ROCHESTER DX ASSOCIATION
rdxa.com

February 15th 19:00

Gander Mountain
Meeting Room
300 Jay Scutti Boulevard
Henrietta, NY 14623

Automating SSB Contesting
by Rick Mintz, W1TY

Rick has always hankered to operate SSB contests *like* CW ones. You might have observed the CW ops at FieldDay just hitting the function keys or even just the return key to send the exchange and log the QSO. It turns out that with some skill, cleverness and tweaking, you can do the same for SSB. Rick is willing to share his secrets of capturing audio, shaping and arranging it, and setting it up for Writelog so as to automate SSB operating. So, if you voice was hoarse after the last contest or if you want the 10db advantage of having a YL voice for your exchanges, come to the next meeting and learn how to do it.

President's Soapbox Rick Mintz, W1TY

It is never too early to begin thinking about next year. The elected officials have the responsibility of guiding RDXA through the year. What ideas could you offer? The nominating committee will be active soon to find candidates for next year's slate. Maybe it is time to step up and run for an office.

After a few years away from a Board of Directors position, I chose to run for President. I had four items on my personal agenda that I wanted to accomplish, which I will detail in a later newsletter. The real point, however, is that you can make a difference. BOD meetings are fun, contentious, satisfying, and frustrating. That is how it should be and every year's group dynamic is different.

The January meeting was at my QTH. For 7:00 'till 9:30 was RDXA business. We broke up about 11:00. Why? Because we were just having fun! (I must mention that Past President, Mike Rundle, N1OKL served the best munchies, although my baked crab dip last year was a challenger!)

Rochester VHF Group
and
Rochester DX Association
combined

ANNUAL AWARDS BANQUET

Saturday, April 2, 2005
Pineview Family Restaurant
2139 N. Union Street, Spencerport
(Barefoot Landing Plaza)
1.5 miles N. of Rte 259 / 531 Interchange
(Union St. is Rte 259)

6:00 pm - Cash Bar
7:00 pm - Buffet Dinner

Tickets are $20/person and available from N2OPW or AF2K

Changing gears…

Again this year RDXA will join with the RVHFG for our annual Awards Banquet. More info will be posted in the March newsletter, but reserve April 2 on your calendar. Tickets (printed by our own AF2K) will be available at RDXA meetings.

Clutch & shift…

Do you know that RDXA has three email lists?

- RDXA General Membership – for all members
- RDXA Field Day – to exchange FD info
- RDXA BOD – restricted to the BOD

Time sensitive announcements are posted on the General list and most members are activated. Contact me to get on a list.

Final gear grind…

Thanks to Jeff W2FU for a wonderful presentation at the January meeting. Obviously a great deal of thought along with technical expertise goes into his creation. Homebrew and creativity are not dead. Jeff's project supports the old adage, "if you want something done, give it to a busy person".

I imagine that ham gear in general would be lower in price if the manufacturers could agree on some standards. Maybe the industry is not big enough to warrant it. Every radio, rotor and software package seems to need a distinct learning curve. Sounds like a project! How about it, Jeff?

If it is done in amateur radio, it's done at RDXA!

Make Your Next Vacation Your Own "Mini" Expedition: Part 2

Gene Fuller, W2LU

Last month we looked at the overall question of getting on your way and setting up for a portable operation. Now, and keeping somewhat in line with this months theme subject of favorite antennas, a bit more on a multi-band wire antenna system for portable operation. The criteria I used in designing this system included:

easy portability

flexibility for packing

multi-band

flexibility in configuration

efficient

easy to deploy

good for DX or domestic contacts

With the help of AO I came up with a vertical wire system with various horizontal top loading wires and center/off-center feed using 450 ohm line and an antenna tuner.

The final dimensions I arrived at are:

Version 1:

Bottom "T" load of4 feet(2 feet each way)

Vertical 9 feet from the load up to the feed point

Vertical 12 feet feed point to top

Horizontal top loading wires:

for 10 thru 20, one wire 2-4 feet

for 10 thru 40, one wire 39 feet

for 10 thru 80, two wires in opposite directions, one 39 feet, one 77 feet

for 10 thru 160, two wires in opposite directions, one 39 feet one 205 feet

Suggestions - Make up 4 wires for top loading: 3, 39, 77, and 128 feet. Have lugs on both ends of the vertical wires to connect to fed line and loading, and on both ends of the loading wires, one to connect to the top of the vertical and one for an end insulator. To expand from 80 to 160 meters just attach the 128 foot wire onto the end of the 77 foot wire with a screw and wing nut. Inside tooth lock washers and electrical grease are always a good idea, especially in salt water atmosphere.

