Special Edition – 2014 DXCC Year End Review – by Joe Reisert, W1JR - January 2, 2014

An Overview:
The DX just kept rolling in during 2014. Propagation was up most of the year with unexpected peaks. There were approximately 286 DXCC entities activated, the same as last year. There were over twelve hundred (1,200) small (1 or 2 operators) operations (when I finally decided to stop counting!) and over fifty large scale (3 or more operators) DXpeditions. Many were from rare entities. Some were unexpected and available to "The Deserving" on all modes and all bands from 10 through 160 meters, some even on 6 meters. Activity as usual was high from the Caribbean but also from the Oceania Islands.

A Quick Review of 2014:
Although not usually DX, the ARRL Centennial using W1AW/x call signs as well as ARRL officials at times really filled the DX Clusters. The WRTC 2014 took place during early July and was held in the Greater Boston, MA area and was well attended. DX activity was still high this year. The DXCC Challenge and the CQ Magazine DX Marathon activity were high and took advantage of better upper band propagation. There were over 400 and growing different contests that took place during the year with many DX oriented. There were several large DXpeditions from places that were high on the "2013 Worldwide Most Wanted Survey" in "The DX Magazine" by N4AA including

FT5ZM was voted DXpedition of the year (2014) in the annual DX World poll, sponsored by the North California DX Club.

FT5ZM, FT4TA and ZS8 temporarily residents all in the Top 10. Smaller scale operations also took place from E3 and VP8 (South Georgia), which are in the "Top 20." The "2014 DX Magazine 100 Worldwide Most Wanted Countries" shows that the new top 10 in order are P5, KP1, 3Y/B, FT5W, VK0H, BS7H, VP8 (S. Sandwich), FT/T, KH5K and KH5. Only a few changes were noted and surely the FT/T will fall off the list as the FT4TA DXpedition took place after the survey was taken. By comparison, the latest "Club Log" 10 Most Wanted in order is P5, KP1, 3Y/B, VP8 (S. Sand.), FT5W, VK0H, KH5K, FT/J, VP8 (S. Geo.), and KH5.

Unfortunately as frequently happens, several DXpeditions were delayed or cancelled because of transportation problems, some operators had to cancel (T31), financial considerations, logistical problems, shortened due to storms (VK9MT), terrorism (Z81D), cancelled due to plague and Ebola (5V), equipment failed to make the plane (VK9EC), illness (VK0M) from operating for one reason or another**. This vividly shows some of the problems in putting on a rare entity.** Most entities activated in 2014 were available on SSB. CW still did not die as there were about 270 entities active on CW during 2014. The "599 TU" QSOs on CW or "59 thank you" on SSB are still ever present 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 much in evidence as well as many DXers using the DX Cluster Network and Reverse Beacon Network. Most large DXpeditions also used digital modes.

Band-by-Band Activity:
There was plenty of DX activity in 2014 including over 50 major DXpeditions that spread activity out from 160 through 10 meters and sometimes even 6 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 except by split. New entities are slowly getting permission to operate on 60 meters. Several of us completed working 60 Meter DXCC this year with others not far behind although the ARRL DXCC program still does not recognize 60 meter contacts.

40 Meters is still the nighttime 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 with less emphasis on split contacts. 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 activity is increasing and 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 stayed 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 2014. 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 through early August and in December often enhances HF and 6 meter DX however this is not due to increased sunspots.

The 2014 DX Review:
The following is a brief summary of monthly DX activity during 2014. Calls listed are usually rare to semi-rare operations and DXpeditions especially where no resident Amateur Radio operators are active.

January:
There was lots of DX activity as 2014 started. Conditions were great for the entire month. It was possible to work over 100 DXCC entities in the first few days of January and over 200 entities by the end of the month. There were approximately 220 entities available in January, about a 5% less than normal.

As January started, 1A0KM was active followed by TY2BP, TY1TT and FT5ZM (over 170K QSOs!). While 4U1UN/B was noted during the year, it is only a beacon. It doesn't look like there will be a 4U1UN operation anytime soon.

February:
A52JR, S9TF (20K), CE0Z/UA4WHX, CY0/VA1AXC, TO7CC (FR-49K), and 3C0BYP (13K).

March:
VK9X/K7CO (7K), ZS8A, ZS8C & ZS8Z, VK9NF, VU4KV (7.7K), TX6G (FO/A-77K), 9N7AA, ZC4MIS, T32TM and VK9MT (40K).

