Eastern Iowa DX Association

An ARRL affiliated club - Established 1975

In this issue

April 2019

President's Propagation, Pontifications and Prognostics

The column will return when we elect our next president

- A new DXCC-160
- Frozen Aluminum
- Glen escapes the cold

Logbook

- WØGXA WB8ZRL KDØQ KØAFN

CQ Test

- ARRL DX CW at NØNI
- SMC Annual Contest Symposium

QRM

- Duga Radar
- Vinton Radio Station Owner
- The earth moved
- Final word - FT8

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Vacant

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Nelson Moyer KUØA

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Musings from the lunatic fringe

Bob WØGXA

Winter 2018-2019

Well, with the kind of weather we've had, I'm sure everyone has had

plenty of time to work DX and operate in your favorite contest. For me, the government shut down kept me home an extra few weeks but I used the time to shovel snow!

Later in the newsletter is a proposal from Bob Locher for changing the DXCC program. I can resonate with some of his assertions coming from the perspective of someone who has been DXing for less than 10 years. After getting 5BDXCC, my interest has dropped off precipitously. The next goal being Honor Roll seems to be made of unobtanium with countries likely to never be activated in my lifetime. Of course I could be wrong and that would be great, but I'm not holding my breath. Give his article a quick read. I'm sure it will provide fodder for conversations for some time to come.

Thanks for all the contributions to the newsletter. Keep those cards and letters coming!

Remember: The newsletter is only as good as you make it!

Enjoy

Club News and Administrative Items

Minutes of the EIDXA meeting Winter 2019

Cancelled

Thank you Mother Nature

Reminder to pay your dues!

Currently, less than half of the members are current on their 2018 dues ($20). The cancelled January meeting is certainly to blame.

Mike says you can always pay by US Mail. His address is good in QRZ.com for a few more weeks. In May it will change. If you need to know if you paid or not, email Mike, NA9Q at mnowack@adams.net

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NEXT MEETING

April 5, 2019

Upcoming DXpedition to Pitcairn Island (VP6R)

Glenn Johnson WØGJ

Social Hour 6:30 PM
Meeting & Program 7:30 PM
Meeting and location information here

Hopefully, it won't snow

Card Checkers

We have three club members who can check your QSL cards

- Tom, WB8ZRL
- Glenn, WØGJ
- Mike, NA9Q

Contact info can be found here: http://www.arrl.org/dxcc-card-checker-search

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Save the Date

Cedar Valley Amateur Radio Club
CVARC Hamfest

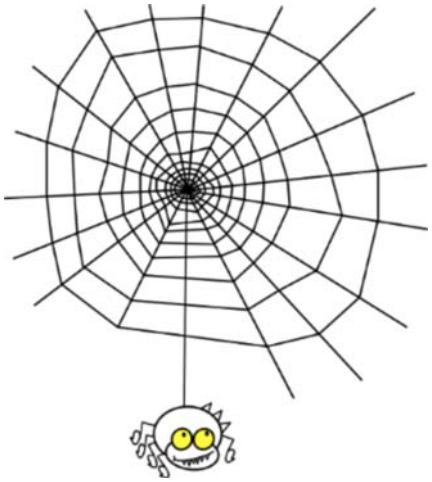
August 3 & 4, 2019

Central City, IA

Watch www.w0gq.org for more info

It's always a good event!

Member Spotlight



Nothing to report this month. If you haven't been featured in the newsletter, let me know. We'd love to do a story.

DX News

EA3HCE	MM0HVU	10136	[LoTW] FT8	2021z 13 Mar
JM1TUY	CT9/DL3KWR	10103	[LoTW]	2020z 13 Mar
VE1KF	IZ6BXV	14190	59 NS	2020z 13 Mar
F1BBI	VK2XAX	7074	[LoTW] CQ FT8 -15	2020z 13 Mar
PD0LK	C31ZM	7074	-14 TNX FT8 QSO 73\'S From Leen	2020z 13 Mar
7P8LP	7P8LP	1824	A Zebra ate the antenna	2020z 13 Mar

Has this ever happened to you?

Special Edition

2018 DXCC Year End Review

Joe Reisert, W1JR

January 1, 2019

Reprinted with permission - Ed.

2018 Overview

It was indeed a tough year for DXers. DX propagation took a very steep decline in 2018 especially on the upper HF bands as we approach Solar Minimum. There was activity from 2 of the 10 most wanted entities on the Club Log “DXCC Most Wanted List,” KH1 and VKØM but only intermittent or short single operator activity from another 2 in the top 20, SVØ/A and JD/M. There were approximately 288 DXCC entities activated, the same as 2017 with at least, 275 on CW.

The Republic of Kosovo, Z6 was finally added to the DXCC entity list in January bringing the total to 340. A major DXpedition (3YØZ) failed to land on Bouvet Island.

Another big story in 2018 was the impact of the FT8 weak signal digital mode on DXing. More on these items later.

The KH1/KH7Z DXpedition team on Baker Island in June/July 2018

2018 in Review

The DXCC Challenge and the CQ Magazine DX Marathon activity were high as usual. The ARRL 2018 Grid Square Challenge affected some DX activity. DX contesting is ever increasing and new regional contests are always popping up.

The “DXCC Most Wanted Survey” by Club Log (WWW.ClubLog.org) is very up to date. It just celebrated its 10th year. Michael, G7VJR at Club Log updates this list monthly based on users log entries. The end of December 2018 most wanted list is quite similar to December 2017. The latest 10 DXCC entities in order of rarity are: P5, 3Y/B, FT5/W, BS7H, CEØX, BV9P, KH7K, KH3, VKØM, and FT5/X. 2018 saw one notable DXpedition from the top 10 Most Wanted Survey, KH1/KH7Z. However many semi-rare entities were activated during the year as will be seen later. Club Log now has over 540 Million QSO records.

To say the least the cost and logistics to activate the rarest entities is getting prohibitive and in some cases can run up to $750,000 in the most extreme locations. “Who Pays for the New One” by N1DG in October 2018 QST show some interesting statistics. Unfortunately as frequently happens, at least one DXpedition, 3YØZ (Bouvet I.) failed to land due to a motor failure on the ship and had to divert to ZS-land. Terrible high (35C) temperatures and humidity (85%) in Africa and Oceania were tough on operators. KH1/KH7Z and 9MØW

were delayed. Some DXpeditions were shortened (TT8KO) or had to be rescheduled. For those who criticize DXpeditions, these are just a few of the problems they experienced in 2018 to give us a new entity.

Most of the larger DXpeditions (3 or more operators) activated in 2018 were available on SSB, CW and Digital modes including FT8. CW was as active as ever and often it netted the most contacts in DXpedition logs. The new FT8 digital mode introduced in July 2017 is a Game Changer. It is a big advancement in the State of the Art of weak signal detection making digital contacts in 1 minute possible versus the slower JT65 mode. Now many small stations can make contacts when the bands seem closed!

