# Special Edition – 2013 DXCC Year End Review – by Joe Reisert, W1JR - January 11, 2014

**An Overview**:
The excitement continues. DX wise, 2013 was a good year. Radio propagation was up and down, especially on the upper HF bands, although not always to the expected level. There were approximately 286 DXCC entities activated, several fewer than in the last few years. There were well over one hundred small (1 or 2 operators) and over twenty five (25) large scale DXpeditions, many from rare entities that took advantage of the better conditions. They were often available to "The Deserving" on all modes and all bands from 10 through 160 meters, some even on 6 meters. Activity from the Caribbean Islands was still very high especially from the four new 2010 PJ entities.

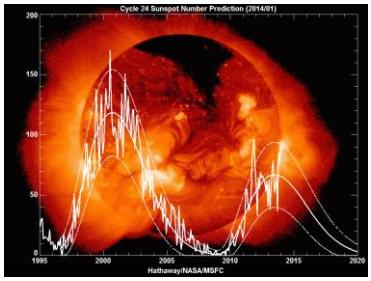
**A Quick Review of 2013**:
DX activity was still high this year. The DXCC Challenge, CQ Magazine DX and the IOTA Marathons activity probably increased due to better propagation. There were over 400 different contests that took place during the year with many DX oriented. There were several DXpeditions from places that are high on the "2012 Worldwide Most Wanted Survey" in "The DX Magazine" by N4AA although only one, ZS8M, was in the Top 10. Operations also took place from SV/A and KH9, which were in the "Top 20." The "2013 DX Magazine 100 Worldwide Most Wanted List" shows that the new top 10 in order are P5, KP1, 3Y/B, FT5W, FT5Z, VK0H, BS7H, ZS8M, VP8 (S. Sandwich), and FR/T. By comparison, the Club Log top 10 in order are KP1, P5, 3Y/B, VP8 (S. Sandwich), FT5W, VK0H, FT5Z, KH5K, FR/T and FR/E/J.

**Members of the K9Wake Island DXpedition made just over 100K QSOs.**

Unfortunately as frequently happens, several DXpeditions such as VK0/H were delayed (hopefully only into late 2014 or early 2015). Others were delayed because of Government transportation problems (K9W), cancelled due to logistical problems (T31), were shortened due equipment delays (T2GM), storms and Tsunamis (H40 & H44IOTA), accidental death (DL4JJ (SK) at T2YY), terrorism (Z81D) or were thwarted from operating for one reason or another**. This vividly shows some of the problems in putting on a rare entity.** Most entities activated in 2013 were available on SSB. CW still did not die as there were about 270 entities active on CW during 2013. The "599 TU" QSOs on CW or "59 thank you" on SSB are still very popular especially with DXpeditions although it is evident that some operators are advocating a return to the days when signal reports meant something! Computer sending and receiving were very evident as well as many DXers using the DX Clusters and Reverse Beacon Network. RTTY (now called "Digital" by ARRL) was also used by most large DXpeditions.

**A Solar Review**:
We are now well into Solar Cycle 24 although it has been like a roller coaster. Now it looks like there will be a double peak as was seen in Solar Cycle 23. Some of the computer models of late are now undergoing modifications. It looks like Solar Cycle 24 will **NOT** be a memorable one with record numbers of sunspots. The computer models from NASA (http://solarscience.msfc.nasa.gov/predict.shtml) are now predicting this solar cycle peaked in late 2013 with only 72 smoothed sunspots. Based on the latest data, this will be the smallest solar cycle peak since Solar Cycle 14 peaked in February 1906 well before DXing began! Predictions for future Solar Cycle 25 etc. look even bleaker.

Solar flux (SF) is a good indicator of improved propagation on 10 through15 meters. SF did stay mostly above 100 for the entire year 2013 with only a few short dips into the 90s. SF was very high (174) at the start of 2013 but rapidly declined staying mostly below 150 until late October just in time for the CQWW DX Phone Contest. SF peaked at 178 in mid-November. Aurora was often evident when the K index rose to 5 or above. The most affected stations were at high latitudes. NOAA has the "Stereo Satellites" looking at the Sun from the front and back so now sunspots can be easily spotted ahead of time on the internet by interested parties.




