

# ROCHESTER DX ASSOCIATION

rdxa.com



ROCHESTER DX ASSOCIATION NEWSLETTER

SEPTEMBER 2006

## Regular Meeting

September 18<sup>th</sup> 19:30 local

300 Jay Scutti Boulevard  
Gander Mountain  
Meeting Room

### DX and the New Year

Start the new Club year with DX. ZL8RI Kermadec Island DX video, and the latest RDXA DX country list. Plus, the upcoming contest year and looking forward to RDXA's 60<sup>th</sup> Anniversary!

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## Social after the Meeting

Scotch & Sirloin  
Winton Plaza

### President's Soapbox

By Dave Wright - N2CK



It seems like just yesterday we were enjoying longer days, and looking forward to the Hamfest and Field Day. Where has the summer gone? Hopefully, you all have rested up and recharged those solar cells to make ready for another exciting year of RDXA meetings, HF contests, and DX chasing. With the shortening of the days, it's now time to finish those final antenna plans. I know I have one more wire antenna

to put up, and another to fix. Other than that, I think I'll be ready. As my kids are currently away at college, I'll have to educate the XYL on the finer points of using a fishing pole to get wires elevated in trees. I can just see her reaction "You want me to help you do **what**?" Sometimes kids can sure be handy to have around the house!

It seems there may be yet another threat to our hobby on the horizon. While at lunch today, one of my co-workers was reading

the money section of *USA Today*. I happened to catch the title of an article called "Broadband over Gas Lines". Of course I grabbed that section when he was done, and analyzed the article. Nethercomm (<http://www.nethercomm.com>), a San Diego based company, has come up with a way to transmit broadband signals over an underground gas line. The key to their solution is to make use of (in their words) Ultra Wide Band Technology to wirelessly broadcast information via your already-installed gas lines. Ultra Wide band, a new unlicensed technology, sends out pulses of radio energy across such a wide swath of frequencies that if some data packets are lost, others can easily make it to the home. Also mentioned in the article, is that Federal Guidelines that limit the strength of ultra wideband signals, do not apply to underground pipes. Nethercomm calls this solution Broadband In Gas (BIG). They claim broadband connectivity in capacities exceeding 10 gigabits. I will try to remember to bring the article to the September meeting so folks can check out the article. When I first saw the headlines, I thought I woke up on April 1<sup>st</sup>, but it looks like it's legit. Wow!

I made this request last year, but perhaps it fell on (some) deaf ears. I have heard multiple people make reference to something that Fred, K2FR was fond of saying. Fred had an observation that a strong newsletter is a sign of a strong club. From where I sit, I see a strong club, filled with knowledgeable, and very talented Hams. However, I have been noticing the diminishing content of the newsletter. I am going to throw down the gauntlet and challenge each of you to write one article for the newsletter this season. Our newsletter editor hasn't been working hard enough (just kidding Mike), and needs more submissions from the community. So, take up his monthly challenge, or just submit some observations from a contest you attempted. Perhaps you planned out a strategy for the ARRL DX CW test to maximize Qs, or follow grayline propagation. How did it work?

It seems these days that everyone has a multi-mega pixel camera. Ever try sending those 1Mb+ images to family and friends? Have they complained that your email clogged their in-box for 20 minutes while all the pictures were downloaded? Well, if you are a Windoze XP user, I have a solution for you, in the form of **free** software from micro\$oft. No, I am not kidding. Surf over to <http://www.microsoft.com/windowsxp/using/digitalphotography/learnmore/tips/eschelmann2.mspx>.

Once installed, highlight/select the pictures you want resized, and use the right mouse button to select "resize pictures". Choices are small (fits a 640 X 480 screen), medium (fits a 800 X 600 screen),

large (fits a 1024 X 768 screen) and handheld PC (fits a 240 X 320 screen). Just for grins, I converted 2 pics, each over 1Mb in size. The resulting pictures were ~100KB, for a 90% reduction in size!

I'll close for now. Hopefully I'll see a lot of you at the September meeting. If you haven't renewed your membership, stop by early with some funds, and see Charlie. He'll gladly take care of you.