YOTA (Youngsters On The Air)

YOTA operators OE3FTA, YO3IMD, DK6SP and HA8RT were operating from Kosovo as Z66DH.

YOTA (Youngsters On The Air) as well as JOTA (Jamboree On The Air) activity is increasing especially in Europe and with IARU and ARRL assistance. Many of the DX foundations contributed to their success. They often use special recognizable call signs. Give them a call. We need to encourage these youngsters as we DXers age. As we will see later the DXer Silent Keys increased at an alarming rate in 2018.

Also don't forget CTU (Contest University) under the direction of Tim, K3LR. It is now in its 13th year having had over 7,500 students in 8 DXCC entities so far. There is also CWA (CW Academy) by CWops, a

program to improve CW skills. “Improving Your CW” is another Morse Trainer by G4FON.

A Solar Review

Solar Cycle 24 is definitely on the wane. Solar Weather Prediction Center (SWPC) predicts a decrease to at least December 2022, a 13 year versus the typical 11 year SC. There were 221 days with NO sunspots in 2018 and many long periods of same. This is the worst it has been since 2009 and many more spotless days are expected in 2019 and probably 2020.

Ionizing solar radiation is the primary generator of upper HF DX propagation especially on 10 through 15 meters. 2800 MHz solar flux—which has been below 80 all year—provides a reliable indirect measurement of the intensity of ionizing solar radiation. Improving propagation on 10 through 15 meters typically occurs when the solar flux exceeds 80 for at least a few days especially when the K Index is low (0-2). Dr. Tamitha Skov gives frequent “Space Weather” updates on the Internet and often addresses Amateur Radio.

There is still no consensus that SC25 will be weaker than SC24. Most forecasts are that SC25 will be about the intensity of SC24. Some experts are still telling us that SC 24 was the weakest SC in over 100 years and that SC25 may be the weakest in 200 years. Professor Valentina Zharkova has her own predictions and they aren’t good. Dibyendu Nandy from India predicts a strong SC25. Let’s see who is correct!

Band by Band Activity

160 Meters: Activity improved somewhat as propagation on the upper HF bands decreased. Some Europeans received additional spectrum on the band. DXpeditions usually operate between 1810 and 1830 KHz. Digital modes, especially FT8 is increasing and usually around 1840. W8LRL is still the Top Band leader with 344 confirmed entities (including about 11 deletes). VE1ZZ (SK) will be sorely missed on 160. Try to avoid frequencies divisible by 5 (eg. 1820, 1825, 1830 etc.) since broadcast birdies are often there.

75/80 Meters: Activity is slowly increasing especially on CW when DXpeditions are active. The later often operate at either the low end of the band or near 3525 KHz. FT8 activity is also increasing around 3574 siphoning off some of the weak signal DX. 75 Meter SSB DX is often concentrated between 3790 and 3800

60 Meters: Several new entities have received permission to operate in this band although many are limited to 15 Watts EIRP and a narrow band centered around 5357. As a result there is lots of FT8 activity there and almost all DXing on 60 meters is now on FT8. The FCC is considering modifying the USA 5 channel operation to allow non-channelized operation in a small portion of the band to be more compatible with the rest of the world allocations. There have been over 190 DXCC entities active on 60 Meters but the ARRL DXCC program still does not recognize 60 Meters contacts.

40 Meters: It's still the go to band during the dark hours and especially during winter time. DXpeditions are often there on the lower end or at 7025 for CW. FT8 activity is increasing around 7074. SSB is mostly above 7100. Remember that USA stations cannot operate SSB below 7.125 mHz but best to stay above 7.128 for safety. Most of the world can now operate from 7000-7200.

30 Meters: 30 Meters is becoming more popular especially with DXpeditions and low power stations. The new FT8 mode as well as other digital modes are usually found between 10.135-10.150 MHz. 30 M is sometimes open 24 hours a day during the darker months. Remember that USA stations are limited to 200 Watts output power.

20 Meters is still the daytime breadwinner along with **17 Meters** where activity is increasing and there is less congestion. Signal strength on 17 Meters is often better than 20 Meters when both bands are open. **15 Meter** openings are decreasing with the lower solar flux. During this past year **12 and 10 Meters** were showing fewer and shorter openings as solar flux decreases.

6 Meters: Sporadic E propagation especially from mid-May through early August and in December often enhances HF and 6 Meters DX but this is not due to sunspots. Much of the 6 meter activity is now above 50.250 MHz so openings on the low end of the band are sometimes missed.

Other 2018 News on FT8

Ever since mid-July 2017 the new FT8 digital mode by K9FN and K1JT has taken the bands by storm. With the introduction of FT8 “You can’t work them if you can’t hear them” no longer applies! This mode is especially popular with operators with limited power and small antenna systems. The most notable activity is on 6-Meters where the propagation can be erratic. On 6 meters FT8 and similar weak signal digital modes usually operate above 50.250 MHz and often cause the lower portion of the band to be quiet even when DX propagation is prevalent! In mid-year a new DXpedition mode was introduced especially for the KH1 operation. It allows higher QSO rates using “Foxes” and “Hounds.” Some stations are reporting that they have worked over 250 DXCC entities using FT8! It’s important to update your software to WSJT-X 2.0.0 because previous versions are not compatible. See http://physics.princeton.edu/pulsar/k1jt/wstjx.html.

Pirates and Unauthorized Operations

Pirates seem to be a perpetual problem. Nowadays many DXpeditions are reluctant to give out their call signs before commencing operation for fear that their call sign will be pirated. Frequent pirate call signs during this year were 3A/IK1AIR, JX7F, JX2WE, JX73EX, C6YL, P5/3Z9DX as well as upcoming DXpeditions such as 3B7A, 3YØZ and 3YØI to name a few. WFWL (work first, worry later) still applies but if you know it’s a pirate, don’t waste your time or $$ to support that activity. K9EL often lists pirate call signs on the CQ Magazine Marathon page.

Furthermore, don’t spot rare DX on the cluster unless you know it’s legit and surely don’t spot rare DX call signs for test purposes. It causes lots of bells to ring and unnecessary worry. Finally, don’t post rare calls to thank someone for a QSL etc. No one watching cares or appreciates this type of boasting.

IOTA

The “Islands On The Air” program is arguably the most active DX program after the DXCC. Let’s face it, many of the islands are DX and over 100 DXCC entities are already separate IOTAs. Chasing IOTAs can fill in the gap when an operator has worked all the active DXCC entities and wants to remain active on the bands.