April:
5J0X (HK0A), S21R, PY0F/PP1CZ

May:
9G5ZZ, XW1YC, S01WS was very active throughout the year on SSB, CW and Digital

June:
OJ0W, 4W/HB9FLX, 4W6LU

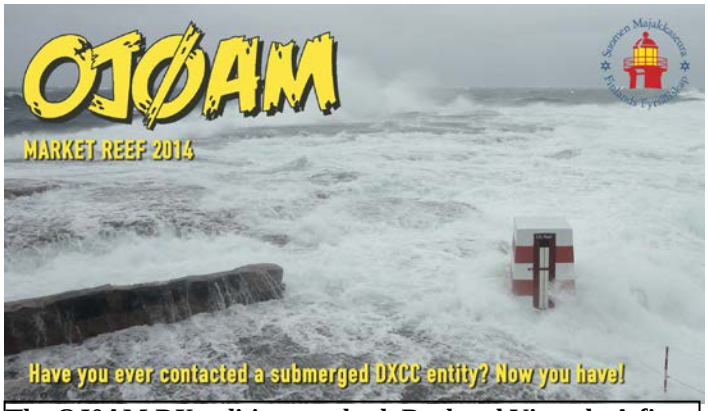
July:

C5II, Z21DXI, C21BN, VK9EC, Z81D

August:
VK9EX, 4W/NB3MM

September:
XX9TYT, E6MF, CY0C, ZD9XF (27K), ZD9ZS (5K), VK9NT, E30FB (4.2K), VK9AN, E41MT, C21GC, 3D2AG/R, 9X0VA, OJ0AM

October:
A52O, 4W/G3ZEM, TX5Z (FO/A), T30D, VK9DLX (128K), VK9XSP (52K), XX9R, FT4TA (71K), TX7G (FO/M-27K)



The OJ0AM DXpedition was both Real and Virtual. A first of its kind!

November:
VU4CB (8.8K), E6RQ, TU0PAX, YJ0BJ, HV6SP/HV0A, TZ6BB, VU4KV (50K), 7O2A

December:
TY2AB, VP8SGK (SG 35 Q), VQ9XR (4.6K), E6XQ, FW5JJ, SV2ASP/A and 1A0C. What better way can we end DXing in 2014 than with 1A0C?

IOTA:
Some DXers also like to chase islands for the IOTA (Islands on the Air) program run by the RSGB. There are approximately 1200 IOTA Island Groups covering all DXCC entities that consist of one or more islands as well as the coastal islands of the others. Over 100 island DXCC entities equate with just one IOTA. The 75 or so IOTA Groups that have not been activated present a real challenge for those looking for true adventure! In fact, ten new IOTA's have just been added to the list and at least four of them have already been activated.

Pirates and Unauthorized Operations:
2014 had its supply of pirates. Often DXpedition calls were pirated even before the DXpedition (like VK9MT) operators had arrived! Others included P5/4L4FN, ZL9GI, VK0MQ and EAHSYL (QRMing FT4TA) to name a few. Sometimes the supposed pirates were actually call signs that were improperly copied or entered incorrectly into the DX Cluster Network such as 5T5T for HT5T and EZ1A for E71A etc. K9EL has a list of busted call signs on his CQ Marathon website. There are still those who post rare calls to thank people for QSLs after the operation is over. This is totally unnecessary and a form of boasting. Furthermore, much confusion comes when people spot rare call signs for test purposes. If you see a rare call sign spotted, first check to see if it is a busted call or a test spot. Of course sending a QSL to a pirated call sign is a waste of time and money. By the way, Z6 contacts still do not count for Kosovo or for DXCC credit at this time.

A Solar Review:
Solar Cycle 24 so far has had the fewest sunspots in 100 years! Fast starting cycles are usually stronger cycles but this cycle had a slow start. Unlike other double peaked cycles 22 and 23, this cycle's second peak is stronger than the first peak, a rarity. At the present time Solar Cycle 24 is expected to end in 2020 but will probably be OK radio wise through 2017. NASA now predicts we are heading for a mini Maunder Minimum!

We are now well into Solar Cycle 24 although the roller coaster continues. Some of the computer models of late are again 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 2014 with only 72 smoothed sunspots. Based on the latest data, this will be the smallest solar cycle peak since Solar Cycle 14, which peaked in February 1906 well before HF DXing began! Predictions for future Solar Cycle 25 etc. look even bleaker. Note that Aurora and disturbances typically come on the downward side of the

Solar Cycle.