### September Contests

All Asian DX Contest, SSB-----2, 3 Sept  
Russian RTTY WW Contest, RTTY-----2 Sept  
WAE DX Contest, SSB-----9, 10 Sept  
QCWA QSO Party, all modes-----16, 17 Sept  
CW WW RTTY DX, RTTY-----23, 24 Sept

More Contest Info <http://www.sk3bg.se/contest/index.htm>

### October Contests

ON Contest 6m, CW, SSB-----1 Oct  
Oceania DX Contest, SSB-----7, 8 Oct  
Oceania DX Contest, CW-----14, 15 Oct  
The Makrothen Contest, RTTY-----14, 15 Oct  
JARTS WW RTTY, RTTY-----21, 22 Oct  
CQWW DX, SSB-----28, 29 Oct

### November Contests

HA QRP, CW-----1-7 Nov  
Ukrainian DX, CW, SSB, RTTY-----4, 5 Nov  
ARRL Sweepstakes, CW-----4-6 Nov  
WAE DX, RTTY-----11, 12 Nov  
Japan Int'l. DX, SSB-----11, 12 Nov  
LZ DX, CW, SSB-----18, 19 Nov  
ARRL Sweepstakes, SSB-----18-20 Nov  
CQWW DX, CW-----25, 26 Nov

Propagation *AD5Q's notes from Cycle 22, September 1995*

Solar Flux Range-----68 – 76

**General** – The bands will be in transition this month. Days are getting shorter at a very rapid clip. Nighttime MUFs are plummeting, and daytime MUFs are rising. Grayline openings are shifting to other parts of the world. QRN levels on the lowbands are dropping. Let's look forward to some Fall DX this season!

**20 Meters** – There will be improvement on most bands, but 20m is not one of them. The broad morning path to Asia will deteriorate and become a narrow window over the pole. As the early path to Asia drops out, a new path will open in that direction around sunset because the evening grayline will soon be tilting toward Asia. By the same token, morning conditions to Europe will improve as the late afternoon window deteriorates. The new daypath windows, however, will not be as good as the summer ones. All 20m night paths are going south for the winter. The band will begin to close earlier in the evening, and by CQWW it will be mostly a daytime and grayline band. There won't be as many

Russians on 20m because the polar windows will be narrow. For now, we can enjoy the polar pipelines of the evening and morning, and hope something substantive comes out of the rumored VU4 operation before that propagation window closes altogether for North America.

**15 Meters** – 15m will be worth watching during September and October. We can't expect anything reliable, but there will be days with openings to Europe. The path to Africa will be easier, and even DX in zones 34 and 37 will be workable. Contacts in those zones are well worth tuning for, and stations tend to come up when the band sounds nearly dead.

**40 Meters** – Activity on 40m should pick up sharply during the month, especially when 20m closes well before midnight. With the expanding area of darkness in the northern hemisphere, paths will open deeper into Russia and will include the Middle East. 40m will be the most active evening DX band through the winter, and at the bottom of the solar cycle "winter" comes very early.

**Low Bands** – So the low band season begins this month, with activity picking up on 80m and 160m as well. Equinox time (not mid-winter) is the best time to work into the southern hemisphere on 80m and 160m. Now that many of us have installed receiving EWEs on our small antenna farms, K6STI brings us another receiving antenna to try: horizontally polarized! I haven't started mine yet.

73, de Roy - AD5Q / Houston  
<http://www.qth.com/ad5q/>

### Twenty-seven Day Space Weather Outlook Table

*Issued 2006 September 13*

*US Dept. of Commerce NOAA*

UT Date	10.7cm Radio Flux	Planetary A Index	Largest Kp Index
2006 Sept 13	85	5	2
2006 Sept 14	85	5	2
2006 Sept 15	80	5	2
2006 Sept 16	80	10	3
2006 Sept 17	80	12	3
2006 Sept 18	80	15	3
2006 Sept 19	75	8	3
2006 Sept 20	75	5	2
2006 Sept 21	75	5	2
2006 Sept 22	75	5	5
2006 Sept 23	75	15	3
2006 Sept 24	75	12	3
2006 Sept 25	75	10	3
2006 Sept 26	75	8	3
2006 Sept 27	75	5	2
2006 Sept 28	75	20	4
2006 Sept 29	75	10	3
2006 Sept 30	75	12	3
2006 Oct 1	80	20	4
2006 Oct 2	80	10	3
2006 Oct 3	80	8	3
2006 Oct 4	80	5	2
2006 Oct 5	80	5	2
2006 Oct 6	80	5	2
2006 Oct 7	80	5	2
2006 Oct 8	80	5	2
2006 Oct 9	80	5	2

