

# The Pileup

## Newsletter of the CDXA

### CDXA Club Score in CQWW – “We Was Robbed”

Those of you who looked at the Club Scores for the 2005 CQWW contests published in the September issue of CQ were probably very disappointed to see CDXA shown in the bottom half of the list with only 862,007 points. It's obvious something is very wrong. Many of our individual scores were way over this and the total of our claimed scores was 21,533,424 points.

What happened? Well, I don't know yet. But I'm trying to find out. Here's what I do know.

The rules for the club competition require an officer to submit a list of participating club members and their scores for the phone and CW contests. This was done via email last December 15, well in advance of the January 15 submission deadline. The contest manager at CQ, K3EST, confirmed receipt via return email the same day.

Of course, each individual participant must submit his log and the logs then pass through a judging process to determine the final scores. It's inevitable that final scores are less than the claimed scores, some substantially less. Further, it looks like a few of our logs didn't get through the scoring process because they didn't show up in the published results. This could happen for a

number of reasons, i.e. the submission wasn't done correctly, the submission was late, the log got lost in processing, or the log was judged invalid.

Now that the final scores have been published, it's possible to use our list of participants and the published scores to determine what CDXA's club score should have been. I've done this and came up with 17,672,958 points—not 862,007 points! That would put us in 17<sup>th</sup> place in the USA.

I've sent K3EST an email laying all these facts out and asking him what happened. I'll let you know what I hear.

—73, Dick Williams, W3OA  
CDXA Contest Manager

CDXA PacketCluster & Other Communication Systems		
W4DXA (11 mi. NE of Mooresville)	144.93 MHz (1200 bits/second)	441.00 MHz (9600 bits/second)
K4MD Charlotte, NC	144.91 MHz (1200 bits/second)	Not Available on 9600 bits/second
NG4DX (Digi near Galax, VA)	144.95 MHz (1200 bits/second) Connect to NG4DX, then type “C W4DXA”	
K4MD (AR Cluster via Telnet)	k4md.no-ip.com	
CDXA Repeater 147.18 MHz (+600 )	W4DXA, Near Fort Mill, SC	
World Wide Web Homepage	www.cdxa.org	
Wednesday Luncheon (11:30 AM)	Shoney's, 355 Woodlawn Road, Charlotte, NC (704-525-4395)	

## Kudos to W3GQ

It takes a lot of effort from many people in an organization like CDXA to keep the wheels turning. Much of the time, the effort goes unnoticed. Yet, sometimes the results of an effort stand out so greatly that they cannot go unnoticed. If you happen to live in Galax, Virginia and lightning takes out your principal means of connecting to the CDXA AR-Cluster, you notice when it gets fixed! The following note was received from James Blythe (W4RDX) recently....

“A few months ago you ran a short article about the update of the Briarpatch Mountain DX packet. That article understated the work that Paul Sturpe (W3GQ) and others performed to get that machine up and working well—not to mention the expense to CDXA. Paul made several trips to the mountain and has worked tirelessly to keep the digi working. He kept us well informed during all phases of the upgrade and repairs. We recently took another monster lightning hit on the mountain, and Paul worked to get us up and running yet again. I am unable to connect directly to W4DXA so the Briarpatch machine is a great help to me and others up here who reside beyond the first ridge of the mountains. I wanted all members of CDXA to know what an excellent Associate Cluster Manager we have. We certainly appreciate Paul’s diligence.”

That says it all. And, Paul, those 150 mile round trips up the long hill to Fancy Gap **ARE** appreciated. Thanks from all of us in CDXA.

### The Pileup

Official Newsletter of the Carolina DX Association  
Copyright 2006

Published monthly 10 times per year, excluding the months of June and December.

The purpose of the association is to secure for the members the pleasures and benefits of the association of persons having a common interest in Amateur Radio.

Members of the CDXA shall adhere to “The Amateur’s Code” as published from time to time in *The ARRL Handbook for Radio Amateurs*, and shall consist of those valid licensed amateur operators having an interest in promoting amateur radio. Long distance communications (DX) is of special interest to members of the association, but said interest is not a requirement of membership.

Dues are \$30 per year for those using the PacketCluster maintained by the Association, \$15 otherwise, payable each January. Dues are payable by check to the Secretary/Treasurer:

Cliff Wagoner, W3ZL  
P. O. Box 577  
Davidson, NC 28036

Address, telephone, and email address changes should be directed to the Secretary/Treasurer at the above address or via email at: cliffw@adelphia.net.

## “Angels” Come in All Forms

In Show Business, an “angel” is an individual who steps in and lends support—often financial—to ensure the “the play goes on”. We in CDXA have recently been touched by our own special form of an angel.

Our annual dues of \$30 for AR-Cluster users and \$15 for those who are not cluster users allows us to financially support selected DXpeditions (CDXA’s own version of being an angel) and put enough money toward the cluster to help keep it running—but only because of a lot of good work and commitment from Joe Simpkins and Paul Sturpe. But, every so often to permit us to take advantage of improved technology we find that we must make a capital commitment to ensure a good cluster operation.