Version 2:

for 10 thru 20 meters (can be used on 40 but not too efficient) - 40 foot

center fed vertical wire

for 15 thru 40meters - 50 foot center fed vertical wire

These are great for high band DX'ing. It's best if you have a 40-50 foot support. But don't worry if you can't get the wire exactly vertical, you won't loose much if it's only at 60 degrees instead of 90. Otherwise, for shorter supports, go to the end loaded Version 1 system.

It will add to the convenience if you can make some little fiberglass insulators for the system. But remember that if caught in a pinch, nylon rope is a pretty good insulator. A "T" insulator for the feed point with two holes for #6 or #8 machines screws (with butterfly nuts) for the vertical wires and holes in the main body to tie down the 450 ohm feed line. Then four small, straight, two-hole pieces for the top and bottom of the vertical wires and ends of the horizontal loading wires. Two holes – one to connect the wire with "nuts and bolts", one for a small rope.

For the feed line you might make up two pieces of the 450 ohm line, one 50 foot and one 100 foot with appropriate end fittings to allow making it up as 50, 100 or 150 feet long depending on how far away the feed point is from the station.

For the bottom loading, try ¼ inch copper tubing with light line to tie it back up to the bottom vertical wire. This piece of tubing can be rolled up in a 6 - 8 inch coil for storage. I use a gallon paint can lid as a form – it doesn't take up

much space and it has a little rim which helps hold the tubing while rolling it.

Predicted patterns and experience show this system to be effective for both DX and Domestic contacts, even working DX on 80 meter SSB with 100 watts, with the top of the vertical and the horizontal loading wires at only about 25 feet, hung from second floor windows, fairly small trees, or a collapsible mast. The 40/50 foot vertical can really be quite effective on the high bands for DX.

For an antenna tuner I built a small "T" type circuit keeping the circuit and controls above ground and then going from balanced configuration to coax at the low impedance "matched" side of the tuner using about ten turns of miniature coax on a small powered iron core. I also included a small 50 ohm Carborumdum resistor, with a slide switch on the back panel, for a dummy load. Commercial tuners are available that do the balanced/unbalanced conversion between the feed line and the tuner – more convenient but not quite as efficient - and should work ok at low power (up to 100 watts or so).

Indicated patterns for the system are essentially omni directional for the 10-20 meter version but when the top loading wires are added for the lower frequencies it starts becoming somewhat directional – perhaps best to aim the line of the top loading wires about 45 degrees away from the most desired direction if possible. This is where a compass could be handy. The 40/50 foot verticals are obviously omni directional. And, it's generally best to have the bottom of the vertical fairly near ground. If you raise it too much the vertical pattern will start to break up into multiple lobes and do funny things.

If you take this combination of wires and insulators, and a good assortment of small ropes you'll have lots of flexibility to react to what ever you have for space and supports.

A generalized approach to this kind of antenna system is to just make a center fed antenna about .6 to .65 of a half wave long for the lowest frequency band and/or 1.2 times the wavelength of the highest frequency you want to operate on and get one end up as high (close to vertical) as you can for DX use or deploy either horizontal or as an inverted V for domestic use. This will operate fairly well for over a 4:1 frequency range using a tuner. e.g. 20-40 feet for 10-20 meters, 40-45 feet for 10–40 meters, 50-55 feet for 15-40 meters, or 80-90 feet for 20-80 meters. The ones cut for the lower bands will of course work reasonably well on the higher bands, but will have lobe splitting which will effect the horizontal pattern if deployed horizontally or the vertical pattern if deployed vertically.

Now that you've got the station all set up made lots of QSO's and made it back home, the QSL cards start coming. What to do? Depending on how many QSO's you made and how many cards you expect to get there are several options. If you expect a hundred or more you may want to order cards from one of the many commercial QSL card printers. If a limited number of cards will be required you could make them with your PC/printer and card stock from your nearest office supply store. Or, a rubber stamp made by an office supply store might be used on your primary QSL card. Or, possibly just pen and ink.

With that, you have completed you're first mini expedition. Hopefully all went well and you're ready to make a few refinements to the plan and try it again.

RTTY Rangers and RTTY Roundup

Rick Mintz, W1TY

Now that my favorite contest is but a memory for another year, I am always amazed at how little time passes before I look forward to the next.

