



THE FRANKFORD RADIO CLUB NEWSLETTER

PROFICIENCY THROUGH COMPETITION

CALENDAR

January 2005:

8-9 No. Amer. QSO Party, CW
15-16 No. Amer. QSO Party, SSB
11 FRC Main Meeting, Phila
11 Remy Meeting B
20 T.I.T.S. Meeting, Noon
26 Remy Meeting B
29-30 CQ 160 Meter Contest, CW

February 2005:

5 No. Amer. Sprint, SSB
5-6 Delaware QSO Party
8 FRC Main Meeting, Phila
8 Remy Meeting B
12 No. Amer. Sprint, CW
17 T.I.T.S. Meeting, Noon
19-20 ARRL DX Test, CW
22 Remy Meeting B
26-27 CQ 160 Meter Contest, SSB

March 2005:

5-6 ARRL DX Test, SSB
8 FRC Main Meeting, Phila
8 Remy Meeting B
17 T.I.T.S. Meeting, Noon
19-20 Russian DX Contest
22 Remy Meeting B
26-27 CQ WPX Contest, SSB

CHANGES

None this month

Deadline for January issue:

Wednesday, January 26, 2004

President's Column

The following was sent to the FRC Reflector on December 17, 2004:

With elections coming up in a couple of months we will be needing a new President and Vice President. Also, our Secretary has been in office for four years and we need to give him some relief. So we need a couple of volunteers to make up a nominating committee to get these slots filled. Nomination will be in February and elections in March.

If you'd like to volunteer for this committee please let me know as soon as you can at k3nm@ptd.net

With all the talk about programs lately the club needs someone to take the job of "Program chairman" and set up some programs. The **Frankford Radio Club** does not run by itself, it takes volunteers.

The following was sent to the FRC Reflector on December 18, 2004:

I don't understand why we have no VOLUNTEERS yet to fill the positions that are coming up in a few months. With all the ideas that have been posted lately it seems that nobody wants to do any of the work just give suggestions. The club can not run without officers. From what I have been reading and hearing the members would like to see programs at the meetings. This is where the program chairman job comes into play. We need someone who will work on getting this done. It will be allot of work and maybe it will take more than one person. So let's not just sit back and let others do all the work in running the CLUB.

73, Joe K3NM



Authors Wanted

This is a call for club members to submit articles, shack photos (note, not Shaq photos), etc. for publication. It doesn't have to be pretty, or even that organized. That's my job, though every effort on your part helps. But I'd like to hear from many more members who might have good ideas for articles. 2004's excellent series on various contests by K3MD, or the K3ZO propagation series I reprinted from PVRC are just examples. You can write whatever you like, so long as it's somewhat contest related. I look forward to hearing from you.

73, Joe KQ3F

MEETINGS

Main Meeting Back in Philadelphia

The main monthly meeting of the **Frankford Radio Club** will be held Philadelphia on Tuesday, January 11 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, January 20 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..

— . . . —

FRCers Under the Weather



Ben, **W3BEN**, is recuperating at home after recent surgery and would appreciate hearing from club members. Ben's address is Ben Righter, 144 Burmont Rd., Drexel Hill, PA 19026. His phone is 610-626-7443.

Norm, **K3NZ**, is also continuing is recuperation. Norm's address is, Norm Zoltack, 4333 Locust Dr., Schnecksville, PA 18078. His phone is 610-799-4044 and email is k3nz@enter.net

Hi **FRCers**,

This is Mike Thompson, **N3PUR**, **K3MD**'s son. John badly injured his leg a week ago on Saturday, December 4th. He was trying to get a massive exercise bike down into the basement. The bike fell down the steps and hit him right below his left knee. His leg bones shattered into about nine pieces. Pretty messy break, not just one break but many.

Anyway, I'm back at Brown finishing up my semester now but I told him when he asked that I'd email some of his ham radio friends for him. John had surgery Tuesday morning the 7th. Surgery went well. He won't be able to walk on both legs for at least 12 weeks. He has a big metal halo on his left leg which he'll have for the next 12 weeks.

He will likely need some help with moving some of his radio equipment to the first floor of the house because he will be physically unable to get to the basement for the next 3 months. Some of the local hams in the local Susquehanna Valley ARC in the three county area where John lives will hopefully be able to help him out with that.

Feel free to pass the news to other FRCers and other non-FRC hams as well. For those wishing to contact John, his home phone is 570-743-7862. His home address is RR 1 Box 431 Reichley Rd. Winfield, PA 17889

If nothing else maybe one of you or a ham you know might want to operate from WP2Z for the Feb 19-20, 2005 ARRL DX Test, CW. An FRCer would be ideal, wouldn't want to give YCCC an advantage despite John being under the weather. John won't be putting weight on or walking on his broken leg until March 13th or so at the earliest so he is in no shape to operate from WP2Z even though he has already booked it. Anyway, if you or anyone you know wants to be at WP2Z for the test, contact and work it out with John and the WP2Z people. <http://www.qth.com/windwood/>

All the best, Michael Thompson, **N3PUR** son of John Thompson - **K3MD**

FRC 2004 CQWW CW CLAIMED SCORES

Station	Class	Score	Station	Class	Score
A61AJ	A14	1,350,000	N2CQ	AA	277,947
<i>Op N2AA</i>			N2ED	AA	2,574,016
AA1K	A	4,620,192	N2LT	A	3,769,528
EI/AB2E	AA	1,173,447	N2MR	A	516,520
<i>Op AB2E</i>			N2MT	LA	113,278
HS0ZDJ	A	766,500	N2RM	M2	5,154,079
<i>Op W2YR</i>			<i>Ops N2RM K3ZV</i>		
K2GN	AA	739,932	N2SS	AA	50,397
K2NG	AA	3,754,032	N2VM	A	51,480
K2OWE	MS	338,000	N2VW	MM	375,768
<i>Ops K2OWE K2JF</i>			<i>Ops N2VW W2OF</i>		
K2PS	LA	1,603,055	N3AD	AA	3,527,720
K2SB	AA	914,853	N3KN	A	206,916
K2SG	AA	1,558,076	N3KR	A	486,712
K2TW	A	2,570,673	N3MX	MS	1,689,298
K2UT	LA	82,894	<i>Ops N3MX K3YD</i>		
K3BU	L7	169,936	N3NA	AA	1,408,501
K3CP	AA	521,655	N3NR	AA	595,362
K3II	MM	3,210,560	N3RJ	A	505,476
<i>Ops K3II K3IPK</i>			N3RS	M2	11,460,998
K3JG	AA	50,400	<i>Ops N3RS N2SR N3ED N3RD W8FJ WA3LRO</i>		
K3LR	MM	16,168,677	N3RW	A	96,768
<i>Ops K3LR K0RF K3EST K3UA K8CX</i>			N3ZA	AA	943,260
<i>KL9A N2AU N2NC N3SD N5RZ W0UA</i>			NA2U	AA	2,084,268
K3ND	AA	1,523,214	NE3F	MS	1,380,226
K3NM	AA	1,350,168	<i>Ops NE3F K3ATO</i>		
K3OO	MS	5,140,788	NN3Q	AA	1,506,211
<i>Ops K3OO N2TK</i>			NO2R	AA	2,340,732
K3PH	AA	2,847,969	NU2W	AA	
K3WW	AA	4,929,759	NY3C	LA	128,576
KC1XX	MM	14,810,271	NZ3O	A	65,000
<i>Ops KC1XX K1GQ K1TR KM3T VE3EJ</i>			P40W	AA	10,810,085
<i>W1FV W1MD W2RQ WA1Z</i>			<i>Op W2GD</i>		
KD2HE	A	240,778	PJ4M	AA	5,311,950
KD3TB	AA	78,496	<i>Op K2QM</i>		
KQ2M	A	4,080,154	V26K	LA	7,668,490
KQ3F	AA	2,819,012	<i>Op AA3B</i>		
N1RK	AA	725,186	V31RM	M2	8,263,874
N2AB	AA	666,575	<i>Ops KN5H N3DXX</i>		
N2BA	L21	234,462			

FRC 2004 CQWW CW/SSB CLAIMED SCORES

Station	Class	Score	Station	Class	Score
V47KP	A	2,514,912	W3BGN	A	3,918,909
<i>Op W2OX</i>			W3BYX	A	60,000
VP2MZM	MS	7,459,732	W3CC	A	185,365
<i>Ops K2DM K3ZM</i>			W3CF	AA	1,066,240
VY2NT	A	8,472,464	W3EA	AA	365,532
<i>Op N2NT</i>			W3EEE	MS	1,638,760
W1GD	AA	1,421,748	<i>Ops W3EEE KD3CN N3BNA</i>		
W2CG	AA	1,346,904	W3FV	AA	2,341,750
W2EN	AA	1,915,424	W3FVT	A	160,440
W2LE	A	1,004,456	W3PP	MM	5,127,840
W2RD	AA	218,400	<i>Ops W3PP KW3Z N6ZO W3PAR WB4FDT</i>		
W2RE	AA	3,579,006	<i>WK2W</i>		
W2REH	LA	777,417	W3RJ	A	447,078
W2UDT	A	239,445	WA3RHW	AA	117,696
W2UP	AA	2,862,600	WE3C	A	2,121,718
W2YC	MM	1,755,130	WP2Z	M2	14,151,180
<i>Ops W2YC AA2WN W0MHK</i>			<i>Ops K3CT K3TEJ K3VA</i>		
W3AP	A	385,008	WW2Y	A	3,281,908
					Total
					227,340,212

Scores reported as of Dec 26, 2004. If your score is missing, please contact **K3WW**. Note: multi op scores are equally split by CQ and only the portion belong to club members who live within the defined radius count towards the **FRC** aggregate.

FRC 2004 CQWW SSB Additional Claimed Scores		
Station	Class	Score
KF3B	A	47,880
NU2W	A	472,890
VP2E	M2	43,431,314
<i>Ops N2NT K1DG K5MR KC5EA N5AU N5TJ VE3EJ</i>		
W2CG	M2	1,517,337
<i>Ops W2CG W2EN</i>		

FRC 2004 ARRL 160M CONTEST CLAIMED SCORES

Call	QSOs	US/VE	DX	Score	Class
AA1K	1504	77	42	390,082	SOH
AB2E	700	67	11	112,242	SOH
K2DM				20,068	
K2GN	122	37	4	10,496	M
K2SB				22,650	M
K3MD	151	53		16,006	SO
K3WW	1090	78	33	259,629	M
KF3B				124,270	SOH
N1RK	220	46	2	21,408	M
N2ED	540	72	4	82,992	SOH
N2NC	322	58	1	38,173	SOL
N2NT	655	72	9	109,026	SOH
N2VW	239	58	3	29,707	M
N3AD	506	70	9	82,318	SOH
N3MX				12,740	M
N3NR	332	59	2	41,419	SOH
N3ZA				12,735	M
NN3Q	699	66	13	113,523	M
NO2R	1241	78	47	350,000	M
<i>Ops NO2R K2NG</i>					
W2GD	1410	78	50	413,952	M
<i>Ops W2GD W1GD K2SG K2TW KU2C N2HM</i>					
<i>N2NC N2OO N4HY W2GC W2KP</i>					
W2RQ	219	64	6	31,920	M
W3AP	315	57	6	40,824	SOH
W3BGN	1060	75	25	221,300	SOH
W3CF				6,800	SOL
W3FV	500			65,000	M
W3MF	333	54	6	41,040	M
W3RJ				73,627	SOH
WE3C	1084			256,913	SOA
Total				3,174,521	

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



Contesting as the Solar Indices Plummet (Part VI)

by Fred Laun, K3ZO

Reprinted with permission from PVRC (February 2004 Newsletter)

This is the last part in this series of articles. What I hope to do this month is to provide a general look-ahead to what we might expect in the next few years. To get our initial bearings, we are currently on the down slope of Cycle 23, about four years nine months down from the peak of the cycle which occurred in April of 2000. Scientists are predicting that the minimum will occur in the year 2006. Since the cycles have historically averaged about eleven years from peak to peak, the next cycle, Cycle 24 would be predicted to peak in the year 2011. Cycles have traditionally risen at a more rapid rate than they have decayed, so once we reach the minimum the rise can expect to be pretty fast compared to the rate of decline that we will have seen before then.

What is the peak value of the next cycle likely to be? The predictions by experts in the field are all over the map, which shows how difficult it has historically been to forecast the values of successive cycles in advance. The basic problem is that the period during which humankind has been scientifically advanced enough to accurately measure the Sun's activity is so infinitesimally small as compared with the age of the Sun that there is insufficient historical data to bring to bear on the problem.

Schatten and Tobiska(1) predict the onset of a period of very low-value cycles beginning with Cycle 24. On the other hand, the unusually high solar activity in October/November of 2003, when the strongest solar flare ever recorded occurred, has led other scientists to predict that the peak value of Cycle 24 will be considerably higher than the peak values of cycles in the recent past. We can only hope, as testers and DXers, that the latter predictions turn out to be the correct ones. In the meantime we are going to have to put up with a few years during which things are going to be in the doldrums compared to what we have been accustomed to.

In practical terms, what does this mean? We have already seen from December's [2003] 10 meter contest that the 10 meter band is showing signs of decreasing DX activity. I didn't work any JA's this year in that contest, and the European opening was shorter and less robust than those of recent past years. To some extent this was compensated for by a wonderful out-break of Sporadic E propagation. Science has thus far failed to find any correlation between the sunspot cycles and the frequency or intensity of Sporadic E sessions. What this means for ten meters in the coming years is that it may be better in the summer months than in the winter months, though not for very long-distance DX. In a couple of years you may find it easier to work Europe in late June or early July on 10 than in mid-September through mid-March which is what we have gotten used to lately. But it will be highly unlikely from 2005 onward that you will be able to work Japan from the East Coast, though it might be possible on one or two days in the summer when Sporadic E floods the North Pole.

Even 15 meters might find it tough to open right at the bottom of the cycle. I can recall one weekend back in the 60's during a solar minimum when, operating 15 meters at the W3MSK super-station, I was only able to work four KZ5's (then the Panama Canal Zone) all weekend long -- PERIOD!

Twenty meters will be king during the day but even it will disappear rather quickly after sunset and will open only about at sunrise to Europe, though if the solar flux is low it could well stay open all night to Australia. Paradoxically we may find that the two most interesting contests right at the bottom of the cycle could well be the CQ WPX CW contest and the IARU contest, since they occur closest to the periods of maximum daylight for us in the Northern Hemisphere. Experience has shown that 20 meters can easily stay open to Europe all night long in the summer even when we are at the solar minimum. And particularly for the IARU contest Sporadic E propagation could quite likely enhance propagation on the 10 and 15 meter bands, since it occurs close to the yearly Sporadic E peak.

Forty meters is not as good right at the bottom of a cycle as it is about halfway down the slope -- in other words where we are at right now -- or halfway up the rise, because for very long darkness paths the MUF can drop below 7 MHz when the cycle is at the bottom. Thus as I mentioned in a previous article, there will be a dead period toward Europe from late at night until the wee hours of the morning. This past weekend I spent some time in the HA DX Contest and this phenome-

[CONTESTING — TIPS, TECHNIQUES, RESOURCES](#)

non was already being exhibited. At 2200 UTC T96Q was 10 db over S9 on my S-meter. By 0200 UTC his 40 meter signal had dropped to S5 on the meter, but European signals on 80 meters were booming. When I called HA7UG on 80 at 0435 UTC he answered with the word "huge" before giving me my number. When I ran out of new Europeans to work on 80 I went back to 40 at 0530 UTC and encountered what was for all intents and purposes a dead band toward Europe, and so I went to bed rather than waiting for it to open back up.

On the other hand 40 is very interesting right now at sunrise and sunset, when "grey line" propagation is in vogue. Of course it helps to have a beam, but almost every morning from about 1100 UTC to about 1300 UTC this month I have been greeted with HS, VU, YC, HL, BG, BV, XU, 9M2 etc QSOs, all at a beam heading of about 225 degrees. Then in the late afternoon at 2200 UTC or so a beam heading of 160 degrees has produced good JA, HS, HL, YC signals also.

Eighty and 160 will probably be very good during the hours of darkness in late fall, winter and early spring. I recall in previous minimums watching European signals on 160 peak up here from different parts of Europe in succession as sunrise moved across them. First the UA6s and 4X4s, then the UA3s and SVs, then the OHs, LAs and YUs, etc. And this month I have worked Japan on 160 even though I'm an alligator in that direction since I have no low-noise receiving antennas favoring the Northwest, so things are getting better there.

In summary, there will still be lots of stuff to work but we'll have to get used to heading for the lower bands earlier in the afternoon, moving to 80 earlier than before, and hanging around on the lower bands later in the morning than what we have been doing in the last few years. It will still be interesting, just lots different, that's all. Enjoy!

1) <http://www.aas.org/publications/baas/v35n3/spd2003/18.htm>

FRCer Unveils New Contesting Weapon





Tower/Antenna

I have come to the realization that I have been too optimistic in planning my former multi multi contest station, and I have decided to sell the equipment I do not need. I purchased several towers and antennas which are laying dormant, thinking I would eventually erect them and provide more towers and antennas for additional operating positions in a multi multi contest station. I am not dismantling any equipment in use, because I intend to get back on the air in the future. I lack the time and resources now to run a serious contest station. I am too busy with other activities and responsibilities. I will not be running a multi multi station, so the extra equipment will be for sale. My first offer is to members of the Frankford Radio Club and our local Delaware Lehigh ARC and QCWA chapter 17. I shall write up ads for each item in the future as I have time.

First is a very strong and sophisticated Tri-Ex "HZN-471N extra large deluxe crank-up tower". Height extended is 71'; height collapsed is 21' 6"; width is 26"; weight is 1050 pounds. Plus it has a Model RLH-75 "Motorized control tower raising and lower unit for HZN series", which includes pulleys, belt, brackets, indicators, controls, and 3/4 H.P. totally enclosed raising motor, completely wired. I have stand off kits for fastening coax to the tower, model CO-4. The tower is supported by three strong steel tripod legs which should be anchored in concrete. The tower also rotates on a pivot base with a prop pitch motor and chain drive. It has an inside control unit. (You would enjoy service you antennas at 22' rather than at 71' elevation. You can retract the tower during bad winds and storms.)

I purchased it from a ham in Westchester County, NY and brought it home a few years ago using a flat bed truck with a portable crane. It is now resting horizontally, safely and securely on wood beams, a couple of feet off the ground. I have the blue prints and instructions for erection and installation. The NY ham had a Hygain 105 (five element 10 meter yagi) on the top section, a Hygain 155 (five element 15 meter yagi) on the second section from the top, and a Hygain 204 (four element 20 meter yagi) on the third section from the top. He also had a few VHF antennas on the mast above the 10 meter yagi. (Later I will inventory my extra antennas and sell them too.) It had a custom mast with steps, but I did not get it. (It was promised to another ham.) I believe it will handle a 2" mast. I recommend and use chrome moly steel tubing for masts.

The manual's description of the tower is as follows: "Here is the ultimate in crank-up tower design, engineered to support large 10, 15, and 20 meter "ham" beams. Bringing to you a greater strength and added weight, this tower meets and surpasses RETMA and UBC Building Standards. The HZN towers feature heavy, formed steel horizontal members plus full X-sway bracing throughout for maximum strength and rigidity. In addition, the top section is large enough to hold a prop-pitch or other large rotor motor for rotating your antenna." (My tower is designed to rotate on its base with a prop pitch motor. I have extra prop pitch motors for sale too. I currently use them for rotating other antennas on my other towers.)

"As an added exclusive value, all Tri-Ex HZN towers feature 'telescopic operation'. As the tower is cranked up or down, all sections raise or lower together under full control of raising cables at all times! (3 sections telescope inside the lowest 4th section.) This means faster, better, more efficient operation at any height above 20 feet. The tower is equipped with a 40 to 1 Timken roller bearing, sealed, worm gear drive raising winch plus an extra-large 5" diameter cable drum. With the use of Tri-Ex accessories, you may motorize this tower for manual or remote control. (Mine has the motorized remote control.) Also, if desired at a later date, you may add our Tri-Ex rotating base and rotating ring to make this model into a rotating tower." (As mentioned, I have the rotating base and ring with the outboard prop pitch motor in a steel box.) The tubing in each section is 1 1/4" O.D. with .083" walls.

"Model HZ-471N is self-supporting when used with our special Tripod Support", which I have for sale.

"BMP-61 Winch raising and lowering kit. For all HZ-N and ... models. Use 3/4 H.P. motor. Includes guard, belt, pulleys, motor mounting bracket, and all necessary bolts. Weight 18 pounds. ...shipped complete with desk type control box with direction and height indicators, less control cable required from Tower to transmitter site." (I believe I have the necessary cable.)

The tower footing should be 21 1/4" by 2" 6' wide and 3' 0" deep. Three 1/2" anchor bolts are required. I may have some extras. The three tripod bases should be 5" 6" deep and 3' 6" by 3' 6" wide. The tripod needs a special anchor rod which you can weld. I have the U clamps which attach the anchors to the anchor rod.

If you install this tower system, you will have the Rolls Royce of ham antenna supports! I regret selling it, but I lack the time to seriously use such a station and doubt that I ever will. I used a local rigging company to pick up and move the tower to my home. They are available to move and install it at your home. I thought their price was economical and recommend them highly. WF3H helped me dismantle it in NY before moving it to Easton, PA. Many local hams have seen it reclining at my home and will vouch for its rugged design and construction.

Price: I have not decided yet. It is certainly worth several thousand dollars and priced new around \$10,000 or more plus installation costs. If you are mechanically inclined and have the necessary skills, time, tools, and equipment to install this tower, you can get a bargain! Even if you must hire a contractor, you will have a bargain. If interested, please call or E-mail me.

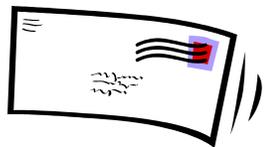
I also have a three band Lightning Bolt quad, model 34 MCQ for 10, 15, and 20 meters, for sale. It can be easily converted to five bands by adding wires for 12 and 17 meters. It was never used. A local ham started to erect it and dropped it from his mast pole, abandoned it, and sold it to me. He was ill, and since moved away and probably died. Almost all of the parts are like new, but not neatly organized. I have the instructions. I met with the manufacturer at Dayton Hamvention and he said that he could provide any missing or broken parts. I think only a couple of clamps were damaged. The expensive parts, primarily the aluminum tubing and fiber glass spreaders look good. The quad has two elements on a horizontal 8' boom, 3" O.D. The spreaders are 12' 9" long. The antenna elements are stainless wire suspended from the spreaders with special clamps in square loops. The specifications are 10 db gain; front to back ratio is 25 db; side lobe attenuation is 50 db, surface area is 12 square feet, weight is 85 pounds. It is fed with a 2:1 transformer for 10, 15, and 20 meters. The same transformer has a 1:1 ratio tap for 12 and 17 meter antennas. List price was \$675 excluding shipping. My sale price is \$375.

You may already know that a quad has excellent low angle radiation, especially good on a 50 foot high tower. It may out perform a triband yagi at 50'. It also has quieter receiving back ground noise. The loop wires tend to deemphasize static (QRN). I know I can hear better on my 80 meter quad than I can on my 80 meter dipoles at the same height. If you want a big signal with low cost and a simple antenna array, this is it! Many hams with quads dominate DX pile ups. They fit neatly in small yards. Call or E-mail me if interested.

Bill Goodman, K3ANS

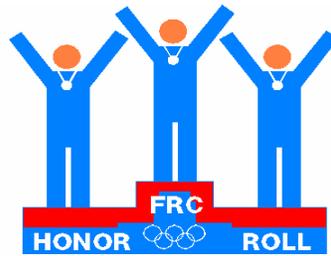
Telephone: 610-253-2745, Fax: 610-253-9773

E-mail: wgoodman@goodmancpa.biz



IRCs for Sale

Sam, WT3Q, has International Reply Coupons (IRCs) for sale. Cost is \$1 for the big (new) ones and 80 cents for the small (older) ones. Email Sam at wt3q@frontiernet.net



JANUARY **CONDUCTED by N2SS** **2005**

WARC BANDS

<u>30 Meters</u>	<u>17 Meters</u>	<u>12 Meters</u>
K2FL.. 331	K2FL...335	N2TK ..327
N2TK326	N2TK 334	K2FL..... 326
N2LT313	N2LT 331	N2LT..... 319
W3BGN ...309	W3CF 329	W3BGN ... 311
K2RW296	W3BGN ... 325	N2SS..... 301
W2YC287	K2RW 324	K2RW 300
W8FJ286	N2SS 319	W3CF 282
N2SS284	K2PS 302	W2YC 272
K2PS281	W2UP 293	K2PS 268
W2UP248	W2YC 292	W2UP 247
N3RD230	W8FJ 290	N1RK 217
K3II222	N1RK 252	W8FJ 226
W2LE212	KQ3F 245	KQ3F 215
NZ3O188	K3II 237	K3II 202
KQ3F182	NZ3O 233	K2NJ 190
AA2WN...171	W2LE 202	NZ3O 188
W2YR130	W2YR 194	W2YR 186
AB2E124	K2NJ 179	W2LE 176
K2NJ113	K2JF 168	N3KN 176
K2JF112	NA2U 162	NA2U 154
NA2U105	N3KN 147	K2JF 135
N1RK90	K3ND 119	AB2E 92
N3KN85	AA2WN ... 116	K3GYS 30
K3ND76	AB2E 105	N2VW 27
N2VW71	K3GYS 85	AA2WN 20
W3CF55	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

W3BGN291	K2RW 93
AA1K285	AB2E 87
N2LT244	W2CG 85
N2TK240	W2YR 80
K3SX224	N2SS 79
W8FJ200	NA2U 78
NO2R197	N2VW 77
W2UP186	W3CF 77
K3JG186	K3NL 70
K3NZ172	K2NJ 59
W2YC165	NZ3O 55
K3NM156	KQ3F 54
N3RS156	N1RK 40
K3II149	AA2WN 36
K2FL141	K2JF 34
K3ND136	W2LE 28
K2PS106	K3GYS 12

W3BGN continues as the undisputed Top of Top Band.

DIGITAL

W2UP335	W2YR 122
N2LT329	K2JF 113
K2PS285	W2LE 85
W3SB268	KQ3F 78
K2RW266	N2SS 53
K2NJ235	N1RK 39
W2YC229	K3GYS 15
AA2WN187	W8FJ 12
N3KN165	

MOBILE DX

W2YC276	K3GYS 143
AA1K269	AA2WN 131
N2SS234	W2YR 21
K2JF150	

1.5K Club

K2FL..... 1707	K2NJ.....1406
W3BGN 1694	W3CF1403
N2TK 1685	AA2WN.....1369
N2LT 1676	K2JF1350
W2UP 1659	NA2U1335
K2RW 1610	W2CG.....1305
W8FJ 1588	N1RK.....1277
N3RS 1581	N2VW1258
W2YC 1527	K3CT1177
N2SS 1517	W2LE1141
K2PS 1516	W2YR.....1138
N3RD 1514	W3SB1132
NO2R 1511	K3NM.....1107
K3ND 1496	NZ3O.....1088
KQ3F 1446	N3KN1065
.....	AB2E1055

Islands On The Air

K2FL..... 984	NZ3O317
N2SS 809	N2VW259
W2YC 574	W3CF253
W8FJ 573	W2YR.....230
N1RK 537	K3GYS214

6 METER DXCC

N2LT..... 106	N1RK.....57
K2NJ 100	N2SS.....55
AA1K 98	K2RW.....42
K2PS 96	W2YR.....41
K2JF 94	W2YC.....16
K3SX 75	AA2WN.....15
K3OO 71	K3GYS10
N3KN 61	



THE FRANKFORD RADIO CLUB NEWSLETTER

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



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The Frankford Radio Club

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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

k2ut.gofrc.org
k3ww.gofrc.org 7300
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