A recent review of our cluster operations showed us that our PC’s CPU had “run out of gas”. Accordingly Joe Simpkins made a written case to the officers stating that fact. That meant at least \$400 out of the treasury to get a machine worthy of our needs. Up stepped an “angel” in the person of Frank Dowd who wrote us a check to cover most of our expenses in acquiring a new CPU. The show goes on due to Frank’s generosity. From all of us who enjoy the AR-Cluster to help us find rare DX out there in the ether, thank you, Frank.

## Welcome New Members

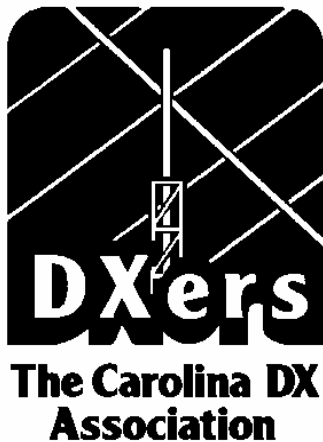
In the month since the last *Pileup* was published, CDXA has seen an increase in three new members to its roster. More accurately, we’ve been honored with the return of a former member and two all-time new members.

Our returning member is **Chip Chalker, AC4ZD**, of Monroe, North Carolina who recently retired from the Charlotte Police Department. We used to have Chip stop in to join us at Shoney’s for lunch when his “beat” took him nearby at lunch time and we are pleased to see him return as a member of CDXA.

Another new member is **Joe Spears, AF1E**, of Conover, North Carolina. All of us are looking forward to seeing more of Joe and getting to know him.

The third new member to join us is **Ray Weeks, N4APR**, of Charlotte, North Carolina. We hope Ray’s proximity to Shoney’s allows him to drop by for lunch occasionally.

Welcome to Chip, Joe and Ray. We look forward to seeing you at a CDXA event real soon.



# The Pileup

## Second Front Page

### MORE CWAC FUN



Trophies



Patches



Gift Certificates



Map

The contest season is just around the corner and it's time to get ready for the CQ World Wide Contests and the CWAC (Contest Within a Contest). The phone contest is the weekend of October 28, CW the weekend of November 25. We are offering a number of prizes to encourage you to participate in CWAC and thus contribute to CDXA's CQWW Club Score.

Our CQWW Club Scores for the last several years are shown below. Note that the 2005 score shown is not official. An accompanying article explains this. We want to resume our upward climb in the national rankings this year.

Year	CDXA Score	Rank in USA
1999	8,380,897	27
2000	12,494,946	22
2001	15,813,137	17
2002	17,364,657	20
2003	15,383,214	19
2004	23,246,423	15
2005 (unofficial)	17,672,958	18

There are prizes for both serious efforts and more casual operations:

1st place prizes – Each winner can choose between a trophy or a \$50 Gift Certificate for Outback Steak House. These will be awarded in the categories listed below. An individual can only win one 1<sup>st</sup> place prize.

**Combined phone and CW score**

**Phone score**

**CW score**

**DXpedition score**

**Multi-op score**

1000 or more QSOs total in the phone and CW contests – Each winner can choose between a trophy or a \$25 Gift Certificate for Outback Steak House.

250 or more QSOs – A 2 by 3 inch, colored, embroidered patch with the CDXA logo.

100 or more QSOs - A chance in the drawing for the world map signed by the members of the Peter One team and presented to the Club at our dinner meeting last Spring.

Only members whose scores are eligible for the club competition as defined in the contest rules can win a 1<sup>st</sup> place

*(Continued on page 4)*

(Continued from page 3)

## More CWAC Fun (Con'd)

prize or a 1000 QSOs prize. The CQWW rules are available at [http://www.cq-amateur-radio.com/WW\\_Rules\\_20083006.pdf](http://www.cq-amateur-radio.com/WW_Rules_20083006.pdf) or page 98 of CQ magazine for September 2006. All CDXA members are eligible for the CDXA patch and the world map drawing.

Prizes will be based on your claimed score and they will be presented at the Holiday Dinner/Annual Meeting.

Let me know if you have any questions, suggestions, or need help in preparing for CQWW.

And please let me know if you are planning a DXpedition for CQWW.

Dick Williams, W3OA CDXA Contest Manager  
w3oa@adelphia.net (704) 658-0915

## Alternative Sunspot Index Found

An accurate index of sunspot activity has just been documented by Gary Dixon, K4MQG. Gary reports, "I'm passing along some QSL checking statistics from the Shelby, NC Hamfest this past Saturday, September 2 and for several previous years.

I was really shocked at the lack of cards and applicants. Normally card checking at this Hamfest is four to five hours of heads down work leaving little time for socializing. What a difference this year. I don't know if Hurricane Ernesto scared folks away that normally come in from eastern parts of the Carolinas, but the weather in Shelby was fine.