I had the pleasure to operate M/S LP for the third time at the N2WK station. Wayne always makes for good company and a fun time. This year we were joined with RTTY newbie, Kevin N2VJB. Even watch someone new transition from apprehensive to comfortable? Was fun to see.

Conditions did not allow us to best last years score but we were close. Initial reports indicate that we will finish second this year and with that goes our shot at a 3peat.

Beginning as a way to promote RTTY operation years ago, I established Rick's RTTY Rangers. I made the criteria simple, work W1TY in a RTTY contest!

We worked RDXA members N2CK, K1PY/rr, K8FC/rr, K2DB, K2MP/W2AN and N2KX. Luis, XE2AC/rr was operating, but we never did find each other.

Some may have missed the January meeting and the official presentations to our newest Rangers, now numbering fourteen. Therefore I am proud to announce four new operators that have reached the pinnacle of RTTY operators. They are now qualified to use the /rr suffix!

Ed Gable, K2MP/W2AN/rr; Paul Mackanos, K2DB/rr; Dave Wright, N2CK/rr; Bob Wood, N2KX/rr

RDXA Chair Positions Rick Mintz, W1TY

First the bad news… Vic K1PY has resigned as Contest Chairman. With the vast amount of work associated with Field Day, Vic did not want to compromise the Contest Chair. We need a replacement for the remainder of the year. How about you?

Now the good news… Our hard working VP K2DB is going to work even harder for RDXA. Paul is assuming the Membership Chair for the remaining months. Thanks Paul.

Community Article

My Favorite Antenna

Paul, K2DB

My favorite all time antenna was an elevated 80 meter vertical, with elevated radials. The antenna was very simple, a ¼ wave (approximately 66 feet) section of # 10 AWG insulated wire, pulled up along side of a very tall tree I had when my QTH was in Hamlin, NY. I fed it with RG-8, and had two ¼ wave elevated radials. The bottom of the antenna was about 10 feet off the ground, putting the top of the antenna at about 76 feet. With this antenna, and about 500 watts, there was nothing on 80 meter CW that I could not work, and work very easily.

Vic, K1PY

Back when the call was KN1JUL, I was running the venerable DX-40 and Hallicrafters SX-99. Of course, one used CRYSTALS back then – Novices weren't allowed VFO's (now THERE'S an upgrade incentive, aside from the fact that Novice licenses also expired after one year back then. Whew!)

Anyway, 40 was the band of choice (had the most crystals, maybe 4), and I tried a regular ol' coax-fed dipole. Balun at the antenna? Heck no. Well, it didn't work all that well. (Refer back to balun…).

So somewhere I got 'hold of some TV Twinlead and made up a folded dipole with the feedline coming to the second-floor shack window. Feed-thru wasn't elegant – pull down the top window, pass it thru, then jam the window shut. But now you really did need a balun – mostly cuz you couldn't connect twinlead to the rig! So there it was, real old-time radio, a pair of large, must have been 3-inch diameter by 6-inch long coils, open-air mounted on a 2-inch high chassis. Sitting right up there on the shelf – you could just sense the rf all around it. Those were the days…. And it was the proverbial gang-busters antenna – hear it, work it. Been a folded-dipole fan ever since.

Charlie, WB2HJV

When one needs to operate in the CQ WW 160 meter contest, and he currently has no antenna because his GAP Voyager was just taken down, it's amazing what an op will do in sub-zero temperatures with wind driven snow in his face...in the dark after dinner.

Figuring that something was better than nothing a pair of 160 meter "Shorteners" were ordered from Spi-Ro, part number LC-160 for $32.95. After snow-blowing various paths in the back yard through four foot drifts and shoveling the patio roof, materials and wire were hauled to the rear deck.

After three nights of fumbling around in relative darkness with only one flood light, cutters, strippers, soaked gloves, extension ladder, drill, extension cords, pressure treated wood, ten foot Radio Shack gray masts, etc, a compromise 160 meter dipole was raised, that was only 100 feet long. At a very formidable height of "twenty feet" for the apex and "ten feet" for the ends this baby was sure to be a cloud warmer, especially with the eastern leg being only one foot above the snow on the house roof over the living room and kitchen areas. Yea, I was up there too in the dark because the wire got hung up in the snow. (Not recommended.)

