



THE FRANKFORD RADIO CLUB NEWSLETTER

PROFICIENCY THROUGH COMPETITION

CALENDAR

May 2005:

- 10 FRC Main Meeting, Phila**
- 10 Remy Meeting B**
- 14-15 CQ-M DX Contest
- 14-15 Mid-Atlantic QSO Party
- 19 T.I.T.S. Meeting, Noon**
- 24 Remy Meeting B**
- 28-29 CQ WPX Contest, CW

June 2005:

- 14 Remy Meeting B**
- 16 T.I.T.S. Meeting, Noon**
- 18-19 All Asian DX Contest, CW
- 25-26 ARRL Field Day
- 28 Remy Meeting B**

July 2005:

- 1 RAC Canada Day Contest
- 9-10 IARU HF World Championship
- 10 FRC Summer Mtg, N3RD**
- 12 Remy Meeting B**
- 21 T.I.T.S. Meeting, Noon**
- 26 Remy Meeting B**

CHANGES

None this month

Deadline for June issue:

Wednesday, May 25, 2005

President's Column

On behalf of the club, I would like to thank Joe Brue, **K3NM**, for his great work as president for the past two years. **Under Joe's leadership, we have won the last two DX contests and look pretty good for winning the 2005 ARRL DX contest.** Thanks Joe.

This month is the annual donation drive. Your newsletter includes a SASE to return you donation to the club treasurer, Bob, **KQ2M**. All donations go a long way towards supporting club resources such as the packet cluster, repeater, and the web site.

I hope to have a good turnout for the May meeting at the College. I would like to hear from as many members as possible about improving meeting attendance. On the reflector, I have seen suggestions about having programs, changing the meeting location, and going to weekend meetings. I would like to hear ideas from the membership about this issue. Nothing will change without a vote by the membership.

At the September meeting, Sig, **N3RS** and Dave, **N3RD** will be giving a presentation on Station Automation. If you are interested in hearing about what Dave & Sig have done, the September meeting is for you.

Ben, **W3BEN**, recently became a silent key. In Ben's will, he left his ham radio equipment to the club. Nick, **K3NL**, has volunteered to produce a list of equipment. I am looking for suggestions on what we should do with Ben's equipment. Nick said that Ben had a small crankup tower that we will need a crew to take down and remove from the property. Your help will be appreciated.

73, John, K3ZV

2005-2006 FRC Officers

President - John Lindmeier, K3ZV
Vice President - Art Hitchens, N3DXX
Secretary - Rick Stoneking, W2RDS
Treasurer - Bob Shohet, KQ2M

MEETINGS

Main Meeting in Philadelphia

The main monthly meeting of the **Frankford Radio Club** will be held Philadelphia on Tuesday, May 10 at 8 PM. Location is Rosenburger Hall, Room 102 at the University of the Sciences.



T.I.T.S. meeting—The Trexlertown International Transmitting Society meets on Thursday, May 19 at 12:00 noon. Location is the Hometown Diner on Route 222 in Trexlertown..

Rexy Meeting B—The Rexy's **FRC Meeting B** meets about 8 PM on the second and fourth Tuesdays of each month.

Special FRC Meeting at Dayton

Come join your fellow FRCers at a meeting (yes, it counts) lasting 3 nights. Location is the Crowne Plaza Hotel in the Contest Super Suite. Time is 8pm til ??? each night.

— . . . —

Summer Meetings



Sunday, July 10—Dave Hawes, N3RD 1PM (Directions in the July issue)

We need volunteers for June and August!!!!



QST QST QST ::: FRC GOLFERS:::

This year's **FRC OPEN** golf outing will again be held at the Southmoore Golf Club. See www.southmooregolf.com for directions and information about the course. Lunch and a driving range are available at the course. This is the same location it has been held for the past two years.

Date is Tuesday, June 21, and the first tee time is high Noon.

Contact me k3oo@k3oo.com by Friday, June 3 if you are planning on attending.

Dinner at the same place as last year after the open.

Anyone interested in stopping by my QTH after dinner is welcome to keep the party going.

GREETINGS FROM AN OLD FRC FRIEND

by Dale Long, N3BNA

On our trip to operate in Tobago, I had an unbelievable meeting with an unbelievable guy. Frank/9Y4VU has been a regular contender and friend of **FRC** for many years. But I had never met him before, and had no idea what a fine gentleman he was and his great love for contesting and his **FRC** friends. This guy is one-of-a-kind. Frank asked me to send his warm greeting to all the “boys” in the **Frankford Radio Club**.