**We are now in the second peak of Cycle 24.**

**Band by Band Activity**:
There was plenty of DX activity in 2013 including over 25 major DXpeditions that spread activity out from 160 through 10 meters. 160 Meters is still generating LF DX activity especially by DXpeditions usually operating between 1810 and 1830 KHz but conditions seemed poorer than prior years. 80 Meters is often quiet except during DXpeditions and contests. 80 Meter DXpeditions on CW often operate at either the low end of the band or near 3525 KHz. Several more entities have received permission to operate on 60 Meters. Since the FCC relaxed mode requirements, CW and digital activity are being used in the established fixed channels. Some of the DX entities outside the USA have different channels making it sometimes difficult to work them. New entities are now getting permission to operate on 60 meters. Congratulations to Bob, W4DR who completed working 60 Meter DXCC, the first from the USA, with others not far behind.

40 Meters is still the night time breadwinner and was great all year round as usual. DXpeditions used to operate CW near the bottom of the band but nowadays many opt to operate near 7025 KHz to reduce QRM. The expansion of 40 meter SSB from 7100 to at least 7200 KHz for many of the Worlds entities has generated lots more activity, especially during SSB contests. Remember that USA stations can't operate SSB below 7125 KHz. For safety stay above 7128 KHz. 30 meters is very popular, especially for QRP and digital modes and is sometimes open 24 hours a day during the darker months. 20 Meters is still the daytime breadwinner along with 17 meters where there seems to be less congestion. 15 meter conditions have greatly improved and sharing some of the load when the solar flux rises. During this past year 12 and 10 meters really came alive with worldwide DX especially when the SF was above 150 although not like what was experienced during the peak of solar cycle 23. Despite this, it was easy to work over 200 entities on 10 meters during 2013. Some isolated F2 and Transequatorial propagation DX was present on 6 meters especially around the equinox periods but less than in Solar Cycle 23. Sporadic E propagation especially during June, July, early August and December often enhances HF and 6 meter DX but this was not due to increased sunspots.

**Equipment and Publications**:
As usual, some new equipment came on the market. The five major radio manufacturers all introduced new transceivers and peripherals. New receiving arrays became available for the Low Bands. HiZ is back in operation after they reached an agreement with DX Engineering. SDR (Software Defined Radios) also increased with more features. In addition, some do-it-yourself low cost SDR kits became available. More QRP kits and rigs are now available. New antennas were introduced, especially compact multiband verticals and Yagis. It was just announced that InnovaAntennas has acquired Force 12 antennas and will be manufacturing same their Junction, CO location.

**Ham Radio and the Internet**:
The Amateur Radio sites, DX clusters and of course emails etc. on the internet are really supplying lots of good services. Most major contest logs and some awards now must be submitted via the Internet often within several days after the contest is over. Internet use and abuse by Amateurs continues to increase especially for DX spotting clusters. The DX clusters are still an amazing tool for finding and spotting rare DX. One popular one is "DX Summit." Reverse Beacon Networks which use CW skimmers are now being widely used and rarer spots uploaded to the DX Clusters.

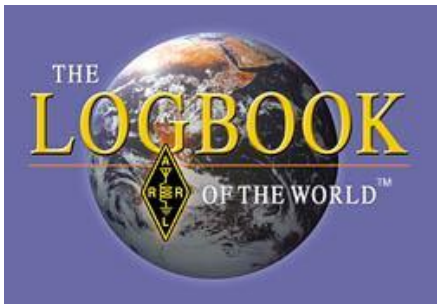
There are several downsides to using the cluster. All too often incorrect or extremely rare call signs (not on the air at the time!) are spotted. Another cluster annoyance is using the clusters for self-spotting or to boast about a QSO or a

QSL being received. No one really cares and sending thanks to a station that probably isn't on the cluster is an annoying waste of time and space. Repeated spots of the same station are also not productive. First check to see whether a spot was previously made before repeating same. A rare call sign can cause a huge pileup that may even cover up the DX station. Always listen before you call to be sure it is the right station and especially if there are special instructions such as listening UP. In these days of seldom signing both call signs, never rely solely on the accuracy of the spot as you may receive a NIL (Not in Log) to your QSL request. During 2013, especially in November I often heard two or more DXpeditions operating simultaneously on or near the same frequency and often pileups coincided or overlapped. Also don't post QSY requests. Few DX stations notice and in the case of DXpeditions, they seldom are continuously connected to the internet so they usually don't see your request.