For more see: <http://www.sec.noaa.gov/Data/index.html#alerts>



## Summertime Radio

*In our first Column of the Month for the season, RDXA members share their summertime radio adventures and projects, etc.*



**K2NNY, Hickory Lake Contest Club** – K2DB and W1TY have installed a new tower and antennas at K2NNY over the summer.



**K2NNY, Hickory Lake Contest Club** – Club trustee K2DB has made so many additions to the antenna farm that an antenna switching and control shack was needed to house all the switch gear. Here, the new antenna shack is delivered to K2NNY. You gotta love the transport system.



**K2NNY, Hickory Lake Contest Club** – Antenna shack in place and ready for feedline, power, and control wiring and hookup.

**Dave, N2CK** – Keeping with the theme Mike proposed for this month, of station changes, here's my contribution. Wanting to augment my coverage on the lower bands I purchased an Ameritron remote coax switch. I currently have one feedline of RG-213 running from the house, through the PolyPhaser mounted on the grounding plate, to the GAP vertical mounted on the garage. Last year, I also had an Alpha Delta antenna (on loan from Vic – thanks Vic) which was fed with ~170 ft. of RG-58 coax. My plan is to have the remote coax switch so that I can utilize the GAP, Alpha Delta, and one more wire antenna I picked up at the hamfest for 160 – 40M all from one feedline. Over vacation, I mounted the coax switch under the eaves of the garage. The directions indicated that in the event of failure of the control unit, the switch would establish a default connection to the antenna on position 4. Figuring that I only had the GAP currently in a usable state, I connected that to position 4. I went into the house to check out this new toy. Imagine my surprise when I heard exactly the same signal strength no matter which antenna I was connected to! I know when I played with the remote coax switch it at the kitchen table, I heard the relays clicking away as I selected different antenna positions. Hmmm, I wondered, 'Did I buy something that didn't work?' I called Ed, the resident Wizard and local legend to ask him if he could check it out. I forgot to mention, that I'd already done a continuity check of the center pin(s) of the antenna connectors with the ohmmeter, and found open circuits all around.

So, I arrived at Ed's house, confident that something was wrong with this unit. It took Ed all of a few minutes to prove that nothing was wrong, and that it was indeed switching correctly. It was then that Ed went on to explain that this unit used DC to switch between the various antennas, and that it also used RF coupling to pass the signals from the various inputs back to the radio. That would explain why the ohmmeter showed open circuits. But why did it receive the same signal strength no matter which antenna it was connected to? Therein was a mystery I needed to solve. I asked my son for assistance when he was home from school (remember that reference in paragraph one about kids being sometimes handy to have around). I had him rotate the switch while I stood underneath it. Well, imagine my surprise when I did **not** hear the relays clicking away. There was one thing left to try, which was to bypass the PolyPhaser with a bullet. Wow, what a difference. I could now hear the relays happily clicking away! Lesson learned: PolyPhasers do not pass DC. That's why I was hearing the same signals no matter which "antenna" I was connected to! I wasn't getting control signals to the remote unit, so it was doing what it was designed to, and defaulting to the antenna on position 4!

Having 3 PolyPhasers mounted on the grounded plate outside of the house, my thought was that I could use one for the tribander on the roof of the house, one to protect the antennas mounted on the garage and trees at the back edge of the property, and the third for an antenna not yet in hand. So, I guess I may have to rethink lightning protection for the antennas at the back of the property.

**W2CCC, Coldbrook Contest Club** – Several members of the Club fielded an all-mode operation for the IARU HF Championship, 8 and 9 July. A new 40-10m dipole was installed, oriented broadside to Europe. The existing 160m dipole was raised and repositioned, also broadside to Europe. Irv, AF2K; Paul, N2OPW; Gayle, N2TWI; and Mike, N1OKL were the operators for a fun weekend radio and gourmet food event.

The antenna work paid off handsomely and contacts were made with most of the IARU HQ stations operating the event. Several enjoyable 160m QSOs were made Saturday evening with RDXA members also participating in the contest. K2DB in particular was



booming in loud and clear on 160m from the other (North) end of the Adirondack Park.

The following are some photos of CCC members in action during the contest.



Gayle, N2TW1 running 'em on 20m SSB. The YL touch really pulls in the Qs.