The IOTA program website is WWW.IOTA-World.org. It is filled with info on the program and the almost 1,200 IOTAs that are available. So far only about 1,125 or so IOTAs have been activated. At least 36 IOTA chasers have achieved IOTA 1100 IOTA level. IOTA DXpeditions happened all year from the easy to the more difficult and rarer IOTAs. Several rare activations were H44R (OC168), 5C5AF (AF065), RI0B (Several Artic), TXØA (OC113), VK5CE/6 (Rare VK6s) etc. ATNO (All time new one) were EP6RRC (AS189) and EL2EL/4 (AF111). As a result of the addition of 6 new IOTAs, TXØM (OC297) and KP4/EI9FBB (NA249) were activated with the other 4 scheduled for 2019. Remember that QSLing can now be conducted for some IOTA operations using Club Log.

DX Contesting

DX contests are everywhere using CW, SSB and Digital modes. The most popular DX contests seem to be the CQ Magazine SSB and CW as well as the ARRL CW and SSB. However there are many other DX contests sponsored by organizations around the world. As mentioned above, DXers should help out the youth to get involved in contesting, especially DX. Younger operators are showing interest especially since most contests require computer logging. Contest rates are slowly climbing with new software and more spotting websites despite poorer propagation. Logs are often required online usually within a few days after the contest. Contests often yield new band countries and modes sometimes even before the contest as stations test out their equipment. The WA7BNM Contest Calendar is a great source of contest activity.

Equipment and Technology

New gear and computer programs are still showing up all the time. One of the best places to see what's new is at the Dayton HamVention now held in Xenia, Ohio in mid-May. ICOM, Yaesu, Kenwood and others all have new transceivers. Likewise SDR transceivers are becoming very popular from FLEX Systems and others. New antennae especially loops and low profile types are becoming popular. Also controllers to optimize performance from SteppIR. Keep an eye on the major Amateur magazines for new equipment offerings.

Finally be sure to keep safe practices especially on tower and antenna work. The FCC and OSHA have recently announced a new free publication entitled "Communications Tower Best Practice Guide." This year well known DXer and contester Rev. Paul Bittner, W0AIH fell off one of his 50+ towers and was killed.

This reminds us that every tower climber death is preventable.

Ham Radio and the Internet

The Internet plays an important part in Amateur Radio be it DX Clusters, working groups, sending in contest logs, QSL info, LOTW (Log Book of the World), helpful hints etc. Club Log is becoming the go to place to see if you are in a log especially with DXpeditions. Some DXpeditions update their logs daily while others actually update logs continually. **Try to prevent duplicate QSOs on the same band and mode.** Each dupe may prevent someone else from making an ATNO or even a band slot or mode.

Don't forget to correctly spot call signs and frequencies on DX clusters. **Due to the addition of the FT8 mode, it is now important that digital signals be listed by their mode in the remarks column on the clusters (e.g. FT8, BPSK, RTTY etc).** Of course self-spotting is frowned upon. Just because a DX station is spotted doesn't always mean the call sign etc. is correct or that the station is really there! Working an incorrect call sign may result in a NIL (Not in Log) to your QSL request. **Obviously posting obscenities and negative comments on the DX Clusters is never acceptable.**

QSLing and DXpedition Costs

Postage rates are going out of sight. LOTW (Logbook of the World) is very popular with DXers, especially those that don't want or need to collect QSL cards. Club Log and their OQRS (Online QSL Request Service) are also popular for those who prefer a paper QSL card. It is a method to obtain a QSL without having to send one (an added expense) and to guarantee that your request makes it to the proper source without theft. What could be better in this day of high and varying postal charges at home and abroad? I prefer paper QSLs since they may be needed for awards other than DXCC but I realize that I am now in the minority.

Most Amateur Radio societies have their own QSL bureau but often you have to be a member to use their service. The ARRL outgoing QSL Bureau or the QSL bureaus in many entities can lower QSLing cost. LOTW is extremely popular and the DXCC has been the prime user but other awards such as WAS, VUCC, Triple Play, and some CQ awards are now available. There are now over 1 billion LOTW QSO records, an increase of over 10% since 2017. There are almost 113,000 registered LOTW users. This trend continues to increase and 5 doesn't look like it will level off for many years. Furthermore, contesters are often uploading their logs immediately after the contest ends. Many DXpeditions are now using LOTW, sometimes while still on location!

DXpeditions to rare entities are getting more expensive and many cost $100,000 or more. They are experiencing difficulties obtaining transportation and raising the necessary funds etc. It now can cost well over $20,000 per operator to participate in large scale DXpeditions to rare DX entities. Low number of sunspots is also limiting the number of contacts especially on the higher bands. Most large DXpeditions are 50% funded by the operators and the rest from clubs, individuals and QSL donations. Please support DXpeditions directly or through organizations such as NCDXF, INDXA, CDXC and EUDXF Foundations etc. The NCDXF contributed over $156,000 to DXpeditions in 2018 alone!

Operating techniques

A look at 2018 statistics on Club Log logs shows that the rarest DXpeditions had more CW than SSB contacts. Of course the “599 TU” QSOs on CW or “59 thank you” on SSB are still ever present especially with DXpeditions. Operating CW at high speed (30 WPM or higher) has caused problems perhaps due to computer receiving and processing and were very much in evidence although QRM can add to the problem. Serious DXers are definitely using the DX Clusters and Reverse Beacon Network (RBN) for spotting DX.
DQRM (Deliberate QRM) is still a major problem. Calling out of turn or calling continuously only slows down the pileup so fewer calls get into the log. IQRM (Ignorance QRM) is also a problem from lack of learning.

Tuning up for long periods of time on a DX station is a big problem. There is always plenty of spectrum to tune up away from the DX operations. This subject has been beaten to death but we must do our best to speed up operations.

Again, make sure to review the DX Code of Conduct (www.dx-code.org). On CW some DX stations transmit at 30 to even 35 WPM and/or seldom sign their call signs or where they are listening. Some operators just can’t copy their call sign that fast. Some of the problems may be the limitations of code readers especially for newer operators.

The old adage still applies:
Listen Listen Listen before you start calling.

Try not to rag chew or tie up frequencies frequented by rare DX such as 3.795, 14.025 and 14.195 MHz as well as 14.040 and 14.260 MHz for IOTA. Other suggested frequencies to avoid are listed in “The Daily DX.”

Transmitting on these frequencies will make it difficult for others who are experiencing poorer propagation than you are.

Silent Keys (SK)

Once again this was a bad year for Amateur Radio as many well known DXers and important Amateur Radio people became SKs. The

SK column in QST has been listing over 200 per month. Other Radio Societies also have a rise.