Year	<u>DXCC Applications</u>	<u>Cards Checked</u>
2006	6	183
2005	11	961
2004	15	1173

For 2006 at Shelby, there was one application with one card, one with two cards, and one with four cards. This year in March at the Charlotte Hamfest, we had 24 DXCC applications with 2008 cards. I hope the upcoming DX season gives us a few new band countries and that Solar Cycle 24 takes off in earnest!"

## Ten and Twenty Years Ago...

### Twenty Years Ago

Ron Wright, ZL1AMO, was preparing to give hams all over the world Christmas Island as VK9XI. Ron is still DXing these days, moving around the South Pacific area and serving hams everywhere as President of INDEXA. . . a group of Francophiles were heading off to Clipper-ton Island. . . Gary and Carol Dixon were preparing to host the CDXA Barbeque. . .the DXCC Advisory Com-

mittee (DXAC) under the Chairmanship of John Parrott, W4FRU, was undergoing some soul searching as to how to restructure DXCC. Consideration was being given to accreditation of awards, operating ethics, and administration of awards.

### Ten Years Ago

The CDXA PacketCluster system was really getting cranked up. N4ZC had a node at his QTH and K4MD had a node at his QTH. Most of the area within about 60 mile radius of Charlotte had relatively easy access to the Cluster. Users were being advised to use as high power as practicable to ensure "collisions" were sensed by all TNCs so that the communication process would not slow drastically (still true today!). KC1XX, K3LR, N2RM and W3LPL were "Big Guns" even in 1996 producing CQWW scores of well over 10 Million points. N4ZCs contest station produced about 6.5 Million points in the same going—outscored all its 4-land competitors and doing very well for being so far removed from the Northeast USA.

## 5BWAZ Honor Roll

One of the most difficult awards to achieve is the Five Band Worked All Zones award. Most hams in the Southeast USA find getting into CQ Zones 23, 24, and 26 to be a big stumbling block. One can apply for the "Basic" 5BWAZ award when 150 zones (any combination of the forty defined zones on the five principal amateur bands) have been confirmed. At that point your certificate number for 5BWAZ is established. However, there is sometimes a long wait from the time one's basic certificate is awarded until all 200 zones are confirmed. Therefore, one's ranking for 5BWAZ is based not on the certificate number but rather when that 200<sup>th</sup> zone is

(Continued on page 5)

(Continued from page 4)  
confirmed.

Below are the members of CDXA who have achieved the pinnacle of 5BWAZ success.

World Rank	Call	Name	Cert. Number	Date 5BWAZ Earned
2	K4MQG	Gary Dixon	6	6/7/1980
178	K4CEB	Larry Sossoman	149	4/18/1988
254	AA4V	Steve Reichlyn	437	11/22/1989
296	N4JJ	Jack Jackson	691	11/27/1990
554	AA4S	Ron Bailey	1191	3/3/2001
604	K4CIA	Bill McDowell	1285	8/15/2002
622	NW4N	Tommy Lineberry	1331	6/9/2003
648	K4ZA	Don Daso	1386	4/3/2004
689	N4PQX	Bob Burton	1283	2/15/2006

A “contender” for the next 5BWAZ award from the ranks of CDXA is Steve Sullivan, KZ2I. Steve now has 198 zones confirmed, but he still needs—you guessed it—Zones 24 and 26!

### 2006 CDXA Barbeque Awaits You

The 2006 Version of the **CDXA Barbeque** is just around the corner. It is scheduled for Saturday, October 7, 2006. Here are the details:

- What: CDXA Annual Barbeque
- When: Saturday, October 7, 2006
- Time: 5:30PM for Social Hour, Dinner at 6:30PM
- Where: Frank Dowd’s QTH  
623 Lester Davis Road  
Waxhaw, NC
- What to Bring: Each “couple” should bring a dessert for four
- Cost: \$10 per person for a chicken and BBQ dinner catered by AA4SC (Rick Porter)
- Beverages: Wine/Beer Provided by CDXA—Other Beverages are BYOB

Directions: Go south off of the I-485 loop on Providence Road until you come to NC-84. Turn left on NC-84 and travel approximately 4 miles. Turn right on Lester Davis road. After about 1/2 mile or so, look for a BEAUTIFUL 100 foot tower with a MAGNIFICENT

Yagi on the top sticking above the trees. That’s the end of the rainbow. C’mon in!

RSVP to Vice President Thomas Wright (eMail: N4HN@arrl.net, Phone: 704-536-9117) regarding your intentions to attend.

### Vote to Change Bylaws On Horizon

A proposed change to the CDXA Bylaws will be presented to the membership for a vote at the Barbeque event to be held at Frank Dowd’s home on Saturday, October 7, 2006. This article shall serve as an official notification of the upcoming vote. The change under consideration is to incorporate the position of Contest Manager as an officer of the CDXA and as a member of the Executive Committee.