The CCC HQ buildings and station. The flat, clear 15 acre site sits at an elevation of 1400 ft. and is an ideal location for a variety of wire antennas



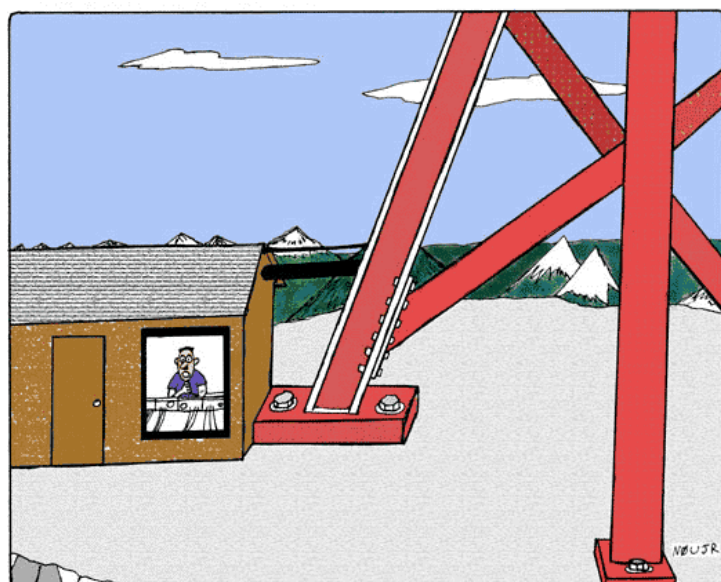
CCC members enjoying a round of "cold 807s". Rear, L to R: Raymond, harmonic of K2CS & N2TW1, Chris, K2CS. Seated, L to R: Irv, AF2K and Paul, N2OPW.



AF2K checks out the bands prior to the start of he contest.



AF2K working the bands and K2CS logging.



"Yes I really am running just 5 watts QRP...although I suppose I do have an above average antenna system..."



## DX and the New (Club) Year

By Vic Gauvin - K1PY



What better way to start the 2006-07 DX and Contest season than with a DX presentation? We'll be presenting the Kermadec Island DX video to revisit the challenges of DXpeditions, plus providing the latest updated RDXA countries list with the latest additions from our own DXAC representative, **Chris K2CS**.

We have another handout as well, so find another refrigerator magnet to put up the new Contest Calendar for the season, and let the family know which weekends you'll be hibernating in the shack. The key is to let them know they can do whatever *they* want too! You can try this approach as well, "Look at all those contest dates! I'm only doing this one and that one!" Does anybody hear the echoes of "Lotsa luck?" ☺

Plus we'll look ahead at upcoming programs, including an exciting proposal from **Chris K2CS** for RDXA's 60<sup>th</sup> Anniversary year. We had a ball during our 50<sup>th</sup> which included the W2RDX/50 campaign. Let's see what Chris is proposing this time

Lastly, let's give an official welcome to our new Board members **Irv AF2K**, **Alan K6PSP**, and **Doug N2BEG**. They stepped up to contribute to the Club, so let's show them our appreciation!

## My Four Step Program

By Rick Mintz - W1TY/qro

Since summer 2005 I have been on a crusade to improve my RTTY contesting station:

1. Upgrade my antennas: Homebrewed a three element vertical parasitic array for 40 meters (5.33 dbd gain, 24 db F/B), multiple patterns, designed by Floyd WA2WVL.
2. Optimize my RTTY decoders: by testing different setting combinations to accommodate various signal paths and propagation conditions. Using multiple decoders I can better print QSB, QRM and weak signals
3. Improve my RTTY receive capabilities: Added 2 cascaded 250 Hz receive filters to my IC-765 and modified the Icom to use the new filters in RTTY mode.
4. Find a way to become **LOUD**.