The following is a partial list of notable DXers, contesters, designers or officials in Amateur Radio who became SKs in 2018. They include in no particular order: K3LP, N4KG, P43E, G3NUG, NP4B, HS0ZIA/N6BK, N8UG, F5CQ, F5ANO, PY1RO, AG6K, 3D2ER, ZL2HU/ZL4HU, K6KU, LA1VC (ex 3Y1VC), UA9AB, W6SZN, JA1AN, WA4WTG, SM0AGD, VE7IG, W3XO, VE1ZZ, K5MA, DL1BDF, KØALL, WØAIH, K8OQL, YV5AJK, SM5DJZ, W4MYA, VP8WA, OK3DQ, TA3D and VE5SDH etc.

May they rest in peace.

2018 DXCC and ARRL Matters

The big news at ARRL is that they amended the DXCC rule that concerns criteria for Political Entities. Martti, OH2BH has been working tirelessly on this issue for almost 10 years. As a result The Republic of Kosovo became an official entity on January 21, 2018. Thus there are now 340 entities on the active DXCC list. This is the first new entity since Southern Sudan, Z8 was added in 2011.

The 2019 ARRL Handbook, a great reference book, is now available. It was extensively rewritten and now is in several volumes! QST page count has been reduced from 160 to 140 pages. The DXCC Yearbook is still 6 available each year (usually near mid-year) but only on line. Remember that it now only includes a list of those individuals that increased their totals during the prior calendar year. For best accuracy, consult the online ARRL DXCC Standings on their website which is continuously updated.

Latest license figures in the USA are at an all time high with a gradual growth rate of just under 1%. LOTW input software was recently updated. LOTW now contains over 1 Billion QSOs listings. It looks like the QSL bureau is handling less QSLs as paper QSLs are decreasing.

2018 Month by Month DX Activity Sample

The VP6 Ducie team made some 112,000 QSOs in October

January: It was a tough month propagation wise especially on long DX paths. Despite this, approximately 225 entities were active. Some notable rare to semi-rare stations active included: S01WS (active all year on all bands and modes), 6O0O (17KQ), E31A (33K), ATNO Z60A (90K), ZC4A and D68I (12K). The big disappointment was the failure of the 3YØZ operation to land on Bouvet Island because of an engine failure on their boat.

February: Active were 9X9PJ, Z81D, C5DX (9K), TY1TT (13K), VU4G (7.7K), 3C3W (30K).

March: Z2LA (4.6K), XRØYD (46.5K), 4B4B (XF4), 3CØW (54K), TN5R (62K), TJ2TT (51.5K), XX9B (11.6K), XZ2A, S92HP and YJØCA.

April: A5A, 3B7A (71K), RI1FJ, SV2ASP/A, VK0AI (Macquarie), VK9X, 9L, T2AR and OJØW were active as propagation improved by the end of the month.

May: KH9/N7NVK, Z6s

June, July and August: Summer is typically a slow DX time, especially in the Northern Hemisphere. None the less S9ZZ, H44XG, KH1/KH7Z, 4W6VA, A35, HC8/HC1HC, Austral I. TX5T (17.1K), S79LD and XT2BR were active.

September: A5A, A52SL, ZD9CW, TO6OK (FH), 9XØT, VK9XT

October: C21GJ (VHF), E6Y, TT8KO, 5AØYL, KH9/N7NVK, 6O1OO, VP6D (121K), VK9XG (25.6K).

November: KH8L, EP6RRC, A35EU (17K), 4W/HL1AHS, 5U9AMO.

December: T32NH, XT2BR, ET3YOTA, Z81D.

And now the Drum Roll:
There were approximately fifty two (52) entities that are NOT believed to have been active during 2018 as follows:*
Africa (12): 3X, 3Y/B, 9U, FT/G, FT/J, FT/T, FT/W, FT/X, FT/Z, TL, VKØH, and ZD8.

Antarctica (1): 3YØ (Peter 1)

Asia (6): 7O, BS7H, BV9P, EZ, P5 and YK.

Europe (2): 1AØ and JX

North America (7): CYØ, CY9, FO/C, KP1, KP5, TI9 and YVØ.

Oceania (16): 3D2/C, FK/C, FO/M, FW, KH3, KH4, KH5, KH7K, KH8/S, T31, T33, VK9/M, VK9/W, ZK3, ZL8 and ZL9.

South America (8): CEØJ, CEØ/X, HK0/M, PY0/S, PY0/T, VP8 S. GA, VP8O S. Orkney and VP8 S. Sandwich.

*Please note that some rare entities may not be on this list for 2018 because some operations were short, set up schedules or only on VHF, EME (Earth-Moon-Earth) etc.

The DXCC entities that are not believed to have been activated in ten (10) or more years has increased and now includes: 3Y/P, BV9P, BS7H, CEØX, EZ, KH7K, KH3 and YVØ. This means that an avid DXer working hard at DXCC may take at least 11 years to make it to 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 in many years and not surprisingly goes to P5, BS7H and FT5/W in that order.

Upcoming DXpeditions

Here are a few announced DXpeditions for 2019. 3Y0I is possible from Bouvet Island in January/February by the Rebel DX Group. Other rare to semi-rare entities promised for 2019 include ZL7, V84SAA, XX9D, 9U5RI, T31EU, TT8RR, FW/G0VJG, VK9L/AI5P, VP6, ZK3 and CY9. Also several new IOTAs are promised. Stay tuned and check the Daily DX calendars at: http://www.dailydx.com/the-daily-dx-calendar/ for future operations.

Looking ahead to 2019 and Beyond

SC 24 is definitely on its last legs. Solar activity will continue to decline between 2019-2021. From the predictions we've been hearing SC 25 may be even weaker. Believe it or not, the first sunspot for SC 25 occurred back on December 18, 2016 but it was only a short blip! The new FT8 weak signal digital mode should help when conditions are poor.

DX means different things to each DXer. Some DXers chase the DXCC Honor Roll, the DXCC Challenge or the DX Marathon. I'd estimate from the latest DXCC mixed listings on the ARRL "DX Standing" list that there are well over 2,000 persons worldwide that have confirmed all 340 on the present DXCC entities list. Fernando, EA8AK now has an amazing 3264 entities to lead the DXCC Challenge. More than 170 DXers have now achieved the very difficult DXCC Challenge 3000 level, 99 are in Europe, 51 in North America and 16 in Japan.

The top 6 meter station, LZ2CC now has an amazing 280 entities. There are only about 20 NA stations to break the 6 meter 150 entities level. W7GJ has worked 210 entities and both W7GJ and K2ZD have 204 confirmed.

EME is being more frequently used by major DXpeditions and is now a very important factor for leading North American 6 meter DXers.