The changes to be voted on are in italics, below:

#### Article II –OFFICERS, Section 1. – Officers

The officers of CDXA shall consist of a President, Vice President, Secretary-Treasurer, Newsletter Editor, *Contest Manager*, and Packet Cluster Manager, all of whom comprise the Executive Committee.

#### Article II—OFFICERS, Section 2. – Duties

Add: *Contest Manager: The Contest Manager shall have the responsibilities of encouraging participation of members in radio contesting. In addition, the Contest Manager shall ensure proper credentials are presented to sponsoring organizations as to the authenticity of club membership.*

#### Article III—EXECUTIVE COMMITTEE MEMBERS

The business and affairs of the CDXA shall be managed by the Executive Committee which consists of the six elected officers.

#### Article V – ELECTIONS, Section 1. – General

Officers of the CDXA shall consist of a President, Vice President, Secretary-Treasurer, Newsletter Editor, *Contest Manager*, and Packet Cluster Manager. These officers shall be elected from the membership by a simple majority vote. Officers shall be elected for a period of one (1) year and any officer may succeed himself.

If you would like to vote but cannot attend the Barbeque, please send your vote to Secretary-Treasurer Cliff Wagoner indicating whether you are “For” or “Against” the By-Law amendments.

## CDXA Scores in 2005 CQWW CW Contest

The final results of last year's CQ World Wide CW Contest are published in the September issue of CQ. Listed below, in alphabetical order, are the calls of all the CDXA CW CWAC entrants who scored in the top half of their class as listed in CQ. The last column shows the entrant's place in his class in the 4<sup>th</sup> call area and the number of 4<sup>th</sup> call area entrants in that class.

Don't forget to mark your calendar for this year's CQWW contests. SSB is the weekend of October 28, CW the weekend of November 25.

Call	Final Score	Class	Place/No in Class
AA4NN	913,800	Single Op, High Power, All Bands	15/53
AA4V	708,750	Single Op, Assisted, All Bands	8/42
K4DGJ	77,149	Single Op, Low Power, All Bands	26/65
KR4M	338,542	Single Op, High Power, All Bands	28/53
KS4S	108,790	Single Op, Low Power, All Bands	23/65
KZ2I	455,376	Single Op, Assisted, All Bands	13/42
N4AA	657,248	Single Op, High Power, All Bands	23/53
W3GQ	815,080	Single Op, Assisted, All Bands	7/42
W3OA	660,366	Single Op, Assisted, All Bands	9/42
W6WNS	924,148	Single Op, High Power, All Bands	13/53
WA4DOU	567,756	Single Op, Low Power, All Bands	5/65

### How Do They Do That????

We've all picked up the late summer issues of CQ to find the results of the previous year's CQWW contest. When we see those scores in the millions of points from some of the big contest stations, did you ever wonder, "How do they do that?" Well, even though we might not learn all the operator skills which produce those big scores, we can learn something about the physical makeup of the station to get a partial glimpse of what makes for a world class station.

Pete Smith, N4ZR, is the editor of the Potomac Valley Radio Club newsletter. I met Pete at Dayton a few years back, and we now exchange our clubs' newsletters on a regular basis as a courtesy to each other. The transmittal letter of the September 2006 issue of the PVRC newsletter contained a World Wide Web URL that I think you might be interested in checking out. It is: <http://www.pvrc.org/WCSO/WCSOsearch.htm>.

This site contains the "World HF Contest Station Database". There you can enter the callsign of 3165 of the world's big contest stations and learn all you ever wanted to know about the equipment complement of the

"big guns". Merely enter the callsigns of the likes of K3LR, K1TTT, HC8N, ON4UN, or W3LPL (or any of several thousand others!) and you'll get a flavor of what it takes to compete at the highest levels of radio contesting.

### Hilltopping/Roving Has Its Merits



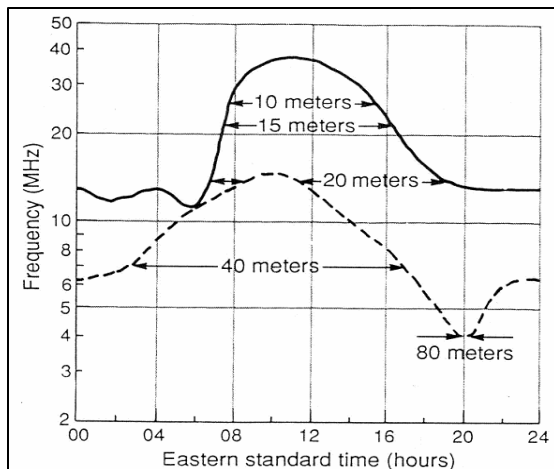
Ed Swiderski, KU4BP, sent along this nice photo of a sunset taken during the recent CQ VHF contest. You'll agree hilltopping or roving has its great moments.