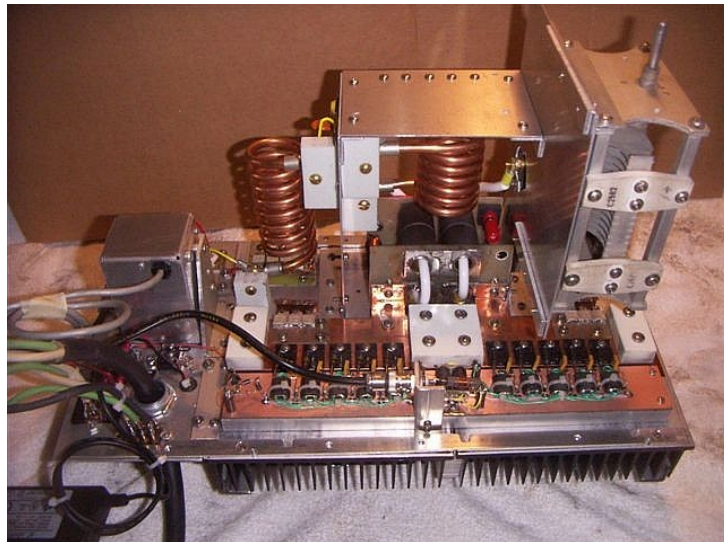
Steps 1-3 were completed by spring 2006. The antenna upgrade alone produced three 1<sup>st</sup> place 40 meter N.A. finishes in four contests. Now to become **LOUD**. Here is a brief overview of how that was accomplished.

I operate Single Op Single Band 40m. To become **LOUD** there was only one option (after antenna gain), and that was a new amp. Since contest classes tend to be under 150w or legal limit, I needed 1500 watts. I could already make 500-600 watts but why not more? Many commercial amps will produce 1500w SSB or CW. But try to find anything other than an Alpha that will do that on RTTY and under \$5000. Additionally I did not have the know-how for such a major homebrew project. Was such a thing possible for someone with limited electronic experience?

Choosing to avail myself of the expertise available, I again contacted Floyd. Anyone that designed commercial multi-KW amplifiers was just what this RTTY Ranger needed.

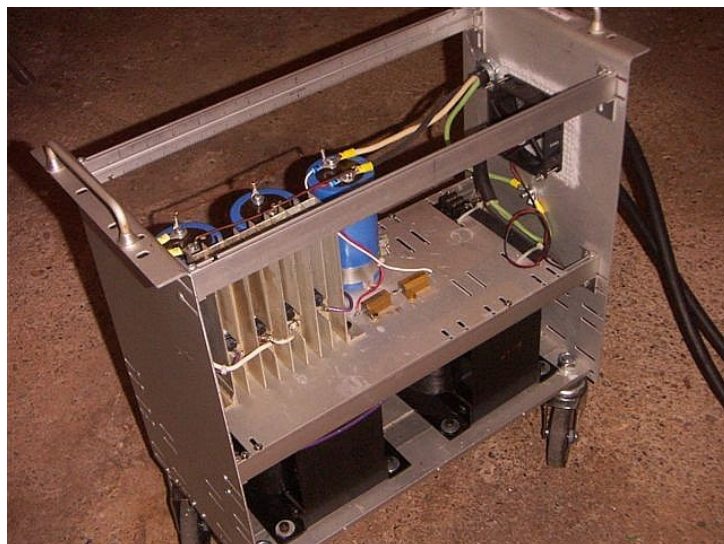
Floyd, retired from Harris RF, is still actively involved in research. He offered to design a 40 meter, Class E, RTTY-only, solid state amp capable of ~2400 watts, 100% duty cycle. As Floyd put it, "Key the amp, go on a long vacation, and it will be running when you get home." A Class E amp is capable of 92% efficiency with proper tuning. (The 10 HEXFETs are capable of dissipating over 4000 watts and in my amp, reach 165° F. The 135 sq. inch heatsink only rises 15° F.) Even better was his generous offer to build the power amplifier portion for me! I would build the 100+ pound power supply. K2DB ran a #10 240vac power line for me in the garage for testing. (It looks like a garden hose!)

Floyd drove from Florida for the Rochester Hamfest and delivered the PA unit. I was amazed at his results. All of this was done in a home workshop!



The PA section of W1TY's homebrew Class E RTTY amp. You can see the row of 10 HEXFETs (5 per bank) in front. The PA was built by Floyd, WA2WVL in his home workshop.

My contribution, small in comparison, was the power supply. A single transformer would be \$400, but on Ebay I was able to acquire two new, which in parallel, gave the required power for \$100. N2OPW showed up with 19" racks that would form the case for each unit. Note the wheels, a necessary addition!



The power supply for W1TY's homebrew Class E RTTY amp. Built by W1TY in his home workshop.



Q: How do you test a 100% duty cycle, 2000 watt amplifier?