Solar flux (SF) is a good indicator of improved propagation on 10 through 15 meters, especially when the K Index is low (1-2). SF did stay mostly above 100 for the entire year 2014 with only a few short dips into the 90s and a dip to 86 in July. SF was very high (237) at the start of 2014 but slowly declined staying mostly between 125-160 until late October when it peaked at 227 just in time for the CQWW DX Phone Contest. 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 interested parties can easily spot sunspots ahead of time on the Internet.

Equipment:
New equipment came on the market as well as upgrades to existing gear especially among the major radio manufacturers. DX Engineering acquired the Bencher's Skyhawk and Skylark antennas as well as the Butternut line of verticals. Several manufacturers introduced antenna and network analyzer measuring equipment. Receiving arrays are becoming very popular for the Low Bands. 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 or improved antennas were introduced, especially compact multiband verticals and Yagis.

Ham Radio and the Internet:
The Amateur Radio sites, DX Cluster Network and of course use of emails etc. on the Internet are supplying lots of good services. Most major contest logs and some awards now must be submitted via the Internet or the ARRL LOTW (Logbook of the World) 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 Cluster Network is still an amazing tool for finding and spotting rare DX. One popular one is "DX Summit" which has now been significantly upgraded as "My DX Summit." The Reverse Beacon Network, which uses CW skimmers, is being widely used and rarer spots uploaded to the DX Cluster Network.

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 it. 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 2014 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. Many European country's postage rates have risen again. IRCs are costly, seldom available (USA discontinuing same) and often can't be redeemed but are sometimes necessary where postal theft is a problem. The ARRL outgoing QSL Bureau or the QSL bureaus in many entities can lower QSLing costs. The ARRL Outgoing QSL bureau shipped approximately 775,000 QSLs during 2014, an increase of about 6% over 2013. 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** is extremely popular. The DXCC has been the prime user but other awards such as WAS, VUCC, ARRL Centennial, Triple Play, and some CQ awards are now available. There are now over 638 million LOTW QSO records, an increase of 18% over 2013; over 72,000 registered LOTW users and over 100 million QSL records have now resulted. LOTW use continues to rise and doesn't look like it will level off for many years. The updated LOTW software seems to be working well and faster. Contesters are often uploading their logs immediately after the contest ends. CQWW logs are routinely seeing match rates near 50%. Most DXpeditions

are now using LOTW, sometimes while still on location such as FT4TA!

Partially as a result of LOTW, expensive DXpeditions (costing $100,000 and more!) 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! Hence if LOTW is used extensively, there may be a shortfall of money support for DXpeditions QSLs. This will make donations from clubs and DX foundations necessary to offset cost and make these rare entities available. Try to support DXpeditions even when using LOTW.

One very popular QSLing trend is the OQRS (Online QSL Request Service) procedure where for a donation no QSL is needed to be sent. Club Log (www.clublog.org) is very popular with many DXpeditions uploading their logs in short order and has streamlined the OQRS procedure 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 (and newer versions) digital mode similar to those 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! Surely an NIL (Not in log) would follow. 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 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 almost always 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 2014 due to tuners 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, much less any additional instructions**. Some of the problems maybe the limitations of the code readers, especially for newer operators.** Also DXpeditions often create excessively wide pileups. This causes unnecessary QRM and disrupts stations that 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! Some DXpeditions have requested this feature be turned off to allow those who need an entity for an ATNO (All Time New One) a better chance to get in the log.

Also, try not to rag chew on frequencies frequented by rare DX such as 3.795, 14.025, 14.195, 21.025, 21.295 and 28.495 MHz as well as 14.040 and 14.260 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) (www.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. DXpeditions should have their ops read N7NG's timeless classic DXpedition Basics (http://www.arrl.org/files/file/DXCC/dx-basics.pdf).

Silent Keys (SK):
DXers are aging as are DX Honor Roll leaders and Amateur Radio in general. The June 2014 QST Magazine SKs (pages 100-101) list was over 1-1/2 pages long with over 300 call signs! This was typical all throughout the year.

It is sad to note that several well-known Amateurs became SK during 2014 and deserve to be mentioned. Many were well known DXers. An incomplete DXer list is: N4XR (HH2VP), VE3RM, HA3OV (E44), W6BH, W6OSP, K1NA (PJ5NA), IT9ZGY (390/340 DXCC), BV4FH (BQ9P), W0CM (392/340 DXCC), I0XXR, N3ME (W3UR's father), W1TYQ (HZ3TYQ/9K3TL/NZ) and AI6V (P40V etc.). Also well know writers etc.: K8RA, W6ISQ, W1RW (ARRL Gen. Mgr.) and W0IYH. 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.

2014 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 several more entities are added, 400 will be an elusive number.