## CQWW Contest Information

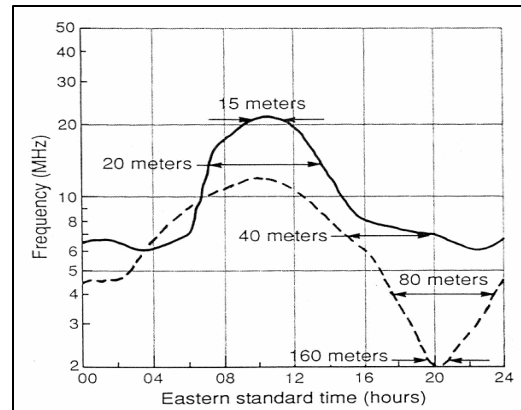
By Roger Burt, N4ZC

Six years ago, at the peak of this solar cycle, I was asked to do a "how to" article for the *Pileup* on operating the CQWW contest to try to help the CDXA club score. Here we are near the bottom of the cycle. My guess is we'll pass through the bottom of this cycle between this and next years CQWW. You'll have to work at it but even near the bottom of the cycle it is possible to work DXCC during the contest weekend. I would again like to challenge each of you to try to work DXCC during the contest weekend, and at the same time help CDXA come up with a big club score. It will take a good deal more effort than at the top of the cycle. Think about it a minute. . . to be able to say "I worked DXCC in one weekend" IT CAN BE DONE!

Below are two charts to show band conditions between the east coast and Western Europe. The first shows conditions as they were during my 2000 article; the second, the conditions to be expected in this years contest. The solid line is MUF or Maximum Usable Frequency. The dashed line is LUF, Lowest Usable Frequency. There is nothing you can do to make the MUF go up. You can lower the LUF with more power and better antennas. These charts are for 250 watts. Each 10db increase in ERP will lower the LUF by 2 MHz. The first chart shows 7 hours of 10 m and near 10 hours of 15 m openings to Europe. This year that drops to 0 and 3. At this stage of the solar cycle the MUF is just touching 15 m. A few points up or down in the solar flux will bring a very large change in what you can work. A flux near 70 will give very little Europe while a flux of 80 or better, with a low k index will give a number of hours of 15 m opening to Europe. If the flux is very low, you may see the MUF to Europe fall below 40 m for a number of hours during the night.



The chart below shows expected conditions in the 2006 version of CQWW.



**Equipment pointers.** Noise blankers should always be used with great care. They always make strong signals seem wider and sound distorted. Check from time to time to see if the noise is gone. Turn off the blanker as soon as possible. Don't use it if you don't need it.

If you are using the CQ run mode, use your RIT or other VFO to tune for off-frequency callers. Don't waltz around the band being pulled up and down with each off-frequency caller. Remember to turn off the RIT, notch filter or passband filter any time you move the main dial. If left active, on a new frequency, you may filter out the very signal you want to hear. No need to worry if you have a newer rig with the auto-notch filters. They can work wonders, especially on the 40 meter phone band with all its broadcast carriers and CW signals in the DX band. If you use rig control software that can take spots from the packet cluster, make sure you know how to use it on 40 and 75 meters since it can save time moving both your RX and TX frequencies to the correct split operation in one key stroke.

Always tune into the open end of the passband. That means tuning up in frequency on 20, 15 and 10 and down in frequency on 160, 75 and 40. This gives the ear/brain a better chance to copy a signal as you tune into it.

**Operating tips.** A good contester really HATES stations that give only two letters of their call. Unless the DX station shows his inability by asking for last two letters, DON'T do it. Give the DX station the chance to copy your full call. Two letters always dou-

(Continued on page 8)

(Continued from page 7)

bles the time spent on the QSO.

Don't spend too much time in any pileup....note the frequency and try again later. You'll find that stations that are very hard to work at the start of the contest are easy the next day after most of the big guns have them in the log. By the end of the contest the big gun DX stations will have worked every indoor dipole guy in the world. Always try again later. Never give up on a station just because you couldn't work him the first day.

For packet users, NEVER take the call as listed on the packet as the real callsign. Many people do a very poor job of getting the correct callsign. Make sure you copy the correct call yourself. Your score will drop with each incorrect call.

You will find some DX stations operate for long periods of time without giving their callsign. If you work one of these guys, DON'T give him a report before you get him to give you his call. If you do, you'll be stuck there waiting for him to give his call. That could be 15 minutes or more in some cases. To make it easier to work these guys and in general point your beam in the correct direction, I've made the chart below. It gives the center beam heading for each zone. This will allow you to peak your beam on his station with just the zone information he gives in each QSO. This can be a quick help in pointing your beam at any DX station by just knowing his zone. Point your beam at each station and get in and out of the pileup as fast as possible.