**QSLing**:
There is no denying that the cost of QSLing is becoming too expensive. The European postage rates have greatly risen and on January 26, 2014 postage rates in the USA will increase about 4.3% for both domestic ($.49) and foreign $1.15). IRCs are costly, seldom available (USA discontinuing same) and often can't be redeemed. The ARRL outgoing QSL Bureau or the QSL bureaus in many entities can lower QSLing cost. The ARRL Outgoing QSL bureau shipped approximately 775,000 QSLs during 2013, an increase of about 6% over 2012. I prefer paper QSLs since they may be needed for awards other than DXCC but I realize that I am now in the minority

To further offset QSLing cost, the ARRL LOTW (Log Book of the World) is extremely popular. The DXCC has been the prime user but other awards are being added. There are now over 540 million LOTW QSO records, an increase of 16% over 2012 and over 61,000 registered LOTW users, a 13% increase over 2012 with almost 93,000 active certificates!

There were extensive LOTW delays back in 2012. Recently version 2.0 of LOTW was released, the first major new client side software in a long time. Volunteer programmers Robert, KC2YWE, Rick, K1MU and Dave, AA6YQ have been instrumental in helping to produce this new version in concert with ARRL IT Manager Mike, K1MK. LOTW use continues to rise and doesn't look to level off for many years. The updated software seems to be working well and faster. Contesters are often uploading their logs immediately after contests. CQWW logs are routinely seeing match rates near 50%. Most DXpeditions now use LOTW.




Partially as a result of LOTW, expensive DXpeditions (costing over $100,000!) are experiencing difficulties raising the necessary funds for transportation etc. It now can cost between $10,000 and $25,000 per person to participate and travel to the more difficult places for rare DX entities. The estimated cost per QSO from the upcoming VK0EK Heard Island is $5.00! The cost of DXpeditions was highlighted in a detailed presentation by N1DG at the Dayton HamVention on "DXpedition Costs." It is very enlightening and can be viewed on the NCDXF website (www.NCDXF.org). K4UEE has written a follow-up article pointing out that for the FT5ZM operation based on 100,000 QSOs and time on the air the costs are about $20.00 per minute of operating and about $4.00 for each QSO (http://www.amsterdamdx.org/ft5zm-20-00-per-minute-on-the-air/). This also shows why contributions with QSLs, however small, plus donations from clubs and DX foundations are necessary to offset cost and make these rare entities available.

One very popular QSLing trend is the OQRS procedure where for a donation no QSL is needed. Club Log (clublog.org) is very popular with many DXpeditions uploading their logs in short order and has streamlined the OQRS by making it available on their website.

**Operating techniques**:
Change happens, sometimes for the better and sometime for the worse. Some new modes of communications have appeared on HF. The JT65 digital mode similar to operation used on VHF is now being widely used on HF even on 160 meters. K1JT has recently announced an improved system for HF on his WSJT website. Split frequency operation, especially by DXpeditions should be standard practice but has its own problems. Often calling stations are

not aware of the split and QRM the DX. During several of the major DXpeditions I carefully monitored the DX station frequency. Often someone would hear this relatively clean frequency, jump right in, hear the DX station giving reports, imagined that they had a QSO and with impeccable timing would hear the DX station say TU and think they had a valid QSO! It goes without saying that if you aren't copying the DX station well enough to properly identify the station or aren't aware of what technique is being used by the DX station**, DON'T CALL**! There is a good reason to check internet logs if they are posted rather than receiving back a NIL (Not in log) reply to your QSL request. This doesn't mean that we should call continuously and later check the internet hoping to see if your call sign is in the log!

Also, there are the usual problems with "frequency policeman". If you can't refrain from saying something to the interfering stations, drop in a SHORT reminder like "**UP UP**." Sending or saying a long string of **UP UP UP UP UP or Hi Hi, acting like a policeman or calling a station a** lid often does more harm than good and often QRMs the DX station. Of course, obscenities are NEVER appropriate. Steady tuning up especially on top of a DX station is still a big problem. I was QRMed on dozens of QSOs in 2013 due to tuning and QRM. Also many start calling the DX station before the last QSO is completed causing more confusion.