It's time to improve your 20 and 17 meter as well as your 80 and 160 meter antennas. Then there are the never ending DX Contests, DX Marathon, DXCC Challenge and IOTA chasing. There are lots of things to do. Don't let the airways die for lack of activity. HF radio

conditions on the mid-bands are still fair but improving on the lower bands. Stay active and join the fun. Also don't forget to support the various DX Foundations around the world that help make DXpeditions possible!

Finally:

We hope this review has been informative especially for historical purposes. Using DX publications and the Internet are a great way to keeping us up to date on what is happening now and in the future. Once again I am honored to be asked by Bernie, W3UR to write this review for the 14th year and for his valuable inputs and critique. Thanks also to John, K9EL, Frank, W3LPL and Rich, K2RR for their valuable inputs as well as my
son Jim, AD1C for all his computer help! Also thanks to K1HTV, W1DIG, KG4W, K3WW and AA5AU for their FT8 inputs. Previous Reviews can be read on the K8CX Ham Gallery website.

NOTE: Obviously all the opinions etc. expressed are solely mine as are any errors that I have made.

 Best of DX to you in 2019.

I'll see you in the pile ups - 73, Joe Reisert, W1JR

DX'ing - Time for a Change

Bob Locher W9KNI

Active DX'ers everywhere are concerned - where are the young DX'ers? I should note here immediately that I am talking about DX'ers with a competitive streak, people who have learned that working DX reliably requires a significant station, antennas and a skill set. We do see new faces - who almost invariably drop out. In the mean time, the DXCC program is seriously stale. The bands are often empty even though there is good propagation.

Let's look at the history of the DXCC Program to see if we can learn

why? What has changed?

The Mixed Mode DXCC started it all. It was very popular for a while, but then bogged down. Some of the countries on the list had disappeared, never likely to return, yet they still counted for the totals at the top. Serious DX'ers who had not been in the game at the beginning became discouraged and dropped out.

In due course, realization of this problem became more and more obvious, and the deleted country list was formed. This now allowed newer DX'ers a potential path to the top of the Honor Roll, and enthusiasm for the program was largely restored.

A Phone only version of DXCC was implemented and this too proved popular.

In 1975, the ARRL Board of Directors, concerned about the diminishing level of CW activity, created a CW DXCC. This program had a unique twist - all contacts had to be made after January 1, 1975. All other DXCC Awards accept contacts back to 1945.

The new CW DXCC was immediately popular, especially with newer DX'ers - but not only because it was a CW award. It also gave newer DX'ers an opportunity to get in on the ground floor! Right from the get-go, a newer DX'er was not already 20 or 30 countries behind the top totals, even with a deleted list.

Monoband DXCC's, a Digital award and a Satellite award were also added as time went on, and these created a lot of interest as well.

But then, a few old timers, intent on further cementing their position on top of the DX World hierarchy, brought in a new award: the DXCC Challenge. Almost certainly, the League supported this award also to get critical mass for the ARRL's Logbook of the World. (LOTW) Levels of achievement were created, starting at 1000 entities, increasing in levels of 500. Quickly, the recognized level of achievement became 3,000.

Unfortunately, it soon became apparent that geography had an undue influence on success. Essentially, the further away you are from Western Europe, the less chance you have a chance to be competitive. Without truly heroic effort, it is essentially impossible to achieve for someone operating from the West Coast of the USA to

achieve the 3000 level.

Even so, the Challenge program began to remake the face of competitive DX'ing. Any major DX'pedition had to make a serious effort to activate all bands, especially 160 meters and even 6 meters at the bottom of the sunspot cycle, for example greatly encouraging 6 meter moon bounce.

The Challenge Award program incorporated major flaws that guaranteed inequality. One is the geographical disparity already mentioned, and this was then especially exacerbated when 160 meters and 6 meter contacts were allowed to count. But the real kick in the teeth to young DX'ers was the rule allowing contacts with current countries from 1945 to count, instead of the start date of the program.

A competition is supposed to be simply that - a competition, and there is an implied presumption in any competition that everyone competing will have an equal chance. This obviously was never given much consideration when the DX Challenge was established.

Let's step back now and look at the various DXCC programs from a newcomer's perspective. The new operator at first has a great deal of fun chasing the new counters. But if he or she has a competitive spirit, after a while they start realizing the game is rigged, and certainly not in their favor. The more they examine the "competition" the uglier it gets. In the Mixed Honor Roll total listing, there are people with scores just shy of 400 entities. (Your author has 382) Most of these are people rarely if ever heard on the bands. Indeed, a check of the upper reaches of the Annual Listing and the DXCC Honor Roll reveal that a goodly number are DEAD! Yet their calls remain on the listing.

But at least the deleted countries don't count to attain the Honor Roll. Then the young DX'er examines the entities list.

The barriers to a number of entities ever being on the air again continue to grow. It is probably just possible to make the bottom of the Honor Roll within ten years. Getting to the top of the Honor Roll borders on being hopeless in this day and age. But the situation is even bleaker for anyone chasing the DX Challenge. How do you compete with someone who has been chasing everything since the 1950's or 60's? Back when there were sunspot peaks that made 6 meters look like a world-wide ionospheric mirror?

How to be a top competitor for the DX Challenge? First, start being active no later than the early 1960's, preferably the ‘50's.. Ideally, live preferably somewhere in southwestern Europe. Have a significant DX property - 20 acres should work nicely; enough room for receiving arrays for 160 meters. Pay special attention to 6 meters and 160 meters. On 6 meters, maintain moonbounce capability. Select your career carefully. Best choice of careers for a DX’er is to be of independent means. Failing that, a work-from-home job is ideal.

Most of the competitive world works on the basis of this question: “What have you done lately?” DX’ing as presently structured is more towards “What did you do 40 years ago?”

WHAT IS WRONG WITH THIS PICTURE?

Why are 48 hour contests relatively a lot more popular? And why do contests have an upcoming crop of excellent younger competitors? A crop sadly missing from the DXCC chase? In the contest world, a relative newcomer can still make a splash, and earn international recognition within a very few years if he or she has what it takes. There is no possible way this can be done in the DXCC program as it stands today.

What can we do to make DX’ing and DXCC vibrant again? Permit me to offer a few modest suggestions.

The existing DXCC programs should (mostly) be unchanged. DX’ers who have participated in DXCC most of their lives deserve this, and in turn would bitterly oppose significant change. The following suggestions are for a new program that is an OPTIONAL overlay to existing programs.

I propose that ARRL start a new, additional DXCC program commencing January 1, 2020, and ending December 31, 2030, then restarting. The new program should include all the present DXCC awards, all starting fresh. Include a new DX Challenge, again rolling over in ten years - but this time without 6 meters or 160 meters, making it a much fairer program.

LOTW has changed the face of QSL’ing - gaining confirmations for a new series of awards will be far less difficult and expensive.