A: Have N2BEG step up with a big league dummy load.



The Radiator...er, dummy load used for amplifier testing and tuning.

N1OKL printed the front panel graphics that I created using Microsoft Visio.



The front panel of W1TY's Class E Amplifier.

All of this was not without setbacks. Even after running 1850 watts for 30 minutes there were mishaps. (If you ever want to simulate popcorn, have 10 HEXFETs blow up.) All in all, parts replacement was only about \$200, not bad for a new design.

I recently used the amp in the Russian RTTY contest in a casual effort. With about 75 European QSOs, I called Floyd to complain as *one station asked me for a repeat!*

Many RDXA members donated parts, time, expertise and especially patience towards the successful completion of my

amplifier. Total cost, about \$1400. QRO thanks go to: WA2WVL, N2OPW, K2DB, N1OKL and N2BEG.

CU in CQWW RTTY. I plan to be **LOUD**. More info on Class E, <http://classe.monkeypuppet.com>

de Rick W1TY/rr – W2RTY/rr

## Man & Woman Explained

By Fred Gern - K2FR (sk)

*Several years ago, Fred sent out the photo below. In a recent clean up of my PC I came across it, and it reminded me again of Fred's irrepressible humor and good nature. I suspect many of you also received this from Fred, and I hope it brings back the same fond memories of Fred for you. Ed.*

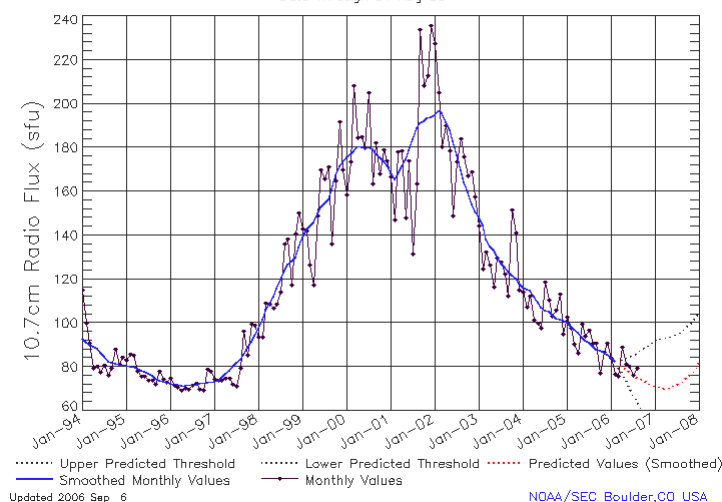


## Solar Cycle 23 Progression

NOAA SEL

Several recent reports suggest that we have reached the end or bottom of Cycle 23. The chart below from the NOAA Space Environment Labs in Boulder, CO suggests that there may yet be some bottoming out ahead. So, there's still plenty of time to get those low band receiving antennas up! This winter should provide great 160m conditions.

ISES Solar Cycle F10.7cm Radio Flux Progression  
Data Through 31 Aug 06



10.7cm Radio Flux Progression – looks like the worst HF conditions may still be to come, but great conditions ahead for Top Band aficionados.

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## ROCHESTER **DX** ASSOCIATION

W2RDX

rdxa.com

This Bulletin is the official organ of the Rochester DX Association and is published monthly, September through June. Email your articles, tidbits, ham ads, etc. to Mike, N1OKL at the addresses below by the second Tuesday of the month for inclusion in that month's issue.

All those with an interest in amateur radio and DXing and contesting are cordially invited to any meeting and to join RDXA. Meetings are held at 19:30 local time on the 3<sup>rd</sup> Tuesday of each month, September through June.

**President**----- Dave Wright – N2CK  
n2ck@arrl.net

**Vice President**----- Vic Gauvin – K1PY  
k1py@frontiernet.net

**Sec/Treasurer**----- Charles Kuhfuss – WB2HJV  
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### Board of Directors

Irv Goodman – AF2K----- af2k@juno.com

Doug Stewart – N2BEG----- stewarts@rochester.rr.com

Alan Masson K6PSP----- k6psp@arrl.net

Vacant----- to be elected at September meeting

### Appointed Positions

DX Chairman ----- Chris Shalvoy, K2CS

Packet Cluster Sys Op ----- Bob Hunter, NG2P

Webmaster ----- Scott Hoag, K2ZS

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