(Continued on page 9)

### Beam Headings to various CQ Zones from Southeast USA

Zone	Heading	Area	Zone	Heading	Area
1	337	KL7—VY1—Some VE8	21	40	Middle East
2	20	VO2-Northern VE2—some VE8	22	25	South Asia
3		West Coast US/Canada	23	355	Mongolia
4		Central US/Canada	24	345	China/Taiwan/Hong Kong
5		East Coast US/Canada	25	337	JA HL
6	230	Only Mexico in Zone 6	26	358	Southeast Asia
7	195	Central America	27	320	Western Pacific
8	150	Caribbean	28	290	H4/P2/VS5/YB/9M6/9M8
9	150	Northern South America	29	280	VK6 VK8 VK9X VK9Y
10	175	Only CP HC OA	30	255	All Other VK
11	150	Only PY ZP	31	280	North Central Pacific
12	170	Only CE	32	240	Southwest Pacific
13	160	CX LU VP8	33	70	Northwest Africa
14	45	Western Europe	34	60	5A ST SU
15	45	Central Europe	35	90	West Africa
16	30	Russia Ukraine Belorussia	36	90	Central Africa
17	25	Western Siberia	37	80	East Africa
18	360	Central Siberia	38	105	Southern Africa
19	340	Eastern Siberia	39	75	Indian Ocean
20	50	Eastern Mediterranean	40	25	Top of the World

(Continued from page 8)

### **Operating Strategies to maximize your score.**

*Time available – Five Hours or less.* Operate during the morning and early afternoon. With your beam pointed over the center of Europe at 45 degrees there are over 100 countries within the 3 db half power points of your beam. Europe is the biggest bang for the time spent. Take 15 or 30 minutes during the early afternoon to point the beam SSE and work the Caribbean Central/South American stations. They will stand out above the din of the Europeans off the side of your beam. There is very little chance that 10 will open to Europe and if the solar flux happens to get down in the lower 70s not much on 15. If 15 is open to Europe, that's the band you need to be on. It could be a real mess on 20 if the MUF doesn't make it up to 15. If possible, take a bit of time as the sun gets near the horizon to look for some pacific stations. While the high bands need a good case of the pox on the sun, the low bands will be great his year. Sunset and sunrise can bring in really great low band DX from half way around the world. If you can only do one, go for the sunrise period. If you have packet, work EVERYTHING they spot. If you have under 5 hours, you will find more than enough to keep you busy from packet.

*Five to 15 hours.* Concentrate on European contacts when each band is open to Europe. I don't expect 10 to open to Europe, but if you ever see any 10 m European spots, go there immediately. If 15 is open, that is the band to be on since it will only be open for shorter periods in relation to 20. A typical station will get over 60% of their score from Europeans. If open, those stations above the tropic of Cancer drop out fast as the sun gets to the horizon on the eastern end of the path. The more near the station to the equator, the longer the band will stay open after their sunset. Take time to work higher band stations to the south in the afternoon and look for the pacific stations near sunset. You don't have to stay up late to work a few hours of Europeans on 40 and 75. If you try 160 start looking on the hour at 0300, 0400, 0500 and 0600GMT if you are still awake. When you get into the upper end of 5 to 15 hours you need to think about calling CQ and working those that call you to maximize your score.

*15 to 30 hours.* This amount of time puts you in the moderate to serious effort and at this point your score for the club effort will increase dramatically as you add those extra QSOs and multipliers. CQ running will make a much bigger score over just the search and pounce mode of operation. A good 30 hour operation

can bring your score over a million points. You can still get a good nights sleep and work all bands to all areas of the world. If possible, get up at least one morning just before sunrise to catch the sunrise peak on 160, 75 and 40m. The 160 peak is at sunrise, the 75m peak at sunrise to a half hour after sunrise, with 40m peaking 20 to 60 minutes from your local sunrise. Some mornings are really magic on what you can hear and work during these peaks. I've seen long path Asians go from S0 to S9 and back to S0 in a 10 minute period. Remember, if you have a low-band beam, you are always pointing into the darkness, not into the light. While there can be true long path on the higher bands, on the low bands, if it is long path, it is long "crooked path" along the terminator.

Europe is the name of the game for the most part. Sixty percent of your total QSO's will come from there. Packet users follow those spots if you are not running. During the day, non-packet users point your beams SSE and make one tune over the band looking for those loud Caribbean/South American multipliers every time you change bands, then back to Europe! The peak chance for Europe on 15 is from 1300-1600GMT. On 20 from 1200-1800GMT. 40m peaks to Europe from 2200-0700GMT. The MUF to northern Europe may fall below 40m from 0200-0600GMT. 75m will be best from 0300-0700GMT. Remember there is a big peak on 160 and 75 at sunrise on the eastern end of the path with the 40 m peak from 20 to 60 minutes after their sunrise. You can really see the effect on low band propagation as the sunrise terminator moves from east to west over Europe. Take a look for Europe on 40 m about 45 minutes before our sunset. A quick check of 75 m about 15 minutes before local sunset will sometimes find magic signals.