Also, the CQ DX Marathon and the UK's CDXC variant should be much more heavily publicized, emphasized and supported. Among other things, these programs create interest in DX'ing YEAR round - not SIX DECADES round.

I want to empathize that it is very important that the current programs should be continued as they are. The new program as suggested above should be an overlay of the existing program - albeit an extremely important and promoted overlay.

There would certainly be some additional cost to ARRL, in that there would be more entrants in the program, but the cost would not be large. And if it revitalizes DXCC it would be cheap at that price. Fees should help offset the additional expense.

The various DX Foundations need to do rather more to encourage operations that get an entity on the air, rather than the over the top operations with 15 operators on 8 bands. Operations that concentrate on working as many different stations should be much preferable to operations whose major goal is to give more band counters for the DX Challenge; especially when such operations exceed US $500,000 in cost. While ARRL is not directly involved with the DX Foundations, it has considerable influence and should use that status to encourage change.

Special effort and resources should be devoted to getting indigenous operators in smaller countries into being active.

A DXCC Honor Roll in Memoriam should be established and maintained for Silent Keys. In turn, Silent Keys should be actively removed from all current listings.

DX'ing as it stands today is stale and dying, and is far too much dominated by old timers. If you are an Old Timer - and let's face it - most of us are - if you love DX'ing - open the doors to the newcomers and welcome them instead of repressing them. And after all, if we don't get new blood, who is going to climb our towers in future?

We need to make DXCC and DX'ing vital and fun again. It is not too soon to start.

Bob Locher, W9KNI, the author of this proposal, has a present score of 382 countries worked. Bob is the top DX'er world wide in the CW

DXCC Listing. He is also the author of the book, "The Complete DX'er" which is sold by ARRL and for which there are over 28,000 copies in print. Bob lives near Grants Pass, Oregon, and remains actively chasing DX, especially the CQ DX Marathon. Bob is 76 years old, and no longer climbs towers. Bob is a member of the Maxim Society.

In case you don't know, Bob is a Cedar Rapids native and Art Collins was his Elmer - Ed.

Putting down "roots"

Tom KCØW

The following was provide via Glenn, WØGJ

I've always enjoyed operating from DX locations. Unfortunately the money is always going out & nothing is ever coming in while DXing from overseas. Another issue is boredom. DXing is great fun & all but there's more to life than sitting in front of a radio for 16+ hours a day. Wouldn't it be great if one could combine an exotic DX location, a full time job & an easy to acquire amateur radio license? This would be the ultimate ham radio trifecta.

After working in the petroleum industry in North Dakota (it's very own DX location) I decided there's gotta be more to life. Roughly 6 months ago I started an international job search for that perfect "job/DXing location". I've always enjoyed islands. If English is spoken all the better.

I started researching the British islands of Jersey & Guernsey. Weather is decent, English is spoken, it's far from "rare" DX but it's guaranteed to generate some interest, kinda expensive to live there

but doable. Sounds good, let's move. Oh, what about the employment & immigration regulations for non-Europeans?.....Basically it's impossible.

1. I posses no Einstein-like job skills which can not be easily filled by UK residents.

2. I'm not in the market for purchasing an ultra expensive home in order to get long term residency.

3. Victoria Beckham is already taken so citizenship via marriage is outta the question.

All over the world these seem to be the three benchmark criteria regarding how long someone can reside long term in a foreign land. I've been DXing to Cambodia twice & it's an interesting place. Staying long term legally is easy and inexpensive. How about meaningful employment which pays more than $15 a day? Ain't no way.

Maybe I should narrow my search? Perhaps some far flung US possession? Hawaii? No, already too many amateurs. Virgin Islands? Same problem. Puerto Rico? Hablo poco español. American Samoa? I operated from KH8 for 2 months back in 2016. Been there, done that. Gaining meaningful employment on American Samoa is difficult as well. How about Guam? That sounds kinda interesting despite KH2 having it's fair share of amateurs. Perhaps Saipan (KHØ) might be worth looking into.

Saipan it is.

Roughly 4 months ago I focused my attention for employment on Saipan. Lot's of physical labor positions are available on KHØ. I have nothing against physical menial labor but I'm not 21 years old anymore. Saipan is currently undergoing MAJOR rebuilding since getting devastated by Super Typhoon Yutu last October. Wind speeds of 185+ MPH obliterated both Tinian & Saipan. Sounds like an interesting, exciting & somewhat dangerous place for a new QTH. Count me in.

So I start sending out resumes, filling out job applications & making phone calls. I wait, wait & wait some more. Meanwhile the phone didn't ring and the email inbox remained empty. Chalk it up to nepotism I figured. Recently I received an email regarding a position I applied for

on Saipan 4 months ago. “We would like to interview you via Skype” it stated. Out of the 23 jobs I applied for I get one response. Best of all it’s one of the jobs I was truly interested in.

The Skype interview goes well. Long story short, I get the job. I start searching for apartments. Housing is now at a premium on Saipan due to typhoon Yutu displacing much of the islands population. I’m rewarded by finding a nice place roughly 400 meters from the ocean with a direct shot to Asia/Africa/Europe.

KHØ land is not “rare” by any stretch of the imagination but it should gather some amount of interest from fellow radio amateurs. I’m primarily a CW operator but from my research KHØ is really needed on FT8. I just might have to do something about that even though FT8 is my least favorite mode to operate. Another interesting fact is there has never been a 60 meter QSO from Saipan. Might have to do something about that as well. In order to test the waters I will bring a 1 kW station, phased array antennas, coax, etc. Although utilitarian it will be enough to get a decent signal on the air. If things work out I will have my big station shipped over.

One of my lifelong dreams has been allowing visiting operators use my station completely free of charge for contesting & general DXing. None of this silly $200 a day bull$hit to operate a DX station. I hope to offer this free service after everything is setup & (most importantly) finding out if Saipan is the place I want to stay for an extended period of time. Perhaps I’ll love it, perhaps I’m outta there in 6 months.

Thanks to the amateurs who have worked me from my past DXpeditions. I’m excited to be signing KHØ/KCØW soon. It will also be good putting in a full days work to help breakup the monotony of single person DXing. Being a productive member of society is important as well.

Live your dream.....I will be QRV on/near April 15th.

Godspeed - Ed.

Feature Articles

The CMOS Story

RICHARD MORTIMORE
GW4BVJ

I have always been fascinated by the inventors of the past (or movers and shakers as I like to call them), especially those in the 'Keyer' field, that have taken place during my lifetime. Of course it all started with a certain chip.