On my last trip to South America, my good friends ZP5AZL and CX6VM suggested another joint contest operation at a mutually convenient location. Our first choice did not pan out, and then Tom noticed an advertisement for the 9Y4SZ station in Tobago. We began making plans early, but a significant obstacle emerged...I was having kidney surgery just before the trip. Facing the surgery was made easier with the thoughts of tropical breezes and DX pileups. My (much too optimistic) plans were to recover quickly, but when that didn't happen, my involvement — and the whole trip — came into question. It was uncertain until the last moment whether I would be able to go on this contest trip because of the seriousness of my recent operation.

I belatedly sent an Email to our old friend Frank/9Y4VU only 2 days before my arrival date. On the basis of that note, and without my request, he came to meet me at the airport, which was very fortunate for me. (it is a long trip for him to the airport). His only surprise was that he was looking for 3 guys, and definitely not one guy in a wheelchair. But he ended up taking me back to the hotel, as I had been waiting more than an hour for a ride, and then waiting for my fellow operators, who were delayed.

Frank is the finest gentleman that I ever met, and he regaled me with story after story about his experiences traveling to the USA and meeting **FRC** members and various visits, club meetings, and a trip to Dayton. He remembers everything in great detail.. Of course, he asked about each of the operators that operated from his shack, and told me some interesting stories about them. I promised to send his greetings to the club. (Frank, 9Y4VU, lives in Trinidad, our recent operation was from the island of Tobago)

It was actually Bernie/W3UR who alerted me to the fact that 9Y4W had been used before by **FRC**ers at 9Y4VU's QTH in Trinidad. I was surprised to learn that, but of course I was not involved in selecting the new callsign. Andy/9Y4SZ (ex DL2MEH) who was our host in the island of Tobago selected this callsign after being criticized by some locals for allowing guests to use his personal callsign. The complainer said that he should get a contest call, and in order to be agreeable, he chose 9Y4W out of the available list.

Again, other than the delightful weather, the most amazing thing in the trip was the kindness of Frank, 9Y4VU. We had several long and delightful conversations, and he is a true friend to the **FRC**. Unfortunately his tower has broken over and antennas are now upside-down...He needs help to get back on the air. Anyone interested in helping?

Frank, by the way, seemed less concerned than I about the reissuance of the 9Y4W callsign. I was concerned that some of the previous users might be disappointed.

Thanks for all the contacts, despite horrendous conditions. Jorge/CX6VM and I repeatedly threatened to finish the contest in CW, because propagation was so poor. And one other point of interest: we had a big problem with interference from the contesters' perennial nemesis, W6HLH (High-Low-HIGH) in the contest. We have documented evidence from packet callouts and from an audiotape of this interference. Our friend Riley at FCC is reopening the case against him.

I hope you will all remember Frank/9Y4VU. He certainly remembers you guys, in great detail. He is like a walking historian of **FRC**ers from 30 years ago...Really a gem.

CONTESTING — TIPS, TECHNIQUES, RESOURCES

Reprinted with permission from the April 20, 2005 ARRL Contest Rate Sheet

Effective March 1st, American and Continental Airlines (there may be others) lowered the allowed checked baggage weight limit from 70 to 50 lbs. Apparently, you can still take up to 70 lbs but should be prepared to pay additional fees; approximately \$25 for up to 70 lbs. DXpeditioners should check with their airlines for applicable limits and fee schedules. (Thanks, John W2GD/P40W)

Super-Check-Partial database file guru, Randy K5ZD, is looking for logs in all the wrong places. He needs logs from the following contests (any mode) to create the next set of SCP database files: CQ WW, CQ WPX, CQ 160M, ARRL DX, ARRL Sweepstakes, ARRL RTTY Roundup, ARRL 10M, ARRL 160M, IARU Radiosport, Russian DX Contest, and Worked All Europe. Send him the same Cabrillo format log that you submitted to the contest sponsor. The next version of the SCP files will be released in mid May before WPX CW. More info on SCP files can be found at <http://www.k5zd.com/scp>.