Back in the shack, a quick check of the SWR, with sweat beading up under my cap, showed a minimum at 1824 (truly lucky) with a 2 to 1 bandwidth of 20

khz and a 3 to 1 bandwidth of 60 khz. Let's try the tuner...zip...no problem anywhere in the band...I'm on a roll. Wonder if the coax is radiating? Didn't bother with a balun.

Well lets give a go, sez I. N3DXX is calling CQ so let's see...whoa an answer on one call...579 in DE...oops the three smoke detectors just went off...and I had to tell the xyl that 11pm is too early to go to bed.

Hummm...ok, where's the breaker in the panel box...there's only one day until the contest...gotta shut these noisy guys off. Ah, no real prob'...the detectors are dead now but so are the family room lights and those in the downstairs bathroom too. I'll just leave a flashlight on the vanity and hope that there will be no QRM from the local government.

It's late Friday night and WriteLog is warmed up so lets go...1st Q is W4MYA, then W0AIH followed by K4EA in GA. Man what's the problem with a low dipole on 160? None that I can see or hear so far. K9DX, NO2R and W8FJ are all +40. There's Joe K8FC...no problem again...he's in the log. Continuing on there's 168 in the log after 5.5 hours effort S&P over two nights.

Quite frankly friends I was just blown away by the performance of this last minute, thrown together, compromise dipole. State total was 41 including CA and all the 7's except MT. Five Canadian provinces are in the log as well. The real excitement was PJ2T, VP2E (one call), VP5/K9NW and D4B (six tries but made the Q). All this with 100 watts! Granted condx were good, with no noise, but wow! There were only a handful of stations stateside that I couldn't work. I sat on F5IN for five minutes but no luck.

This 160 meter compromise dipole is a keeper. It fits on my lot too. I just need to move it away from the house and get the apex up just a tad higher than twenty feet. I suspect that there's more DX to be caught with this champ.

Charlie WB2HJV

PS: The smoke detectors are re-activated and the bathroom light/fan is once again functional.

Raj, N2RD

My favorite antenna is a Force 12 C3SS, a 2 element yagi tribander that also works on 17m and 12m. For those of

you not familiar with the Force 12 line of antennas, they are engineered in a special way:

It uses riveted construction for the boom, elements and boom to element attachment brackets. The boom to element attachment brackets are pre-installed and all the items are predrilled and very well identified. All you need to put it together are common tools and a riveter. No danger of elements loosening in the wind.

It uses highly tapered and very slim elements. It turns out that there are two schools of thought in building wind resistant antennas: One is to make them very sturdy and stiff. It adds to the weight and bulk. The other is to make them very flexible, light, slim and highly tapered. This is the approach that Force12 uses in all their yagis.

It uses a sleeve feed method with closely spaced feed elements. This method has the advantage of simplicity and the consequent increase in reliability, and less loss as no traps are used.

The "SS" version is the severely shorted version on a 12' boom and the 20m element is linearly loaded. All this results in 4sq ft wind area, 27 pound weight and 13.5' turning radius. Even a small TV type rotator on a simple mast can handle this antenna.

I have had this antenna up for more than six years. It requires no little maintenance. It works very well. It has reasonable Front to Back for a 2 element antenna, about 18db. It has 4db gain over a dipole and this gives me enough of an edge to help my dxing and contesting.

If you have never had a yagi antenna and do not have a tower, this may be the easiest way to get one. The antenna is so light and easy to turn that one could install it on a sturdy guyed mast and turned with a TV type rotor.

Who is this? Paul, K2DB

Who is this Famous RDXA Current Member ??

Winner gets a free bowl of popcorn at the next S & S Friday Social !

73 de Paul K2DB

My first RTTY contest, or how I became a RTTY Ranger! Dave, N2CK

Well, I guess now I am officially a RTTY Ranger. During the RTTY roundup, I worked K2MP, N2WK, and K8FC. I heard XE2AC working Hawaii (actually, I didn't hear Luis, but I saw his call in the message box while waiting for the Hawaii station). While I was waiting to work another station, I heard someone go back to K2DB. One station I really wanted to work was K1PY who was at W2TZ's new QTH (Vic, that was me who was calling you off frequency on 80 meters about 8:30 local Saturday night). I ended up not getting K1PY in the log.