Dr Frank Wanlass gained his Bachelor of Physics in 1957 at University of Utah, the year I was born. In 1962 he left with a Ph.D. in Physics and shortly afterwards joined Fairchild Semiconductors. He had to overcome many technical hurdles, but finally invented the complementary metal–oxide–semiconductor or CMOS as we know it. His demonstrations showed how CMOS drew six times less power than the day's state-of-the-art bipolar circuits. As he had the idea, basic concept and designed the circuit, he finally received the patent for CMOS technology in 1967.

At this time Albert H. Medwin was an Electrical Engineer with RCA in Somerville, New Jersey. He led the engineering group that developed the world's first low power CMOS chip in 1968. He is also credited with leading the RCA group that introduced the 4000 series CMOS integrated circuit commercially. In 1971, Medwin left RCA to start his own company called Ragen Semiconductor. He was in the race to produce the world's first pocket calculator, but that's for another day.

The story of John G Curtis starts when he was studying for his Extra Class Licence and thought building something might help him. Having

studied digital electronics he set about designing a keyer circuit. In 1969 he placed an advert in Ham Radio Magazine, and called it the Curtis EK-38 keyer.

Curtis EK-39 Keyer

It was so successful he gave up his day job and started Curtis Electro Devices Inc. in Mount View, California. He manufactured the EK-38 Electronic Keyer on a commercial basis. It was supposed to be a good keyer but only had a dit memory. He soon brought out the EK-39 Keyer, which had a dash memory as well as weight control. Shortly after that he produced the EK-39M featuring a memory with the first versions of ROM, called SC ROM.

By now Curtis had a loyal customer base and in 1971 he produced the EK-402 with a 20 character programmable memory. I was just starting out as an SWL and John was now K6KU. He used some of his contacts from the past to help design his keyer circuit on an integrated circuit. He had previously worked at Signetics Corporation, an integrated circuit manufacturer, so the plan came together.

He was the first guy to do this and it was called the 8043, and was introduced in 1973. It utilised CMOS technology and featured debouncing circuitry for key paddles, a clock oscillator, the divider and logic to produce dashes and iambic mode, a sidetone oscillator, weighting circuitry, and an output stage capable of driving a NPN keying transistor. I became GW4BVJ at this time.

In 1975 Curtis introduced the 8044 chip. It had two improvements. It did not require a symmetry adjustment to equalise the length of dots and spaces and it added a dash memory for true iambic operation, dashes could now be inserted reliably. This 8044 series really was a comprehensive 'keyer on a chip'.

Next he introduced the 8044M in 1980, the M stood for Meter, which could be hooked up to show the sending speed. The K5 & K5B keyers

followed which used the 8044 & 8044B respectively. They were very popular, and although these were the last keyers Curtis produced, he continued to manufacture his Curtis CMOS chips.

They gave countless manufactures the opportunity to produce their own keyers. My S.E.M. Iambic Keyer is such a beast. Introduced in the early 1980's it featured a Curtis CMOS LSI chip, 'custom designed for iambic keyers' as S.E.M. used to say in their brochure.

Enter onto the scene two more excellent guys with keyers on their mind. In 1981 Jeffrey Russell KCØQ and Conway 'Bud' Southard NØII designed the firmware and published their CMOS Super Keyer circuit in QST Magazine.

Kansas City KC-1 Keyer

This Kansas City Keyer was my first programmable memory keyer and altogether quite an advanced bit of kit. The whole unit was designed by Russell & Southard and it was introduced at the Dayton Hamvention in 1984. It was then fine-tuned by the **Eastern Iowa DX Association** and subsequently built commercially by Lance Johnson Engineering. Rockwell Collins was the licensee for the 6502 microprocessor, used in the KC-1 keyer.

I have a suspicion Russell & Southard worked for Rockwell Collins in Cedar Rapids at this time.

Lance Johnson Engineering later developed the MR-1 bracket with four push buttons for the Mercury Key that interface with the KC-1 allowing selection of four pre-programmed memory options. I bought my KC-1 and MR-1 from Lance Johnson which was owned and run by Steve Gecewicz K0CS. I used this set-up many times in contests and at special event stations. I still have the keyer, manual and application guide.

All this was happening whilst Curtis was producing a new design. It was the 8044ABM, and released in the spring of 1986. This featured A or B modes and the speed meter, and was a top of the line keyer chip. Jerry G0AZH continues the story on his eHam review of the ETM9C-X3 Keyer. "In 1989 Russell & Southard released the Super CMOS II and started an association with Bob Locher, W9KNI of Idiom Press who built the firmware into the Logikey K-1.

Samson ETM-9C

At the same time Herman Samson DJ2BW built the firmware into his first ETM-9C. The Russell & Southard partnership then released the Super CMOS Keyer III and this resulted in the Logikey K-3 and the ETM9C-X3." I don't think my CW life would be complete without the Samson keyer.

Around this time microcontrollers came into being and the sales of Curtis chips dropped off. Curtis ceased trading in April 2000. MFJ took over production of the 8044ABM improving the design and it became the 8045ABM.

It's really good to see that in 1991 Frank Wanlass received the IEEE Solid-State Circuits Award. He was then inducted into the National Inventors Hall of Fame in 2009 for his invention of CMOS and gaining the US Patent. Rightfully so, his CMOS technology is employed in most modern microchips. Sadly he died on 9 September 2010.

In 2008 the Veterans Wireless Operators Association (VWOA) honoured John Curtis with the Marconi Memorial Award Plaque for his lifetime efforts of perfecting electronic circuits to generate Morse Code as exemplified by the development of the Curtis Keyers.

Albert Medwin is credited with producing the first CMOS integrated circuits, but no official recognition which is a shame. There's not too much available on Jeffrey Russell KCØQ and Conway Southard NØII either.

We take it for granted that a modern rig will come with a built-in CMOS keyer circuit with a choice of A or B keying.

I think we should have a collective tipping of hats to all these guys, we simply wouldn't be as technologically advanced without Frank Wanless and Albert Medwin. They really did change the world.

John Curtis K6KU was first at making a dedicated CMOS Keyer and developing it to the 8044ABM. Likewise Jeffrey Russell KC0Q and Conway Southard N0II took their firmware to another level with the Super CMOS Keyer III. This allowed the likes of Bob Locher W9KNI, Herman Samson DJ2BW, Steve Elliott K1EL and many many others to produce excellent modern memory keyers.

Really all CW aficionados around the world should acknowledge the efforts these guys made, to make our CW operating the awesome experience it is today.

CDXC
The UK DX Foundation

Many thanks to the author, Richard GW4BVJ for permission to republish this article and to Dennis F5VHY for providing me with the original text and pictures. - Ed.

Originally published in CDXC, http://www.cdxc.org.uk/

Below is a nice email from Dennis in response to my request for original text and artwork. Enjoy - Ed.