In many electric fence noise cases, the culprits are poor splices and gate hooks. It can be quite evident that the sparking will eat through the fence wire, letting the horses get out. If this sounds familiar, take a look at the Electric Fence Interference section at <http://www.arrl.org/tis/info/rfigen.html>. There is a QST article that you can download. The neighbor was described as was very cooperative, so the article is one hams can show to the owners of electric fences to help secure cooperation. (Thanks, Ed W1RFI)

From John WOUN regarding the required grade of bolts for tower assembly, "Grade is really only the hardness/strength of the bolt and does not imply thread length or shoulder. Rohn has always used Grade 5 bolts and in recent years they just specify the SAE NF (fine thread) for their bolts on Rohn 25 and SAE NC (coarse thread) for Rohn 45. These are NOT the hot dipped bolts of yore, but the standard auto grade plated bolts from auto-parts stores. Standard SAE bolts are Grade 5." (Thanks, Ken KOPP)

Here's an easy procedure to make a good approximation of line loss, without disconnecting the coax up on the tower:

1. Connect an antenna analyzer to the feedline in the shack.
2. With the analyzer in swr mode, vary the frequency, observing where the SWR goes through maxima and minima. Pick one of the maxima, in the vicinity of 25 - 30 MHz, noting the SWR and frequency. At that point, the antenna up on the tower presents such an extreme impedance that you are essentially measuring the SWR on an unterminated line.
3. Plug the observed maximum SWR into the following equation: $\text{loss (dB)} = 10 \log [(SWR+1)/(SWR-1)]$ By staying at the high end of the analyzer's frequency range where the SWR maxima have lower values, the effect of imprecision is reduced somewhat. (Thanks, Dave K6LL)

From the ARRL Propagation Bulletin by K7RA, the WA4TTK Solar Data Plotting Utility is freeware by Scott Craig. Download the software at <http://www.craigcentral.com/mystuff.asp>. The program can update by automatically grabbing the sunspot and solar flux data from a text file version of this bulletin, or it can download the data from ARRL servers over the net. (Thanks, Tad K7RA)

Most contesters use the PC to send their CW during contests. What about between contests? A number of non-contest logging programs have a feature that sends CW from the PC keyboard. K1EL (<http://www.k1el.com/>) makes the nifty K40 kit that turns a standard

PS/2 keyboard into a keyer directly, without requiring a host program - it's completely standalone. Monty N5ESE built the K40 circuit board into a surplus keyboard as described at <http://www.io.com/~n5fc/kb.htm>. K1EL offers several other handy kits, including the WinKeyer that bypasses many of the timing difficulties associated with the use of PC serial ports for keying. (Thanks, Monty N5ESE)

CONTESTING — TIPS, TECHNIQUES, RESOURCES

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While you're at it, browse through the list of products for DXers and contesters made by microHAM at <http://www.microham.com/>. The microKEYER is a new product for digital mode operating that uses the PC USB port instead of an RS-232 port.

Another weapon in the eternal battle between ham and tree limb is the arborist's throw bag. Basically, it's one pound of lead shot in a heavy nylon bag with steel ring on top that attaches to 150 feet of braided polypropylene "slick" line. The line is placed in a lazy coil in a 3-lb coffee can. John N1OLO reports that, "with practice you can throw the bag up 75 to 80 feet with accuracy. There is a large slingshot like launcher available that can launch the bag up to 150'."

Here's where to find those metal Slinky toys for making Beverage antennas: <http://www.poof-slinky.com/catalog/slinkytoys/catalog.asp>. (Thanks, Rick KC8AON)

The Contesting-Internet Hybrid

At the recent Visalia DX Convention, I was the host of the annual Contest Forum program - a one-hour ramble through various topics of contesting interest by a panel of recognized expert contesters. Having hosted the forum before, I thought it would be fun to have panelists that brought a DX perspective to the topic. After all, this was a DX convention! My entreaties successfully lured Paolo I2UIY, Roger G3SXW, and John W2GD/P40W to the dais.

Subjects relating to digital communications technology figured in all three of the questions generated by the panelists. I2UIY discussed the policing of self-spotting as highlighted by K1TTT's analyses and tracing of IP addresses on the CQ-Contest reflector. W2GD/P40W took the DX view on the desirability of frequent spotting and "packet pileups." G3SXW asked when contest sponsors would start requiring shorter log submission deadlines, partly to discourage "log washing" before submission.