From sunset until each band drops out it can be a very hard choice as to what band to operate. 15 m to the Pacific with a slight chance to Asia. Africa and South America on 20, Europe on 40 and 75. The same problem at local sunrise. Many DX stations go to 160 for a few minutes on the hour. Don't spend long periods of time on any one band. Hop around. Follow the packet spots if you have them. The people in this category should be able to make DXCC over the weekend. You'll need computer logging to keep track of dupes and multipliers at this operation level.

*More than 30 hours.* This means you are serious! You are going to lose some sleep at this level. Remember, there are 363 other nights during the year to sleep. If

(Continued on page 10)

*(Continued from page 9)*

you must sleep, the hours no band is open to Europe is sleep time. That means 0730-1000GMT. Not much sleep, huh?...add to that time frame as needed but that should be your core sleep time to maximize your score. 20 m opens to Europe between 1000-1100GMT. You really need to do some CQ running to make this work for you. Don't worry about multipliers any time you are running at over 60 QSOs an hour....many mults will call you. Some very rare stations hate pileups and only answer CQ stations. Remember the old adage "location, location, location". In this contest it's Europe, Europe, Europe. Don't fail to seize this east coast advantage. I'll be happy to talk to anyone via telephone or over the air about how to maximize your score in relation to what you have for equipment and your planned operation time. There are a number of hints I can pass on to those that have better stations.

*Optimizing Scoring.* Your contest score is the total QSO points times the total multipliers. You add up your total QSO points from each QSO on each band. Then you add up your total multiplier (zones and countries) from every multiplier on every band. (Remember, you count up each zone the first time on each band and only the first time on each band, the country the first time on each band and only the first time on each band.)

A computer contest log program will take care of all of that for you. If you still do it the old way by hand, the simple way to tell QSO points is USA counts 0 points, zones 1 through 8 count 2 points and zones 9 through 40 count 3 points per QSO....except OX which is a 2 pointer. Total QSO points times total multipliers is your score. A QSO total of 400 with 1000 QSO points with a total of 50 zones and 150 countries all on bands would be 1000 X 200 for a score of 200,000.

I know it is a lot more fun to work a JT but keep in mind, for this contest a W multiplier counts the same as a JT multiplier. Don't give away score by not working a W on each band. They count 0 QSO points so there is no need to work more than one, but make sure you work that one on each band. Another area where you don't want to give away multipliers is the US/Canadian zones. Zone 3 is west coast US/Canada. Zone 4 is central and zone 5 is east coast US/Canada. Better to work a Canadian on each band since they count as QSO points but make sure you work one station in each zone on each band. The zone/country multiplier can be 24, just working US/Canadian stations. That means 24 times your QSO points toward your total score, just in US/Canadian contacts. Don't give away part of your

score by missing these simple contacts.

You count a zone or country the first time it is worked on any band as a multiplier. Double multipliers are a bit more fun. For example, when you work an XE for the first time on a band it is a double multiplier. It is the first zone 6 and the first XE for a double multiplier.

Please contact me if you plan to enter as a multi op. We did it for many years at N4ZC and I think I can give you some tips on how to increase your score. Next month when we are within 27 days of the contest I'll give a bit better idea on what to expect in propagation during the contest.

Enjoy working DX in the CQWW contest and help CDXA pile up the club score.

### **The Toolbox**

By Don Daso, K4ZA

*(Reprinted with permission of the Potomac Valley Radio Club.)*

Often, in my travels for tower work, the subject of bolts comes up. After all, we use a wide variety of fasteners constructing towers and antennas. But every now and then, a question will arise, usually derived from the old "bigger is better" thinking so prevalent in earlier times. I'm often surprised how little some folks know about the topic.

Bolts are often stamped with identifying marks; it seems many folks know that bit of information. Yet, not all bolts are stamped, and there's some confusion on what the markings mean or represent. Technically, the markings are often said to indicate "minimum strength." What that really means is the markings indicate a property class. More on this in a moment. You may ask, "Why aren't ALL bolts stamped or marked?" Good question, and the simple answer is the rules regarding that are vague. And OEM hardware isn't required to be marked at all! That's why (if you look closely), you can find unmarked hardware all over vehicles, for instance. It's also a little known fact that if manufacturers say their super-plated-stamped hardware simply meets or exceeds a particular OEM standard (in writing), then said hardware doesn't need to carry any markings whatsoever.

So, should you care what's stamped on the head of a bolt you're about to use? Simple answer? Of course. Here's why: first if you're replacing something, you

*(Continued on page 11)*

(Continued from page 10)

wouldn't want to substitute something weaker than what you're replacing. Secondly, and more importantly, if you know the property class of a bolt and its diameter, you can determine a basic torque setting. Suppliers and the Web can provide a basic chart lists torque settings based on property class. A few minutes spent playing around with a torque wrench (Yes, Virginia, another tool—one that actually measures how much force you can exert on that 10-inch ratchet), and you can build in some “muscle memory” that will help when you're a couple hundred feet in the air and the client hollers up, “Tighten those rotator bolts to 35 ft-lbs, Sparky!”