Kosovo (Z6) is still remains a possible new DXCC entity. C7A and later 4Y1A were 4U1VIC in disguise and only count for Austria. The DXCC Yearbook, usually published in August, now has limited availability for purchase in hard copy but can be accessed on the ARRL website for free on the Internet.

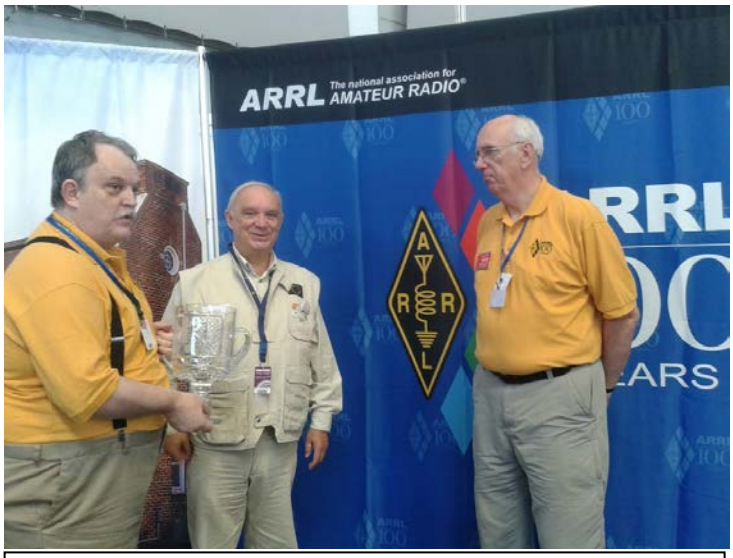
Future DXpeditions:
Mark your calendars. Several large scale DXpeditions from very rare entities are presently scheduled for January 2015 starting with 1A0C (already in progress), EP6T and later K1N (Navassa I.). Then TI9 in February, E30 in March, FK/C and VK0EK (Heard I.) in November and 3Y0 (Bouvet) in December. YV0 may surprise us. A large two stop DXpedition to VP8 (S. Sand.) and VP8 (S. Geo.) as well as a KH5 DXpedition are on the docket for 2016. DX is alive and well. Check out the Daily DX list of Upcoming Operations.

And now the Drum Roll:
These are approximately fifty-four (54) entities that were NOT believed to have been active during 2014 as follows:
Africa (14): 3B6, 3C, 3X, 3Y/B, 5U, 9U, D6, FT/G, FT/J, FT/W, FT/X, T5, TN and VK0/H.
Antarctica (1): 3Y0 (Peter 1).
Asia (7): 1S, BS7H, BV9P, EZ, P5, VU7, and YK.
Europe (1): R1F
North America (8): 4U (UN), CY9, FO/C, KP1, KP5, TI9, XF4 and YV0.
Oceania (17): 3D2/C, FK/C, KH1, KH3, KH4, KH5, KH5K, KH7K, KH8/S, T2, T31, T33, VK0/M, VK9/W, VP6/D, ZL8 and ZL9.
South America (6): CE0/X, HK0/M, PY0/S&P, PY0/T, VP8O and VP8/S. Sandwich.
Please note that some rare entities may not be on this list for 2014 because some operations were short or on VHF. One example is VP8SGK (only 35Q).

A list of DXCC entities that are believed to have not been activated in ten (10) or more years are: BV9P, CE0X, KH1, KH3, KH5K, KP1, P5, VK0/H and VP8 (S. Sandwich). This means 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 2015:
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 good propagation when the solar flux goes 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 shown 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.

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 DXCC Challenge competition. EA8AK is now in the lead at 3236 and more than one hundred DXers have now achieved DXCC Challenge 3000 level. 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 receives his Desoto Cup from N1ND, Dan, as K0QB, Jay looks on at the ARRL Centennial Convention.

The Bavarian Contest Club will sponsor WRTC 2018. Also don't forget to support the various DX Foundations around the world that help make DXpeditions possible! 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. HF radio conditions are still good. Stay active and join the fun.

Finally:
Using the Internet and DX publications is a great asset to keeping us updated on what is happening now and in the future. Also the ARRL Contest Update edited by N0AX often has great tips. There was so much news in 2014 that I can't possibly fit it all in. Once again I am honored to be asked by Bernie, W3UR to write this review for the 10th year and for his valuable inputs and critique. Previous Reviews can be read on the K8CX Ham Gallery website. Congratulations to the stations that worked over 275 DXCC entities during 2014. Thanks also to John, K9EL, Carl, N4AA and Dave, NN1N 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 Bernie MUST first approve copies or use of this review 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