC has registered 2 tables at the Marshall Hamfest on March 15. All club members are welcomed, and encouraged to come out, and sell your items on the tables. Please contact Don Smith or Greg Schippers for more information)

16 Feb 2003 **Farmington Hills, MI**
Contact: Bruno Walczak, WA8DHP
16601 Golfview Drive
Livonia, MI 48154-2139
Phone: 734-464-8928
Email: wa8dhp@arrl.net

******* Net Control Schedule *******

If you are unable to keep your appointment as Net Control, **please** arrange for a replacement. Mark your calendar, PDA, etc. to remind yourself of your date.

Jan 21 John Sundstrom N8YQD
28 Mike Martens WA8CTK
Feb 4 Charlie Osborn KB8HU
11 Don Smith N8HCS
18 Tom Vandermel KB8VEE
25 Woody Alrich N8LBG
MAR 4 Beverly Traxler KC8JWA

Club Officers:

PRESIDENT:	Don Smith, N8HCS	846-1938
Vice-President:	Dean Whitney, KF8NS	842-0976
Treasurer:	Greg Schippers - KC8HXO	847-0238
Secretary:	John Sundstrom, N8YQD	847-4249
Program Director:	Ed Summers, KC8LBZ	231-798-7055
Newsletter Editor:	John Sundstrom, N8YQD	847-4249

Do you "Just Belong"?

Are you an involved member. The kind that would be missed?
Or are you just contented That your name is on the list?
Do you take an active part To move the work along?
Or are you simply satisfied To "Just Belong"?
Do you work on a committee - To that there is no trick.
Or leave the work to just a few And talk about the clique.
Why not come to all the meetings And help with hand and heart?
Don't be "just a member" But take an active part!
Think this over, member. You know the right from wrong.
Are you an involved member. Or do you just belong?

Author Unknown

W8CSO Echolink Station **by Andrew Young, N8ARY**

Have you ever been out of town and wished you could talk on the NOARC repeater? Now you can! There is a new Echolink station on the air that allows you to connect to the W8CSO repeater via the internet. It even works with a dial-up connection! If you have a microphone and speakers connected to your computer, you can download a simple program from <http://www.synergenics.com/el/> and you can be on the air all over the world in as little as one hour, after your call sign is validated.

To connect from the repeater to another node, simply press #C then the node number of the desired station, which you will need to find first at <http://home.insightbb.com/~n9yty/>. To disconnect, press #73.

The NOARC node number is currently 73469.

List of Important Commands:

- #01 - Connect to a random station.
- #08 - Query status ("Is the station connected or not?")
- #09 - Reconnect to previous station.
- #C - Connect
- #73 - Disconnect

Feel free to download and try the program from home. There are several stations in the West Michigan area.



W8CSO (NOARC) Repeater information:

If the NOARC repeater goes down , use 145.490 simplex

145.490 (- offset) tone 94.8 main receiver ; Grand rapids link receiver tone 91.5

Tone control 491=off; 490-on

Time of day 749

“ S” meter read back 7

Touch tone pad test 5

Phone patch

*** followed by phone number**

t o disconnect

**** redial last number**

911 calls Ottawa County Central Dispatch (DO NOT DIAL # FIRST!!!)

912 call Muskegon County Dispatch (DO NOT DIAL # FIRST!!)

Club Net is every Tuesday night at 8PM. Net Controllers please note your assignment found on the calendar and be sure to get a substitute if you cannot take the net.

Club Web Site <http://www.qsl.net/noarc/>. Site has information on Te Ne KE, club events and net schedules.

All licensed amateurs are eligible for membership in the North Ottawa Amateur radio Club. Board meeting held 1 hour before meeting at meeting site.

Annual dues are payable in December . 2002 Dues are \$ 25.00 individual and \$ 35.00 family.

Please send dues to NOARC Box 44, Ferrysburg, MI 49409

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Box 44

Ferrysburg, MI 49409

Postmaster: Return Requested