In the case of Paolo's question, what is to be done about the chronic self-spotters? First, one must remember that it's not illegal in every contest and even common above 30 MHz where contests are a very different beast. Neither was he talking about the operator who is unaware that the practice may be a rule violation. The culprit in mind takes active measures to disguise the spots, knowing full well that it's cheating. K1TTT has developed a process for uncovering the IP address of the bogus spots so that the real source of the fake spots is quite clear. Although the exposure has not resulted in a large number of administrative sanctions, peer pressure is being applied. Given that one can't be absolutely certain of the infringer's identity, perhaps this is as far as we can go. There are some possible technological fixes, but peer pressure of various means is likely the most reasonable way to attack the practice.

The evolution of tactics was highlighted in the responses to John's comments about being spotted. Being an excellent operator in search of high-rate environments, his attitude was essentially, "Bring 'em on!" Roger's observations on being spotted with the busted call of a juicy new mult (5V5Z instead of 5U5Z) pointed out the undesirable aspects. His effective rate plummeted as dupe after dupe went into the log. He eventually had to QSY and start again. The strategies being developed on each end of the pileups often avoid spot-driven behavior. I.e. - tuning up and down the band. Imagine that! It's interesting that the success of the spotting network is driving competitive operators outside it in search of the advantage that spotting once conveyed to connected stations.

Finally, Roger pointed out that the long time delay between the end of the operating period and the log submission deadline allows and can even be seen as encouraging the poor practice of "sanitizing" logs. With the near-ubiquity of electronic log submission, sponsors report that nearly 90% of logs are uploaded within a day or two. Why allow four-week or longer submission periods? Indeed! An on-the-spot poll to select between leaving the deadlines as they are or selecting a one-week, one-day, or one-hour deadline showed a clear preference for moving the deadline to one week and a significant fraction for one day. Perhaps a three-day deadline would work. What about paper logs and DX-peditions? Exemptions could be pre-arranged, of course, not after the fact.

All of these questions and issues are driven by the available of cheap data network bandwidth and cheaper processor

CONTESTING — TIPS, TECHNIQUES, RESOURCE

power. On reflection, it's clear that the combination of on-the-air radio skills with world-wide, high-rate connectivity have created an entirely new type of contest and contester. Operator and network are now merging into a single, planetary entity that emerges on the HF bands during contest weekends. Good or bad, it's definitely changing the face of HF contesting.

Reprinted with permission from the April 6, 2005 ARRL Contest Rate Sheet

W7EL's classic article from Antenna Compendium 1 on how baluns work and why they are needed is now on line at <http://eznec.com/Amateur/Articles/Baluns.pdf>. If you ever wanted to know about baluns and how they work, read this article. It will dispel a lot of myths. (Thanks, Jim KK6MC/5)

ARRL has just posted the electronic version of May 2005 QST's product review of Antenna Analyzers for members only at <http://www.arrl.org/members-only/prodrev/pdf/pr0505.pdf>. The analyzers covered are the Autek VA1, the Kuranishi Instruments BR-210, the MFJ-269B and the Palstar ZM-30. The N2PK Vector Network Analyzer, while not covered in this review is also highly recommended. (Thanks, Bill W4ZV and Rick N6RK)



Work Wanted:

Experienced tower climber immediately available to perform antenna and tower maintenance.

Install/repair/remove antennas, replace feedlines and cabling, rotator servicing, guy wire renewal, new tower installations (guyed and self-supporting), and tower removal.

Make your tower look "like new" this year with a fresh coat of paint.

Inquire about special deals on spring tower painting.

Reasonable hourly rates and scheduling that meets your needs.

Contact: John Crovelli W2GD

W2GD@hotmail.com

(908) 996 3043

Are You Having FRC Reflector Difficulties?

If anyone has stopped receiving the reflector posts recently, please email Bob Applegate, **K2UT**, directly at bob@k2ut.org.

<http://www.qsl.net/lz1jz>



New Mexico Amateur Wins Antenna Case in State Supreme Court

Two 130-foot antenna support structures on the property of New Mexico radio amateur Gerry Smith, W6TER, will remain, now that arguments to permit them have prevailed in the state Supreme Court. This month's opinion reversed New Mexico Court of Appeals and District Court decisions that had ruled against allowing Smith to continue constructing the towers on his rural Bernalillo County property. In July 1999, the county issued Smith a building permit but in December of that year ordered him to halt the project claiming it had erred in issuing the permit. New Mexico Supreme Court Chief Justice Richard C. Bosson recounted events a bit differently in the unanimous opinion.