Another problem is directional calls and partial calls with too many responding that are not from the area or call sign in question. This holds up DX, creates delays and deprives others of a QSO. DXpeditions also have other problems. Many of the recent ones on CW are transmitting at 30 to even 40 WPM. Some operators just can't copy their call sign that fast**. Some of the problems maybe the limitations of code readers especially for newer operators.** Also DXpeditions often create excessively wide pileups. This causes unnecessary QRM and disrupts stations who are not in the pileup. Finally some DXpedition operators insist on sending DUPE, which seems to be a waste of time since it would be easier to just have a quick QSO and move on. Perhaps this happens when a station calling a DXpedition is not sure of a prior QSO due to QRM etc. A more recent problem is the "Leader Board" on Club Log. It is great but causes stations to want to work every possible band/mode at the expense of less equipped stations trying just for a new entity. This is not a fault of Club Log!

Also, try not to rag chew on frequencies frequented by rare DX such as 3.795, 14.195, 21.295 and 28.495 MHz as well as 14.260 and 21.260 MHz for IOTA. These are just a few frequencies that come to mind. You may not hear the DX station but transmitting on those frequencies will make it difficult for others that are experiencing better propagation than you are.

Space does not permit more info on operating but the following references are highly recommended reading. First see "The DX Code of Conduct (for DXers), The DX Code of Conduct (for DXpeditions) (dx-code.org) and "Best Practices for DXpedition Operating" by DX University (www.dxuniversity.com). Let's hope that operators and DXpeditions will adopt these recommended procedures.


**Pirates and Unauthorized Operations**:
2013 seems to have had less pirate operations than usual using existing or unlicensed call signs. There are still those who post rare calls to thank people for QSLs after the operation is over. This is totally un-necessary and often a form of boasting. Furthermore, much confusion comes when people spot rare call signs for test purposes or copy call signs incorrectly and put them out on the DX Cluster. Many of the incorrect spots are due to copying the call sign incorrectly such as 5A1A from HA5A and EZ1A for E71A. If you see a rare call sign spotted, first check to see if it is a busted call. Of course sending a QSL to a pirated call sign is a waste of time and money. By the way, Z6 operations do not count for Kosovo for DXCC credit at this time

**Silent Keys (SK)**:
The age of DX Honor Roll leaders is increasing and with Amateur Radio in general. The July 2013 QST Magazine SKs (pages 104-105) list was over 1-1/2 pages long with over 350 call signs! It is sad to note that several well-known Amateurs became SK during 2013 and deserve to be mentioned. Many were well known DXers who were near the top of the DX Honor Roll such as W7KH (Top of the list) and W9JUV. Other DXers included but not limited to 5Z4FM, ex AC4RF, EX8A, HB9RS (founder of 4U1UN), IK4MRH, K4SMX, ex KC6JC, LU1DZ, VE1AL, VK6HD,

VR6TC/VP6TC, W6BH, XE1L, XE1YK, and ZC4LI to mention a few. Other notable SKs included G3VA (RSGB), K6NY (Palomar Electronics and "Kurt Sterba" in Worldradio), W1NJM (ARRL), W2NSD (CQ and 73), and WJ0G (Storm Chaser). This means that we Amateurs have to be more active to recruit new members especially youth to our hobby. Kids Day and YOTA (Youth On The Air in Europe) are good examples.

**2013 DXCC Changes**:
The DXCC active entity list still stands at 340. If you add the 61 deleted entities, the DXCC total is still 401 entities. It is doubtful that anyone can achieve 400 entities for some time since all of the top leaders missed at least 6-8 of the deleted entities. Therefore, until more entities are added, 400 will be an elusive number. Kosovo is still a possible new entity but the Z6 operations, although being used for Kosovo (Z6 is for ICAO use only), is not an ITU sanctioned prefix for Amateur Radio and therefore does not count for DXCC at this time. Some entity call signs changed such as ZK3, which is now E6. The DXCC Yearbook, usually published in August, is no longer available in hard copy but can be accessed on the internet for download from ARRL.

**In mid-December 50 engineering students from Kosovo passed their Amateur Radio exam.**

**Future DXpeditions**:
Several large scale DXpeditions from rare entities are scheduled for 2014 starting with 1A0KM in the first week of January followed by FT5ZM, S9TF, 3C and 3C0. VK9M is due in late March and FR/T in late October. Others may be in the works. ZS8C and ZS8Z are still active but mostly on SSB. SV2ASP/A lost his antenna in a recent storm (as did OH8X). Hopefully they will be repaired soon. Still no news on KP1, Navassa but I'm sure that it will eventually be activated. There are several groups working on putting P5 on the air. The Daily DX has a list of proposed operations on their site at: http://www.dailydx.com/calendar.html.

**The 2013 DX Review**:
The following is a brief summary of monthly DX activity during 2013. Emphasis is on rare to semi-rare operations and DXpeditions especially where no resident Amateurs are active.

**January**
There was lots of activity as 2013 started. Conditions were great in early January but degraded during the month with solar flux down to 95 by the end of the month. It was possible to work over 100 DXCC entities in the first few days of January and over 200 entities in the month. There were approximately 235 entities available in January, slightly above normal.

As January started, JX9JKA and H40FN were still active. Also active were 3B9, 9X, FH, HH, J5, PY0F, TT8, TY, TZ, VK9L, VK9N, XV, XW, and ZK3 to mention a few. At times there were so many semi-rare stations active as the same time that they unintentionally QRMed each other.

**February**
The solar flux was much lower than in January. Conditions were still good. Several of the DXpeditions that were activated in January were still active. In addition to the above, semi-rare activity was provided by 3B9, 3D2/R, 5V7, 6O3A, 5X8C (81K), 9U, H4, HK0/A, J5, JG8NQJ/JD1 (MT), S01MZ, S7, SV2ASP/A (mostly RTTY), XT, and ZK3.

**March**
The month started off with TX5K (Clipperton, 113K). Other notables were 3XY, 9M4SLL (Spratly), C2, E6 (mostly VHF), H40, S2, T2, T5, XR0Y (24K), and Z81.

**April**

The month opened with VK9CZ (C/K), followed by 5U, 9N, A2, A5, T2, VK9L, and ZK3.

**May**
May celebrated the 75th anniversary of the FOC (First Class Operators Club). Over 60 stations with FOC in their suffix made over 200K QSOs. Also active were FO/A, FO/M, HC8, SV2/A, VK9N, VU7KV (2K), YJ, and ZS8Z.

**June/July/August/September**
These are usually the slower months DX wise. Activity came on from 5A1AL, 6O0LA, C21, E4, FO/A, FO/M, OJ0, VK9L and XZ1Z (by JH1AJT) which was a big surprise.

**October**
DX activity really picked up and so did the solar flux just prior to the CQ WW Phone Contest making this a very memorable month on the upper bands. 7O2A surprised us all followed by 3D2/R, 9L, C82DX (26K), CY0P (24K), FO/A, FW, TN, TO2TT (FH-64K), Z2 and ZS8Z.

**The VU7AG DXpedition to the Lakshadweep Islands for 20 days by VU2NKS, VU2NXM, VU2PAI, VU3DMP, VU2RCT, VU2ABS and W4VKU/VU2VKU.**

**November**
This month will be long remembered as it was crunch time with so many DXpeditions on at the same time. QRM was fierce but to the Deserving it was a great month. Activity started with the long delayed K9W from Wake Island making over 100K QSOs. Also active were 5V, E6, HK0/A, KH8, S21ZBC (52K), T30, T32, T33A (82K), VU7AG (55K), XR0ZR (59K), XT, XR0YY, XZ1J, and Z81X (41K).

**December**
Conditions were still fair**.** 9L**,** E6RQ, T30TS, T32RC, and TT8ES were active as well as great openings to 3W1T on 10 meters. OF9X gave out over 21K Santa QSOs from Lapland, otherwise known as Santa Claus Land.

**<u>And now the Drum Roll</u>**:
These are approximately fifty four (54) entities that were NOT believed to have been active during 2013 as follows:
Africa (14): 3B6, 3C, 3C0, 3Y/B, D6, E3, FT#E/J, FT#G, FT#T, FT#W, FT#X, FT#Z, S9, and VK0/H.
Antarctica (1): 3Y0 (Peter 1).
Asia (6): BS7H, BV9P, EZ, P5, VU4, and YK.
Europe (1): 1A0
North America (7): 4U (UN), CY9, KP1, KP5, TI9, XF4 and YV0.
Oceania (18): 3D2/C, 4W, FK/C, KH1, KH3, KH4, KH5, KH5K, KH7K, KH8/S, T31, VK0/M, VK9/M, VK9/W, VK9/X, VP6/D, ZL8 and ZL9.
South America (7): CE0/X, HK0/M, PY0/S&P, PY0/T, VP8/SG, VP8O and VP8/S. Sandwich.
Please note that some rare entities may not be on this list for 2013 because some operations were short or on VHF. An example is VP6MW.

A list of DXCC entities that are believed to have not been activated in ten or more years are: BV9P, CE0X, E3, FR5/T, FT5/Z, KH1, KH3, KH5K, KP1, P5, VK0/H and VP8 (S. Sandwich). This shows that an avid DXer working hard at DXCC may take at least 10 years to make the DXCC Honor Roll. This list also serves as a guide to those planning DXpeditions to rare entities. As for me, the top of my need list for the DX Challenge has not changed and not surprisingly goes to P5, BS7H and FT5/W in that order.

**Looking ahead to 2014**:
Solar Cycle 24 sunspots will be ever so slowly decreasing although sporadically. This will affect propagation on the higher HF bands, especially 12 and 10 meter. Look for the solar flux to go above 100 with low A (<20) and K (<3) indices. Solar wind below 350 KM per second and dynamic pressure less than 0.5 nPa as show on NOAA Space Weather (www.swpc.noaa.gov) are good indicators of improved HF propagation.

January is usually a good month for Low Frequency operation. With more sunspots the higher bands should be good during daylight. Some information is now becoming available on forthcoming DXpeditions. For starters 1A0KM is scheduled in early January, followed by FT5/Z in and VK9M in late March with more DXpeditions to follow later in the year. Check out the Daily DX Calendar as mentioned above.

DX means many different things to many people. Some DXers are only interested in the ARRL DXCC Honor Roll and soon run out of interest and challenges. Others pursue the never ending ARRL Challenge competition. EA8AK is now in the lead at 3221. This award includes all the bands from 160-6 meters. 6 meters is a tough band for stations outside of Europe. Over 50 stations in Europe have worked over 200 entities on 6 meters while 185 entities is the maximum for USA with only 15 above 150! Hence the Europeans will probably dominate the top of the DXCC Challenge award for the foreseeable future.

**EA8AK, Fernando Fernandez Martin, is now the leader of the ARRL DXCC Challenge with an amazing 3221 confirmed.**

WRTC will be held in early July with over 50 low power stations operated by noted operators from all over the world assembled in Massachusetts. N7NG promises more DX University sessions (www.dxuniversity.com) with one scheduled during the ARRL 100th anniversary celebration in Hartford, CT in mid-July. This is a DX training course similar in concept to Contest University. CTU will again be available prior at the Dayton HamVention. Also don't forget to support the various DX Foundations around the world that help make DXpeditions possible!

Some DXers also like to chase Islands for the IOTA (Islands on the Air) program by the RSGB. There are approximately 1200 IOTA Island Groups and many have never been activated so there are lots of challenges. For the last several years, CQ Magazine has reinstituted the yearly CQ DX Marathon to see who can work the most entities in each calendar year. This program has a few more challenges by also adding seven (7) entities recognized only by CQ Magazine but not on the ARRL DXCC list as well as working all 40 zones. And there are the never ending DX Contests. There are lots of things to do. Don't let the airways die for lack of activity. Conditions have really improved lately. Stay active and join the fun.

**Finally**
There was so much news in 2013 that I can't possibly fit it all in. Once again I am honored to be asked by Bernie, W3UR to write this review and for his valuable inputs and critique. Congratulations to the stations that worked over 275 DXCC entities during 2013. Thanks also to John, K9EL, Don, N8DE, Dave, NN1N and Wayne, N7NG for their valuable inputs and to my son Jim, AD1C for all his computer help!

**NOTE:** Obviously all the opinions etc. expressed are solely mine as are any errors (I hope there aren't many) that I have made. **This write up is copyrighted**. Therefore copies or use of this review **MUST** first be approved by Bernie and then a courtesy copy of the reprint sent to W1JR. Best of DX to you in 2014 and here's hoping to see you in the pile ups. Joe Reisert, W1JR