Early on, I worked 2 stateside stations on 40 meters and one on 80 meters but I found it quite difficult, if not impossible, to work most stations I heard (even to the point of being frustrating!). Hmmm, this RTTY thing is supposed to be this really GREAT mode, why can't people HEAR ME?? I did find K1PY on 80 meters about 8:30 local Saturday night. I kept calling Vic, but he eventually gave me the clue I needed. I needed to figure out how to turn off the AFC while operating S&P. I went back to the AA5AU site and did some reading about RTTY. Here I found some sage advice "never use AFC when operating S&P". Ooops - that's why nobody would come back to me on Saturday night! On Sunday morning I spent more time with AA5AU's tutorials and figured how to configure MMTTY for search and pounce mode.

On Sunday morning, with software now properly configured, I set out to give this mode, and contest some exploration. I ended up with 135 QSOs. My primary focus was stateside Q's initially as I explored the interface. Best DX was Croatia, Mexico, Morocco, and the Ukraine. K2MP did throw me a curve ball by calling me as I tried to work N2WK. Here I am looking at the screen, trying to see if N2WK is answering me, when I see "… CK, de [garbage] 2MP ….". Hmmm, who is calling ME when I'm trying to call someone else. It turns out Ed was calling me, and I worked him at 17:35 on 20 meters. N2WK was in the log at 17:39. Looking at the log they both were on 14.096. Wayne, I guess Ed has better ears (or he knew I was there waiting for you). I don't think the fact that he's less than a mile away had anything to do with it.

I did use the XY scope in the MMTTY plugin to aide in tuning. One thing I found interesting is that towards the end of the contest I could achieve almost perfect tuning by ear. As usual, during a contest, most of the time I tune DOWN the band instead of up. I don't know if this had anything to do with my ability to tune by ear. Another interesting thing I discovered was that I could almost tell, without looking at the screen of decoded data, when someone was coming back to me. Another observation was that RTTY sounds like CW on steroids. As I got close to a RTTY signal, I could envision a really high speed CW op working away. But then I realized that it was actually a computer generating what I was hearing – what a disappointment!

All in all, it was a fun mode. I did think it was a little hard on the ears, perhaps worse than a phone contest. I did learn a little about the mode. I did not realize initially that my Icom had a narrow mode (500 hz) until a few contacts were in the log on Sunday. That made it a little easier. I did not try the 250 hz filters though. I intend to try them in the next contest. Would I do it again? Certainly. I also think I would like to try calling CQ (again, figure out HOW to set the AFC control in MMTTY first!) in a contest to see how the station gets out. One thing really surprised me – hearing the cooling fan in the back kick on! Wow, what's that??? Guess I don't flog the rig enough during normal operations! See what happens when one operates primarily S&P?

Cu in the RTTY pileups,

Dave, N2CK

Rochester Area Radio Clubs 2004-2005

Club	**Rochester DX Association (RDXA)**	RDXA@Rochester.rr.com
President	Rick Mintz W1TY	W1TY@arrl.net
Meeting Date & Time	Third Tuesday of month (except July & August), 7:00pm	
Location	Gander Mountain store meeting room, 300 Jay Scutti Blvd., Henrietta	
Web Page	www.RDXA.com	
Program Chairman	Paul Mackanos K2DB	K2DB@arrl.net
Membership Chairman	Paul Mackanos K2DB	K2DB@arrl.net
Article Submission Date	Fifth of month	
News. Publication Date	Second Tuesday of month (except July & August)	

Club	**Rochester Radio Repeater Association (RRRA)**	
President	Brad Allen KB2CHY	KB2CHY@frontiernet.net
Meeting Date & Time	Third Friday of month (except July & August), 8:00pm	
Location	Pittsford Town Hall basement, Main St., Pittsford	
Web Page	www.RRRA.5u.com	
Program Chairman	Jim Ditucci N2IXD	N2IXD@arrl.net
Membership Chairman	Joel Rossbach N2EZV	jarossba@frontiernet.net
Article Submission Date	Fifth of month	
News. Publication Date	Second Tuesday of month (except July & August)	
Repeater Op	Brad Allen KB2CHY	KB2CHY@frontiernet.net
Sunday Net	Dwight Hill K2KWK	DQHill@aol.com

Club	**Rochester VHF Group (RVHFG)**	info@RVHFG.com
President	Dave Hallidy K2DH	K2DH@frontiernet.net
Meeting Date & Time	Second Friday of month (except June, July & August), 7:30pm	
Location	Ogden Town Center, Union Street (S. of 531)	
Web Page	www.RVHFG.com	
Program Chairman	Fred Miller WO2P	WO2P@aol.com
Membership Chairman	Jeff Luce K2EHF	K2EHF@amsat.org
Article Submission Date	Last weekend of month	
News. Publication Date	Friday preceeding next meeting	