"After neighbors complained, the county changed its mind, tried unsuccessfully to stop the construction and devised new reasons why Plaintiff's [Smith's] radio towers should not be allowed," Bosson wrote.

Smith bought his property in July 1999 after extensively researching deed covenants, conditions and restrictions, receiving assurances from county officials and submitting a detailed, professionally prepared site plan. After Smith got his building permit and began work on the tower project, Bernalillo County attempted to shut it down, citing June 1999 amendments to its zoning ordinance that, the county asserted, had removed Amateur Radio antennas as an "incidental use" in the A-2 (rural agricultural) zone.

Smith took his case to District Court, which agreed with the county's rationale and added another reason of its own to prohibit the structures. The case then went to the Appeals Court. In 2002, New Mexico became the 14th state to adopt an Amateur Radio antenna bill, based on the limited federal preemption known as PRB-1, which requires municipalities to "reasonably accommodate" Amateur Radio communication. Paraphrasing the language of PRB-1, the Appeals Court agreed that the District Court had acted properly in denying Smith's petition because the two 130-foot towers were "unreasonable" as a customarily incidental use.

The New Mexico Supreme Court applied three standards of review and agreed with Smith on all counts. The high court said that the plain terms of the county ordinance indicate that Amateur Radio towers are exempt from height restrictions, that the county had previously interpreted ham radio antennas as customarily incidental, and that the county had failed to adopt a specific standard to preserve scenic value.

"The results of this case may be unfortunate for the neighbors who understandably regard Plaintiff's radio towers as an eyesore," Bosson wrote for the court. "But Plaintiff fairly relied on the express language of the ordinance and the assurances of the county zoning officials in buying his property." The Supreme Court said that if the county had wanted to prevent towers like Smith's, it could have expressly amended its zoning ordinance to include specific height limitations.

"The County cannot after the fact come up with a new legal rationale to block an unpopular activity, which was previously permitted, to the detriment of a property owner who did everything in his power to follow the rules," Bosson concluded in reversing the Court of Appeals affirmation of the District Court decision.

Regarding his neighbors--the nearest of which is some 1500 feet away--Smith said their main concern was not that the towers were an eyesore. "It is depreciation of property value," he told ARRL. "In fact, over the course of this litigation, their property values have substantially escalated, in tune with other areas around where I live."

The League actively participated in Smith's case from the start, and ARRL General Counsel Chris Imlay, W3KD, filed a friend-of-the-court (amicus curiae) brief with the Court of Appeals in support of Smith's appeal. The League also filed three extensive briefs in the case, most recently with the New Mexico Supreme Court, said Imlay, who called the decision "a great precedent" for similar cases and a "shot in the arm for tower planning."

"Most importantly, the case holds that Amateur Radio antennas--even large ones not specifically regulated by ordinance--can be constructed without an unlegislated 'reasonableness' factor," Imlay commented. Smith credited Albuquerque attorney Ed Ricco, N5LI, an ARRL Volunteer Counsel, for the successful outcome. "It was Ed's masterful briefs and oral argument that won this case," he said.



Notes From Your Editor

Dayton! Pack your umbrellas. It's May and that means it is time for the annual pilgrimage to southwestern Ohio. Hope to see a lot of you there. With the FTDX9000 now shipping, it will be interesting to see how Icom and Yaesu will handle their rivalry at the high end of the rig pricing spectrum. Did you ever think you'd see these kinds of prices for radios? The 7800 goes for \$10.5K. Yaesu has 3 versions of the 9000. The one that competes directly with the 7800 goes for \$11.5K and at only \$1K per 100W you can get the 400W version for a cool \$13.5K!

LOTW (LOGBOOK OF THE WORLD)
Seems like LOTW is reasonably popular with FRCers. So far, 5 out of 7 respondents are using it. And, some of those that are using it are giving it high marks. Anyone else have some input?

CQ ANNUAL DX MARATHON
CQ has resurrected a "new" DX award: the CQ DX Marathon. Last run in 1948, the new CQ DX Marathon will essentially be a year-long DX contest with stations competing to contact as many different countries and CQ Zones as possible over the full-year period. Old-timers might remember the original CQ DX Marathon; it evolved into what became the CQ WorldWide DX Contest. Scoring will be very simple, consisting of the total number of DX countries and CQ zones contacted over the course of a year. There will be no multipliers and each country and zone will count only once. In the case of a tie, the station whose last

qualifying contact came earliest in the year will be the winner.

YOUR OLDEST QSL
Still looking for your oldest QSL card. Dust off the shoe boxes, find an old card, scan it and email it to me at n2ss@n2ss.com. If you don't have a scanner, take a digital picture.

CURRENT OFFICIAL ARRL DXCC STATISTICS

Active Count.....	335
Deleted Count	58
Last Addition.....	VP6/D
Last Deletion.....	STØ

7X – ALGERIA
7V2SI is the call sign to be used by OM3CGN and the 7X group headed to Sanja Island (Algeria) to activate it for the very first time. They will be active from this IOTA one from May 1st to May 5th.

BV – TAIWAN
WARC Band alert. Now thru Jun 5th DJ3KR is signing as **BX3/DJ3KR** on 30 and 17 Meters CW. He's usually active between 1100 and 1700UTC. QSL to his home QTH.

GU – GUERNSEY
Look for DF5AU active as **MU/DF5AU** May 14th-15th on 160 thru 10 Meters, not including the WARC bands. QSL to his home QTH direct or via the bureau.

JD – OGASAWRA
From May 5th to 8th JR1AGC and JH1WCD will be signing as **JD1BLZ** and **JD1BLW**. Activity, mainly SSB, will be on 80 thru 6 Meters, including the WARC bands. QSL to their home calls direct or via JARL bureau.

JT – MONGOLIA
IØSNY will be back in Mongolia once again and will be active as **JT1Y** until May 10th. Also, he will be signing as **JT1Y/4** for a brief time while operating from the Gobi Desert. QSL to his home QTH.

UN – KAZAKHSTAN
From May 5th to 15th Kazakhstan amateurs will commemorate the 60th anniversary of the end of World War II by signing with a special **UP6Ø** prefix.

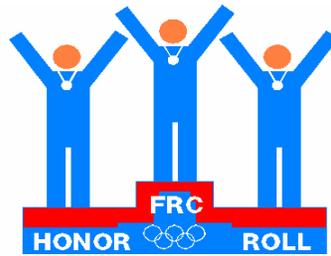
DX ALERT LEGEND	
	160 METER ALERT
	IOTA ALERT
	RTTY ALERT
	WARC BAND ALERT

FROM THE DXCC DESK
Do you know that you know longer have to wait for the ARRL Annual Listings to check your standings? You can look up anything from Honor Roll listings to DXCC standings by any mode and any band. You can even check QRP and the DXCC Challenge Award. The listings are updated daily. Just go to www.arrl.org/awards/dxcc/#listings And scroll down to "DXCC Listings".

"S"pecial "S"alute
Have you made your contribution yet? Contribute to your Newsletter and get the "S" "S".
©

73, Tony N2SS

You can reach me as follows:
H:856-227-4896 C:609-221-4899
n2ss@n2ss.com
argargano@comcast.net



MAY

CONDUCTED BY N2SS

2005

WARC BANDS

<u>30 Meters</u>	<u>17 Meters</u>	<u>12 Meters</u>
N2TK.. 334	K2FL...335	N2TK ..328
K2FL.....332	N2TK 334	K2FL..... 326
N2LT.....318	N2LT 332	N2LT..... 321
W3BGN...313	W3CF 331	W3BGN... 313
K2RW296	W3BGN ... 326	W3CF 303
W2YC.....292	K2RW..... 324	N2SS..... 302
W8FJ.....287	N2SS 320	K2RW 300
N2SS.....286	K2PS 302	W2YC..... 272
K2PS.....281	W2YC 295	K2PS..... 268
W2UP248	W2UP..... 293	W2UP 247
N3RD.....240	W8FJ 291	W8FJ..... 228
N2MM233	N2MM..... 268	N1RK..... 218
K3II.....229	N1RK 253	KQ3F 215
W2LE.....212	KQ3F..... 245	K3II..... 202
NZ3O188	K3II 240	K2NJ..... 190
KQ3F182	NZ3O 233	NZ3O 188
AA2WN...171	W2LE..... 202	W2YR..... 187
W2RQ144	W2YR 202	N2MM..... 185
AB2E132	K2NJ 179	W2LE 176
W2YR.....132	K2JF..... 168	NA2U 154
K3CT126	NA2U 162	K2JF 135
K2NJ.....113	W2RQ 142	AB2E 92
K2JF.....112	K3ND 119	K3CT 76
NA2U.....105	AA2WN ... 116	W2RQ..... 62
N1RK.....97	AB2E..... 114	K3GYS 30
K3ND.....76	K3CT..... 91	N2VW..... 27
N2VW.....71	K3GYS..... 85	AA2WN..... 20
W3CF.....61	N2VW 65	W2CG..... 1
K3GYS17		

K2FL and N2TK still duking it out for that elusive, undisputed **KING OF WARC**

Rules for FRC Honor Roll Listings.

Provide me with your total IOTAs worked, or countries (including deleted) worked for: WARC Bands, 160 Meters, Digital modes, Mobile, 6 Meters or your total for 80,40,20, 15 and 10 for 1.5K Club. Countries do not count until HQ Awards Committee takes action and announces a start date for a new country.

160 Meters

W3BGN292	K2PS 106
AA1K287	K2RW 93
WT3Q.....254	AB2E 90
N2LT248	W2CG 85
N2TK.....243	W2YR..... 81
K3SX.....224	N2SS 79
NO2R.....208	NA2U..... 78
W8FJ207	N2VW..... 77
K3JIG190	W3CF..... 77
W2UP186	K3NL 70
N2MM182	K3CT 63
K3NZ.....172	K2NJ..... 59
W2YC.....171	NZ3O 55
K3NM.....156	KQ3F 54
N3RS156	N1RK..... 42
K3II149	AA2WN... 36
K2FL143	K2JF..... 34
K3ND136	W2LE..... 28
W2RQ.....123	K3GYS 12

W3BGN continues as the undisputed Top of Top Band.

DIGITAL

W2UP.....335	K2JF..... 113
N2LT332	W2LE..... 85
K2PS.....285	KQ3F 78
K2RW.....266	N2SS 53
W2YC.....238	N1RK..... 39
K2NJ.....235	K3GYS 15
AA2WN.....187	W8FJ..... 12
W2YR.....139	



MOBILE DX

W2YC276	K3GYS 143
AA1K270	AA2WN..... 131
N2SS.....234	W2YR..... 21
K2JF150	



1.5K Club

K2FL..... 1708	K3ND1496
W3BGN 1696	KQ3F1446
N2TK 1687	K2NJ.....1406
N2LT..... 1684	W3CF1403
W2UP 1659	AA2WN.....1369
W2RQ..... 1623	K2JF1350
K2RW..... 1610	NA2U1335
N3RS..... 1593	W2CG.....1305
W8FJ 1593	N1RK.....1287
K3II 1573	N2VW1258
N2MM 1524	K3CT1229
W2YC 1533	W2YR.....1148
N3RD 1521	W2LE1141
N2SS 1520	K3NM.....1107
K2PS..... 1516	NZ3O.....1088
NO2R..... 1516	AB2E1074



Islands On The Air

K2FL.....989	NZ3O317
N2SS 811	N2VW259
W2YC 600	W3CF253
W8FJ592	W2YR.....234
N1RK540	K3GYS215



6 METER DXCC

N2LT..... 106	N1RK.....57
K2NJ 100	N2SS.....55
AA1K 98	K2RW.....42
K2PS 96	W2YR.....41
K2JF 94	W2YC.....19
K3SX..... 75	AA2WN.....15
K3OO 71	K3GYS10



THE FRANKFORD RADIO CLUB NEWSLETTER

P. O. Box 431 Albury, PA 18011-0431



Affiliated Club

The Frankford Radio Club

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Newsletter & Roster

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Repeater - 2 meters, 147.27/147.87 Output PL tone, 114.8

Home Page - www.gofrc.org

Meetings

Meetings are held on the 2nd Tuesday of each month (Sep through May) at 8 PM at the University of the Sciences, Philadelphia. Summer meetings are held at member homes (one Saturday/ Sunday per month).

Packet Cluster Contest/DX System

144.930 W3FRC
145.010 N3ED
145.650 K2TD
145.530 K3WW
145.530 AA1K
145.570 WT3Q
145.570 K2TW
145.590 N2NT
144.950 K3ZV
145.730 N2BIM
147.495 W3MM
145.670 W3PP
TBA W2JT

Telnet DX Cluster

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k3ww.gofrc.org 7300
w3frc.gofrc.org 7300