Why is this important? Bolts over tightened can be just as lethal as those that haven't been tightened enough! Such bolts can easily break in service. Remember, too, that torque specs will be lowered for bolts with oil or lubrication on them.

To give some idea of what to look for and do, here are some simple references for SAE bolt identification markings and torque specs—available in printer-friendly versions, too!

<http://www.mne.psu.edu/undergrad/CaseStudy/ME51/BoltStrength/casestudy.html#N40000D>

And finally, some theory, experiments, and case studies, et cetera—a veritable college class assignment which will help you understand not only that theory, but some practical realities of the forces at work. Shows, for instance, why the Telrex rotator didn't work so well in many applications—the bolts used in holding the unit together were way undersized for the stresses involved....

[http://www.americanfastener.com/technical/grade\\_markings\\_steel.asp](http://www.americanfastener.com/technical/grade_markings_steel.asp)

[http://dodgeram.org/tech/specs/bolts/SAE\\_bolts.html](http://dodgeram.org/tech/specs/bolts/SAE_bolts.html)

Above are web links to some of the best charts available on the topic of bolts.

What's in your toolbox? —K4ZA

**Tower Works**  
*Specializing in Rohn guyed towers*  
*Antenna repairs/installations*  
**Don Daso**  
 515 Withershinn Drive  
 Charlotte NC 28262  
 704-594-9853 704-408-7948 (cell)  
 e-mail: k4za@juno.com

## Got that Eerie Feeling?

Kim Hinceman, WA4VKW, certainly did when he looked at his antenna a few weeks ago. A turkey buzzard was on his beam with Halloween still 10 weeks away!!



## Facts about “Old Sol”

Did you know at the peaks of the sunspot cycle the magnetic poles of the Sun reverse themselves? In about January 2001, the sun watchers informed us that the poles had flipped—a sure sign the solar maximum had been reached.

The fact that the Sun will flip again at the next “peak” of the sunspot activity means that the “cycle” of the sun is really 22 years. That is, if a given pole *starts* a cycle at a particular position, it is 22 years before that same pole starts the cycle at that point again.

Sunspots are believed to be magnetic “flux tubes” breaching the sun's surface. They have been found to have specific magnetic orientation. As the sun begins its cycle anew, appearances of sunspots with an opposite magnetic orientation (“Reverse Sunspots”) occur. Such an event was observed recently giving solar observers the clue that we are about to begin the next climb of solar activity.

## Pun Pfun

Two antennas met on a roof, fell in love and got married. The ceremony wasn't much, but the reception was excellent.

A jumper cable walks into a bar. The bartender says, “I'll serve you, but don't start anything.”

## The Back Page

CDXA's "**Contest Within a Contest**" (CWAC or See Whack) is back for 2006! See Page 3, The Second Front Page, inside for details of this year's contest and prize lineup.

If you like barbeque and chicken, you'll love the **CDXA Barbeque**. We're back to Frank Dowd's spread this year for another fine meal catered by our own Rick Porter (AA4SC). Details on Page 5.

Have you been tracking **results from CQWW 2005**? So has our Contest Manager, Dick Williams (W3OA). What happened to our score for CQWW CW? A lot are wondering that, too, but Dick is already in touch with CQ Magazine. See Front Page and Page 6 for two articles by Dick.

Roger Burt, N4ZC, is back as a guest writer six years later to give us "tips" for **success in CQWW** at the *bottom* of the sunspot cycle. See Page 7 for this informative article.

Did you ever wonder how CDXAers are performing in pursuit of the **5BWAZ Award**? Go to Page 4 to find out who's who in CDXA for this hard-to-achieve award.

### Upcoming Contest Activity:

<u>Dates</u>	<u>Contest</u>	<u>Remarks</u>
Sep 9-11	ARRL VHF QSO Party	1800Z (Sep 9) to 0300Z (Sep 11)
Sep 9-10	WAE DX Contest, SSB	0000Z (Sep 9) to 2359Z (Sep 10)
Sep 17	North American Sprint, SSB	0000Z to 0400Z
Oct 28-29	CQWW DX Contest—SSB	48 hours of fun in CWAC!
Nov 4-6	ARRL Sweepstakes, CW	
Nov 11-12	WAE DX Contest, RTTY	
Nov 25-26	CQWW DX Contest—CW	48 hours of fun in CWAC, again!

---

**Cliff Wagoner, W3ZL**  
**P. O. Box 577**  
**Davidson, NC 28036**

**cliffw@adelphia.net**

## First Class Mail

*See something wrong with your address label? Notify W3ZL at once, please.*