Club	**Rochester Amateur Radio Association (RARA)**	
President	Brad Armstrong W1YX	W1YX@arrl.net
Meeting Date & Time	First Friday of month (except June, July & August), 7:30pm	
Location	Henrietta Fire Hall (S. entrance, behind equip. bays), 3129 E. Henrietta Rd.	
Web Page	www.RochesterHam.org	
Program Chairman	Tim Magee WB2KAO	WB2KAO@yahoo.com
Membership Chairman	George Masny KA2GPJ	KA2GPJ@arrl.net
Article Submission Date	Second Friday of month	
News. Publication Date	One week before meeting	

Club	**Brockport Amateur Radio Klub (BARK)**	
President	Lou Kline K2LKK	K2LKK@barkarc.org
Meeting Date & Time	Second Wednesday (except June, July & August), 7:00pm	
Location	1140 Peck Road, Hilton (Construction night)	
Meeting Date & Time	Fourth Wednesday (except June, July & August), 7:00pm	
Location	Seymour Library, 161 East Ave. Brockport (Business meeting)	
Web Page	www.BARKarc.org	
Program Chairman	vacant	
Membership Chairman	Allen Skiles N2VY	N2VY@BARKarc.org
Article Submission Date	as submitted	
News. Publication Date	as submitted, posted on Web page	

Club	**XEROX Amateur Radio Club (XARC)**	
President	Bob Karz K2OID	
Meeting Date & Time	Third Thursday of month (except July & August), 5:30pm	
Location	Xerox Recreation Center, Building 337, Xerox Webster Campus	
Web Page	www.ggw.org/~xarc	
Program Chairman	Ned Asam W2NED	W2NED@frontiernet.net
Membership Chairman	vacant	
Article Submission Date	First week on month	
News. Publication Date	Second week of month	

Club	**Monroe County Amateur Radio Emergency Service (ARES)**	
President	Judy Stonehill, Emergency Coordinator N2KXS	jstonehill@worldnet.att.net
Meeting Date & Time	Fourth Thursday of month (except July, August & December), 7:30pm	
Location	RIT, Carlson Building, room 2150	
Web Page	www.MonroeCountyemcomm.org	
Program Chairman	vacant	
Membership Chairman	Jim DiTucci N2IXD	
Article Submission Date	as submitted	
News. Publication Date	as submitted, posted on Web page	

Club	**Drumlins Amateur Radio Club**	
President	Doug Peeso KB2ROP	dpeeso@hotmail.com
Meeting Date & Time	Third Wednesday of month, 7:30pm	
Location	Newark, NY State EMO (next to ball field)	
Web Page	www.drumlinsarc.com	
Program Chairman	Charles Escriva KB2SOZ	
Membership Chairman	Dave Taylor KB2KBY	
Article Submission Date	First week of month	WA2SOK@arrl.net
News. Publication Date	Second week of month	

Rochester DX Association

W2RDX **www.rdxa.com**

This bulletin is the official organ of the Rochester DX Association. It is published monthly, September through June. Email your articles to the newsletter editor n2rd@arrl.net by the first Tuesday of each month for inclusion in that month's newsletter.

All those interested in Amateur Radio, especially in DXing and contesting, are invited to attend to attend meetings and to join our club. The club meets at 7:00pm local time on the third Tuesday of each month from September to June. Come and join us!

Officers:

President **Rick Mintz, W1TY**
w1ty@arrl.net

Vice-President **Paul Mackanos, Jr., K2DB**
paul@prohomeinspector.net

Secretary/Treasurer **Charles Kuhfuss, WB2HJV**
wb2hjv@frontiernet.net

Board of Directors:

Paul Meyers, N2OPW	n2opw@qsl.net
Dave Wright, N2CK	n2ck@arrl.net
Gene Fuller, W2LU	w2lu@worldnet.att.net
Fred Groner, W2TZ	w2tz@aol.com

Apointed positions:

Newsletter Editor	Raj Dewan, N2RD
DX Report	Chris Shalvoy, K2CS
Packet Cluster	Bob Hunter, NG2P
Web Master	Scott Hoag, K2ZS

Send submissions to the newsletter editor:

Raj Dewan, N2RD n2rd@arrl.net

Send dues ($15/yr) and correspondence to the secretary Charles Kuhfuss WB2HJV, 55 Stoney Path Lane, Rochester, NY 14626.

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To: