



The NCCC 75 meter net
meets on Thursdays at
9PM,
3830 approximately

NCCC Meeting

*Guests are always welcome at the NCCC!
Please join us.*

Program

Contesting Secret Weapon Show n'Tell
bring your favorite widget, gizmo, or whatzit

Monday, 12 August 2002

Harry's Hofbrau

1909 El Camino Real
Redwood City (650)366-3733

**6:00 schmooze 6:30 dinner
7:00 program**

With the fall contest season approaching, and station upgrade/improvements in full swing, it's time for another round of Contesting Secret Weapon Show n'Tell. So bring your favorite widget, gizmo, or whatzit to Harry's Hofbrau in Redwood City and tell us all about it. Remember this: Your competitor will be there... Doooooh! Can't let him get an edge! See you there!.....73, Dave n6nz

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North American QSO Party

by Dan, K6IF

For the past few years, my contesting activities have been severely limited. I try to spend as much weekend time as I can with my young daughter, which makes 48 hour contests a real challenge. As a result, I've become quite interested in some of the shorter events during the year - and the North American QSO Party is now one of my favorite contests. The CW and SSB parts of NAQP are right around the corner, so I thought I would take a minute to share some thoughts about a skill that is pretty much required to do well in NAQP - moving multipliers.

In many of our favorite events, SS or CQP for example, multipliers only count once. You work Montana on 40 meters, and you are done. In the DX contests that isn't true (multipliers, be they countries or zones, usually count once on each band in DX contests), but for most of us the idea of asking ZD8Z to move to another band so we can get the multiplier there is a bit of a joke. Especially if we are a little pistol in search and pounce mode - it is pretty clear that he isn't going to stop his 250 QSO per hour run just to work yet another Californian on a different band.

But in NAQP, it is a whole different game. Unlike almost all other domestic contests, multipliers (states, provinces & North American countries, in this case) count once on each band. And to top it off, the contest covers all 6 HF bands. To make a good score in the August NAQP (where 10 meters isn't too good most of the time), you need around 200 multipliers. That means you need to make 50 each on 15, 20 and 40 meters, plus another 50 on the combination of 10, 80 and 160. The winning score last August had 224 multipliers, around 50 each on 15, 20 and 40 - plus 40 on 10 meters, 30 on 80 meters, and 7 on 160. And as it turns out, if you simply do the normal bit of waiting for mults to call you - you just won't get there.

Continued next page

You only spend around 2 hours on each band (the whole contest is only 10 hours for single ops) - and there just isn't enough activity from the rare multipliers.

By way of comparison, in the January 2002 NAQP my friend N6NF made 1227 QSO's. That put him in 8th place amongst all single ops for QSO points. But Tom doesn't move mults - and he only got 204 multipliers to call him (in January, the scores are higher than in August and you need closer to 250 mults to be competitive). K6LL (1198 QSO's) and W6EEN (1259 QSO's) both made the top ten from the West Coast. Tom wasn't even close, because K6LL had 262 mults and W6EEN had 266 - their final scores were over 300k points vs. 250k for Tom.

Ok, so in NAQP moving mults matters. But how to you do it? It turns out that moving to other bands is such a key part of NAQP that everyone is very open to the idea. Sure, from time to time someone will say no - but most of the time when I ask if someone will move, they say "Sure." Here are some of the ways that I typically see people moving multipliers. All of

these are based on using two radios (on SSB)- but you certainly could do basically the same thing while SO1R (or on CW, I assume).

1) While calling CQ on one band, I search another band for multipliers. If I hear someone on the S&P band that I need on both bands (or just on the CQ band), I call them. After working them on the S&P band, I say "I'm calling CQ on XX.XXX, please give me a call if you can". Almost all of the time, they call in within the next 10 minutes.

2) While calling CQ, if someone calls in that I need on another band that I think is open, I work them and then say "Can you do XX meters?". If they say "sure", I say "How about XX.XXX?". They usually say "see you there". If I am using two radios and don't have the energy to S&P on the second one - I usually park it on some open frequency on another band. For example, if I am running on 40 and I have worked everyone that I can hear on 80, I might park my second radio on 3865. If someone calls me on 40 that I need on 80, I send them to 3865 and work them on my second radio.

Make sense? Here are some real world examples from my log from the January event this year.

QSO: 28478	1836	K6IF	DAN	CA AA0A	DENNIS	MO
QSO: 28478	1836	K6IF	DAN	CA NA4K	STEVE	TN
QSO: 28478	1836	K6IF	DAN	CA N4WTT	SCOTT	GA
QSO: 28478	1837	K6IF	DAN	CA KM5DX	RICK	TX
QSO: 21276	1837	K6IF	DAN	CA N1SNB	JEFF	NH
QSO: 28478	1838	K6IF	DAN	CA K8AO	DUANE	MI
QSO: 28478	1838	K6IF	DAN	CA N1SNB	JEFF	NH

In this example, I am running on 28.478 and S&P'ing on 15 meters. I find Jeff, N1SNB running on 15. I work him, and even though it is early in the contest (37 minutes after the start), I ask him to call me on my 10 meter run frequency if he has time. 1 minute later, he does - and now I have NH on two bands. I might have moved him to a third band - but there aren't any other bands likely to be open between CA and NH that early!

QSO: 21307	1841	K6IF	DAN	CA N5TY	KEN	TX
QSO: 28478	1841	K6IF	DAN	CA W0WAB	JIM	MN
QSO: 28478	1842	K6IF	DAN	CA W8GN	BRUCE	OH
QSO: 28478	1842	K6IF	DAN	CA VY2SS	ROBBY	PEI
QSO: 21311	1842	K6IF	DAN	CA VY2SS	ROBBY	PEI
QSO: 28478	1843	K6IF	DAN	CA WB4SQ	GARY	GA

A few minutes later, Robby calls in from PEI! Always a hard one, I immediately asked him to move to 15 meters, which he was happy to do. Now you might think that a VY2 wouldn't be willing to move for a lowly W6 - but he was happy to. I never did work another PEI station in the contest - if I hadn't moved him to 15 I would most likely not have gotten that multiplier.

A final example, this time an interesting little sequence from my log last August.

QSO: 21315 2115 K6IF	DAN	CA KG4JGR	GEORGE	NC
QSO: 21315 2117 K6IF	DAN	CA KG6BDJ	DENNIS	CA
QSO: 21315 2118 K6IF	DAN	CA K5NAC	JEFF	TX
QSO: 14217 2118 K6IF	DAN	CA AE9B	TOM	MO
QSO: 21315 2119 K6IF	DAN	CA K4XS	BILL	FL
QSO: 21322 2120 K6IF	DAN	CA W2JJC	JOHN	SC
QSO: 14275 2121 K6IF	DAN	CA W2JJC	JOHN	SC
QSO: 14287 2122 K6IF	DAN	CA W7BAS	BRUCE	WA
QSO: 21269 2123 K6IF	DAN	CA K5TR	KEN	TX
QSO: 14268 2124 K6IF	DAN	CA K9XD	DAVE	IL
QSO: 21245 2124 K6IF	DAN	CA K9XD	DAVE	IL

Here I am running on 21.315, and S&P'ing on 20 meters. I decide to break my run and tune around for a minute on 15 meters, and I quickly find W2JJC in SC (always a hard one for me in domestic 'tests). I work him, and ask him to move to 20. 14.275 is a nice round frequency... I work him there and then tune up the band on 20. I find Dave in IL 3 minutes later, and realize that I still need IL on 15. I move him to 21.245 (another round number), work him, and then keep going. Two moves in 3 minutes!

Now one trick here is deciding who to move! You certainly don't want to move everyone, because it takes time for both stations and is distracting. You have to have a sense of which mults are going to be hard, and which ones are easy. Later in the contest, it isn't too difficult. You've had time to realize that there are 4 SD stations active this time - and you can be confident that if you are loud, one of them will call you while you CQ. But early in the contest, like in

the NH example above, it is a bit of a borderline call. Moving VY2SS was an easy decision. VY2 is always rare, and I knew from the fact that he called me that Robbie was just messing around (he didn't even submit his log). Moving N1NSB was a harder call - but I know from previous experience that NH can be a hard one, so better safe than sorry. As it turned out, 10 didn't stay open too long and I didn't hear another NH station there - so the move was well worth it.

Moving mults is a skill, like running two radios or S&P'ing fast. In a contest like NAQP, moving mults is the difference between making the top 10, and just turning in a good score. It takes practice, and a bit of self-confidence (to ask!), but I find it makes contests like NAQP a ton of fun. Give it a try! NAQP is coming up, and the August running is a bit more relaxed and fun than the January one. It is a great contest for working on your skills - so add mult moving to your toolkit and watch your score climb!

Investing....



If you had bought \$1000.00 worth of Nortel stock one year ago, it would now be worth \$49.00. With Enron, you would have \$16.50 of the original \$1,000.00. With WorldCom, you would have less than \$5.00 left. If you had bought \$1,000.00 worth of Budweiser (the beer, not the stock) one year ago, drank all the beer, then turned in the cans for the 10 cent deposit, you would have \$214.00.

Based on the above, my current investment advice is to drink heavily and recycle.

73 Jack, W6ISQ

Dave's Wave's



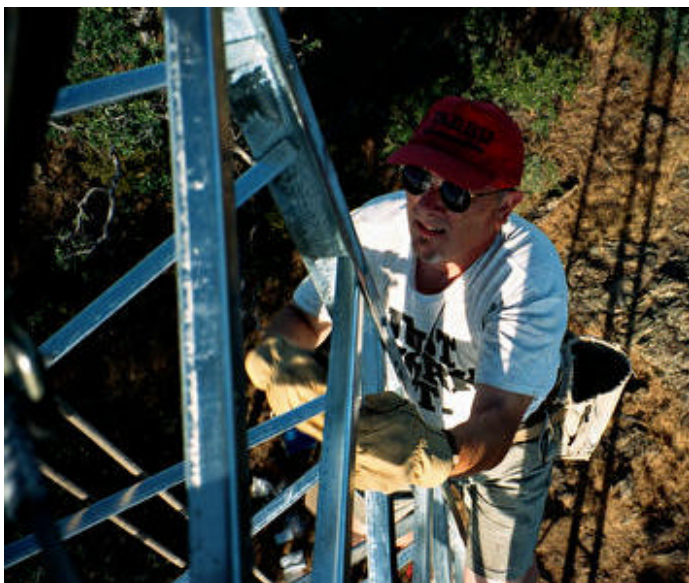
July has been just too busy, no doubt about it. I hope everyone had a good time at the joint meeting with the MLDX/CC in Jackson – unfortunately I had already been scheduled into a “must-do” trip to Minnesota. So, while you were enjoying the picnic, I was getting reacquainted with 95 degree 95% humidity WX – in a necktie. I do promise to make it to an MLDX/CC meeting later this year, though.

On the topic of “Territory Meetings” – I’d like to see meetings this season in the Reno area, Sacramento, and a North-of-Bay meeting. What works best is for a local to take on the job of finding a location and work out logistical details. Any volunteers? Shoot me an e-mail and let’s get those scheduled in.

The K7LXC Fitness Program

Lose weight fast! Build strength! Sweat like never before!

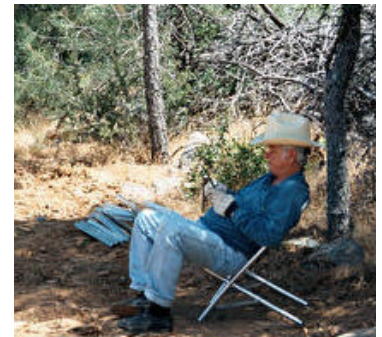
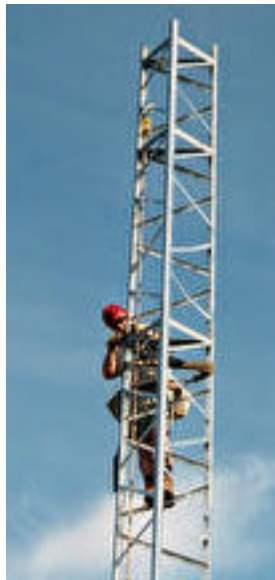
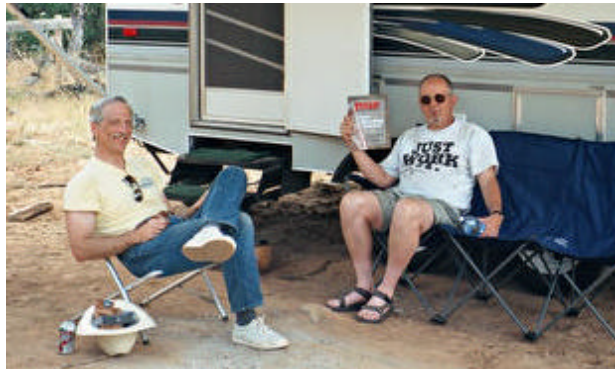
Yes, friends, I’m now a graduate of the K7LXC fitness program. Steve and a ground man came down from Washington, and thanks to the able help of N6XI and W6CYX we stacked up four free standing towers in four days. And yes, I slept very well every single night. That ‘LXC guy really knows how to work a customer.



K7LXC commuting to work.

I ordered the Trylon towers in the “erector set” version. Here Steve and I put on a vertical.

Beer call! N6XI and K7LXC relax at the end of the workday. No house yet, so accommodations are a trailer and portable furniture. What? My priorities? Why yes, I *did* build the towers before the house – do you find that odd?



W6CYX takes a break in the shade while the tower monkeys catch up with him

The pay off! K7LXC tops out a tower.

Some stats:

- Tower sections stacked: 26.
- Total vertical members: 78.
- Total cross members: 468.
- Leg joint bolt/nut/lock-washer sets: 156.
- Cross member bolt/nut sets: 936.
- Total number of pieces, from itty-bitty to honkin’ big: 2886.

73, Dave N6NZ

Contest Calendar for August - Early October 2002

Compiled by N6ZFO

Events that may be of particular NCCC interest in bold.

Note: The following **State QSO parties** take place in August:
MDC, Aug. 10- 11; **NJ**, Aug 17- 19; **OH**, Aug 24,25; **Hawaii**, Aug 24- 25

HF Contests - August					
NAQP CW (100 w)	1800Z	Aug 3	0600Z	Aug. 4	ncjweb.com
Worked All Eu Contest, CW	0000Z	Aug 10	2400Z	Aug 10	www.waedc.de
NAQP SSB (100 w)	1800Z	Aug 17	0600Z	Aug 18	ncjweb.com
Hawaii QSO Party	0700Z	Aug 24	2100Z	Aug 25	ncjweb.com
HF Contests -- September					
NCJ NA Sprint CW	0000Z	Sept 8	0400Z	Sept 8	www.ncjweb.com
Worked All Eu Contest, SSB	0000Z	Sept 14	2400Z	Sept 15	www.waedc.de
NCJ NA Sprint CW	0000Z	Sept 15	0400Z	Sept 15	www.ncjweb.com
HF Contests -- October					
**** CQP CQP CQP ****	1600Z	Oct 5	2200Z	Oct 6	www.cqp.org
NCJ NA Sprint RTTY	0000Z	Oct 13	0400Z	Oct 13	www.ncjweb.com
50 MHz and Above					
ARRL UHF Contest	1800Z	Aug 3	1800Z	Aug 4	www.arrl.org
ARRL 10 GHz Cumulative Con.	801 local	Aug 17, 19	2001 local	Aug 17, 19	Jeffrey Pawlen (nccc)
ARRL VHF QSO Party	1800Z	Sept 14	0300Z	Sept 16	www.arrl.org
ARRL 10 GHz Cumulative Con.	801 local	Sept 21	2001 local	Sept 22	Jeffrey Pawlen (nccc)
Log due Dates for Aug, Sept					
NAQP RTTY		Aug 21			
NAQP CW		Sept 4			
NAQP SSB		Sept 17			
Sources: ARRL, WA7BNM (www.hornucopia.com/contestcal)					
Calendar Links: SK3BG www.sk3bg.se/elinks3.htm#CONT					
Rules Links: Good example: www.yccc.org/Links/Rules					

From the Editor.....It's been suggested that space in the Jug be given to introducing new members to everyone. So, starting next issue we'll give it a go. If you've joined NCCC in the last year, drop me a note and we'll get this going! And for those of you that didn't read the email...I laid claim to my first plaque. RTTY Roundup 2002 Pacific Division. Anyone else want to have some "bragging space", let me know.

73...Mary, NA6E
 mary@na6e.com

Report on July meeting

By Andy Faber, AE6Y

The July meeting was the usual delightful midsummer bash in Jackson, the home turf of the MLDXCC, the Mother Lode DX and Contest Club. I've said this before, but it bears repeating – member for member, they are about the most enthusiastic bunch of guys (and YLs) that one would ever want to meet. As usual, there was a terrific pot luck, with visitors providing a dessert, salad, etc., according to the first letter of your last name, while the hosts supplied great main dishes and generally did all the cooking and cleaning up. Who could ask for anything more?

Unfortunately, the NCCC Bay Area contingent was thinner than in past years, influenced no doubt by the recent WRTC festivities, which soaked up the energies of a number of guys who usually show up. Since no officers could make it, Ken, K6TA, ran the NCCC part of the meeting as the resident director.

The main program was a fascinating slide show (well, these days it's actually Power Point, of course) by Al, AD6E, on his expedition this winter to Cocos Island, TI9M. They had lots to contend with, starting with the fact that the TI2 ham who had arranged the whole thing and received tens of thousands of dollars from the various participants, suddenly went incommunicado right before the trip was to get underway. Not to worry, though, he really had rented the boat. Then other TI2's, trying to preserve some sort of local monopoly, unsuccessfully tried to block the issuance of an operating license to the group.

But they did arrive and set up their stations, and proceeded to make over 70,000 QSOs. By the way, they have a very nice website, <http://www.qsl.net/ti9m/>, where you can find all sorts of interesting info and pictures, including trip stories by several participants. Al says that this is one of the first expeditions that was basically crewed by hams recruited via internet advertisements, and not manned by a bunch of guys who knew each other beforehand. Surprisingly, he reports that most of them became good buds and are looking for another locale to repeat the adventure. Al did a fine job presenting this travelogue, which he has taken on the road to a number of clubs around the West Coast.

Finally, unrelated to the meeting but timely, I wanted to put in a plug for the NAQP contest coming up the first (CW) and third (Phone) weekends of August. It's a great contest for practicing, and I urge everyone to give it a try. I'll be in the CW one at least, trying out my new (used) 756 Pro as well as hoping to shake any bugs out of CQPWIN ver. 9.2, which contains lots of changes from the last version that I know worked in WPX CW, hi.

NAQP has lots of attractions, including:

You can only operate as a single op for 10 of 12 hours, all on Saturday, so it doesn't wipe out your weekend.

Rates are high.

Max power is 100 watts, so no worries about amplifiers.

It's an ideal contest to try out SO2R, both because of the low power, and because moving mults is a common activity.

It has much of the training virtues of Sprint, without the intensity or stress level (and everyone isn't sending at 40+ wpm).

So, give it a go. You'll have fun, even if you only have a few hours.

73, Andy, AE6Y



WRTC 2002



The WRTC 2002 medallists:
USA #1, Russia #2, Germany #3.

One of the two BIG rotating towers at OH6MMC. There's 5/5/5 on 20m plus many other antennas.



N6TV, K1EA, and W2GD operating as OI2HQ (SRAL HQ) during the IARU contest. We operated 20 CW and 10 SSB at OH6MMC (who usually signs OH6OS in contests).

Pictures provided by Bob, N6TV

The NCCC Contest Ladder -- A Proposal from N6ZFO 1st Installment

Bill Haddon, N6ZFO

The WRTC, (World Radiosport Team Competition) might be considered the Olympics of radio contesting. The 2002 WRTC event just concluded in Finland produced scores from the participating OJ-prefix stations that are remarkably close, suggesting that the rank-order in WRTC truly reflects operating skill rather than equipment superiority. In fact the top fifteen OJ stations had scores between 1,629,798 and 1,402,440, a difference of only 14%. Operating skill, band plan strategy, cooperation between team members, and endurance are the components of success in WRTC, not power, antenna size or location. Fine -- but this radiosport "Olympics" comes at the high monetary and physical cost of assembling stations for which antennas, power and location have been essentially edited out of the contest equation. We won't be trying that in NCCC any time soon, until we sponsor WRTC ourselves again. Just the same, wouldn't it be interesting to have a sound way of ranking our own intra-club contest performance in the same manner. You think we have rivalries now . . . just imagine what would happen if a WRTC-type environment could be created within the club and over the course of a normal contest year. That was precisely the challenge laid down by last year's NCCC president, Rick Tavan, N6XI. And it got me to thinking about the subject, and to reflect on some of the reasonable successful approaches used for handicapping in other sporting activities. Running is of course of particular interest to me, and it was a couple of running competitions in Marin county that focused my interest in developing a skill-based ranking system for amateur radio contesting.

During the last year, Rick and I worked together to refine a proposal for a Contest Ladder that is a possible candidate system for skill-based ranking in radio contesting. The central idea behind this Contest Ladder proposal is the concept of adjusting contest scores by the ERP of the stations. In essence, the idea is to re-compute the raw scores of a particular station to reflect the net ERP of a that station. Under such a score-adjustment system, the aspects of contesting

skill that often get buried in equipment and location differences between stations might emerge with more clarity than is usually evidence in reported scores.

The Contest Ladder Concept

Under the N6ZFO ERP-based Contest Ladder system, there are some fine points to these score adjustments -- in fact several pages of them. I won't bore you with all the details in this introductory article. Here's just a rough description of how score adjustment might work. First, it's possible to determine the power dependence of scores in a particular contest. Because that information, expressed in an appropriate equation, is really an ERP dependence on contest score, we should be able to apply the same equation to account for the score difference attributable to use of different antennas. Thus, thus in principle it should be possible to equivalence the scores of two stations, one running 1 kW into a dipole and the other 100 watts into stacked 3-el Yagi antennas. Simple? Well, as I said, there are details and fine points. As just one example of the details, consider that the same station, in the same contest, may use stacked tri-banders on 10, 15 and 20, but a dipole on 40 and 80. So in that case, the adjustment needs to be refined by the number of Q's completed on the different bands. For the most part, these calculations should be straightforward.

An Example

Some of you may see a glimmer of hope for the success of a competitive ladder, but let's look at an example to illustrate the point. As usual, I'm going to use my good (and good-natured) neighbor, Al, K6RIM as the guinea pig for these calculations. With Al's 60-80 dB over 9 signal at N6ZFO, he can't conceal his operating habits too well. In fact we could probably cook our Sunday morning breakfast by hooking the frying pan up to a dipole during Al's ARRL Sweepstakes efforts. [I'd better be careful here, lest some of you confuse this article with the NCCC Roving Reporter, who thankfully appears to be on extended vacation].

In the 2001 Phone Sweepstakes, K6RIM scored 207840 points (after error deduction) and N6ZFO, operating in "A" class, had a final score of 138528. Al's score was thus about 50% higher than Bill's.

Now, Al sits on top of Christmas Tree hill in Corte Madera and runs 1.5kW into a multi-band log-periodic antenna for the high bands, and wires or verticals for low bands. On the other hand, Bill, at the bottom of the same hill, used 150w. into 3-el Yagis for 15 and 10 meters, and dipoles on 20-80. To calculate adjusted scores, the following corrections were applied to the ARRL scores: 1) The power difference was accounted for by an equation developed previously (see NCCC Sweepstakes Handbook) . 2) An approximate difference in antenna gain, normalized to the percentage of time on the beams vs. the dipoles/verticals for each station was translated to a percent score difference based on the same equation. 3) A fudge factor of 10% was applied to account for the superiority of Al's QTH. 4) The difference in operating in "U" (assisted) vs. "A" class (no packet) was judged to be 2.5% of the score. In carrying out the calculation, I increased the N6ZFO score according to percentages calculated for (1), (2) and (4) and decreased the K6RIM score by the 10% amount of factor (3). The major part of the correction is due to (1) and (2). The result is:

station. High scores in major contests will always be an important goal for most NCCC members, and that means using the best equipment and resources at hand. But there are plenty of existing rewards for equipment/location superiority already. The advantages of the Contest Ladder would be the following: 1) Provide a metric for new contesters to judge their skill-based performance against veteran experts. 2) Increase the level of competition between NCCC members with difference levels of physical contesting resources. 3) Create a possible new basis for an awards structure within the club. Finally, if the concept successful, we might also have the material for an interesting QST article in a couple of years. Like all "new" ideas, this one probably isn't totally novel. But clearly, except for WRTC, there's not much out there in radio contesting that skill-based rather than equipment based. Note, this doesn't say that owners of big stations aren't the most skillful operators -- but rather to point out that some operators without big stations may be highly skilled.

2001 SSB ARRL Sweepstakes			
Station	ARRL Score	Correction Factor	Adjusted Score
K6RIM	207,840	0.90	187,056
N6ZFO	138,528	1.265	175,237

Well, in this example, Al still wins . . . but now the difference is 11,819 points, vs. 59,312 points in the raw scores. But Al's winning adjusted score doesn't any longer reflect more power and better location, but rather something more basic -- more contesting hours. In fact, Al operated the full 24 hours, but Bill cashed in after 20. So let's try the assumption that Bill, in a crucial wager with Al for a free beer at the next NCCC meeting, goes the full distance, making an additional 20 Q's per hour for 4 hours, and a score increase of $2*78*20*4 = 12480$ points. Now the result is different: Bill has a hypothetical score of little over 187,717 points, and Al buys the beer, having been defeated by a mere 0.35%.

Why might this Contest Ladder be important to NCCC?

First, the Contest Ladder concept is in no way an effort to detract from the importance of the big contest

Next Month

I hope that this discussion may have stimulated a little interest. Watch for the second installment next month, which will be an implementation proposal to try this out during the 2002/3 contest season Obviously, SS will be the most important testing ground for this Contest Ladder, but there will be other contests as well (but not CQP or WPX, for reasons that will be discussed in more detail later). Remembering the success with carrying out the N6ZFO error rate analysis two years ago, I'll be looking for a brave group of 10 or more NCCC member who are willing to stick their necks out into the wind and give the contest ladder a trial run. I'll guarantee there won't be much effort required, just a little additional information in the score reports to the reflector for several of the coming years contests. Probably the first Contest Ladder event will be ARRL Sweepstakes..

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