Hi Bob,

No problem at all and I attach copies of the article in both .pdf and

.docx format so you should be able to cut and paste and reformat as required for your newsletter. In acknowledging the source, you might like to mention the CDXC website www.cdxc.org.uk .

In my early years in radio – first licensed as G3MXJ in 1958, Collins were the leaders in the equipment we all dreamed about – S-line etc. By chance, I met a few people who had close links with Art Collins. My very good friend Bob Locher, W9KNI lived in or near Ceder Rapids and knew Art. A few yew years ago, I took one of the last voyages of the QE2 to NY and back. I met up with a gentleman who came from Ceder Rapids and I mentioned why the place was well known to me. Amazingly, he not only also knew Art as a close personal friend but was his doctor and was first on the scene when Art had a heart attack. Small world!

73 – Dennis, F5VHY.

Jurassic Journal

- A look back in time -

Tom Vavra WB8ZRL

Twenty years ago, the spring of 1999

From my logs, and some bulletins, some of the activity in the second quarter of 1999.

Martti Laine, OH2BH started being active as P51BH from North Korea around 6 UTC on 21 April (first on CW later on SSB). The short operation ended just before 8 UTC and Martti expected to leave North Korea on Thursday morning (22 April). His aim was to show the amateur radio equipment and concept to the P5 authorities - it was not a DXpedition, but hopefully this may lead to one.

3B9R ---> The 31 March-10 April 3B9R operation from Rodriguez (AF-017) logged over 47,000 QSOs. It seems there was some pirating of 3B9R on 160 meters after their sunrise QRT. There was no on-line log available so some of the deserving nervously awaited their QSL card. The multinational team (OMs, UAs, and Ks) were given much assistance by Robert, 3B9FR.

S09A ---> EA2JG operated from Western Sahara the first two weeks of April.

S7 ---> YL operator DL7AFS (Babs), DJ7ZG (Lot) and DL2FAG (Karl) were active as S79YL, S79ZG and S79FAG respectively from Mahe for 3 weeks in April. Their logs contained over 20K QSOs, but only 28 were cw.

5N99 ---> 5N99CEN (by IV3VBM) and 5N99MSV (by OK1JR) activated the special prefix used in April by amateurs in Nigeria to celebrate the Under 21 Football (soccer) World Championship.

ZD8Z ---> Jim Neiger, N6TJ, activated his Ascension Island station while there on business. ZD8Z was active for many contests each year.

3C2JJ ---> TR8XX, TR8CA, and TR8SA were active from Corisco Isl in Equatorial-Guinea.

5X1T ---> Peter, ON6TT, operated as 5X1T, EL2TT, and 4U1UN during the spring.

E41/OK1DTP ---> David was logged from Palestine, while on one of his many trips there.

A35RK ---> Paul was very active.

OJØ/K7BV ---> Dennis joined a group of Finnish operators at Market Reef. Signing portable, he put 6000 QSOs in his log. He stopped at OHØ on his way home.

CY9RF ---> Original plans were for a major St. Paul Island operation, with a team including W6RGG, W6BSY, K4LT, AC8W, K8DD and K8RF who were to participate in the WPX CW as a Multi-Multi entry. Some transportation problems in getting the original complete six-station setup to the operating location caused four team members to give up, and Dan, K8RF and Doug, K4LT ended up going by themselves. They made 1500-2000 QSOs before and after the contest, in which they participated as a Multi-Single (4840 QSOs).

XV7SW ---> Rolf, SM5MX was active as XV7SW from Hanoi, Vietnam. He participated in the CQ WW WPX CW Contest while there.

V73ZZ ---> Tom, K7ZZ signed V73ZZ from Kwajalein. He was there for the CQ WW WPX CW Contest, but did operate SSB before and after the contest.

E41/OK1FHI ---> There were several DXPeditions to Palestine. Radek's solo trip was one of them.

EZ7ST ---> EZ7ST was active but those that worked him had difficulty getting a QSL from UA9LM, his manager.

Ten years ago, the Spring of 2009

My 2009 logs for the second quarter are very slim. Nearly one-half of the entries were my weekly sked with KB3KV.

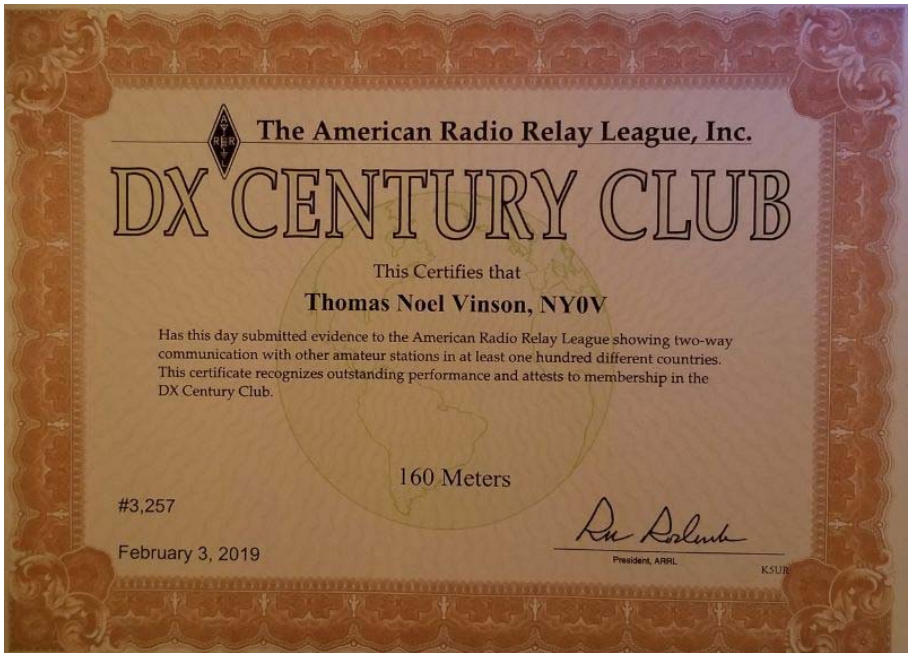
The WWV numbers show the low part of the cycle, but there were some very disturbed days in the quarter. Solar Flux Index ranged from 67 to 74, and the A-Index was 0 to 113.

VK9GMW ---> George, AA7JV and Tomi, HA7RY went QRT from Mellish Reef after 17 days, fighting storms, strong winds and heavy rains over the last few days on the island. They made 20,058 QSOs (2,028 were on 160 meters).

S04R ---> The expedition to Western Sahara with 8 operators, went QRT after five days and 37,005 QSOs (20274 CW, 14342 SSB and 2389 RTTY).

FR/G ---> There was much talk about a DXPedition to Glorioso in the fall. Six French operations activated FT5GA in September, but they never found their way into my log.

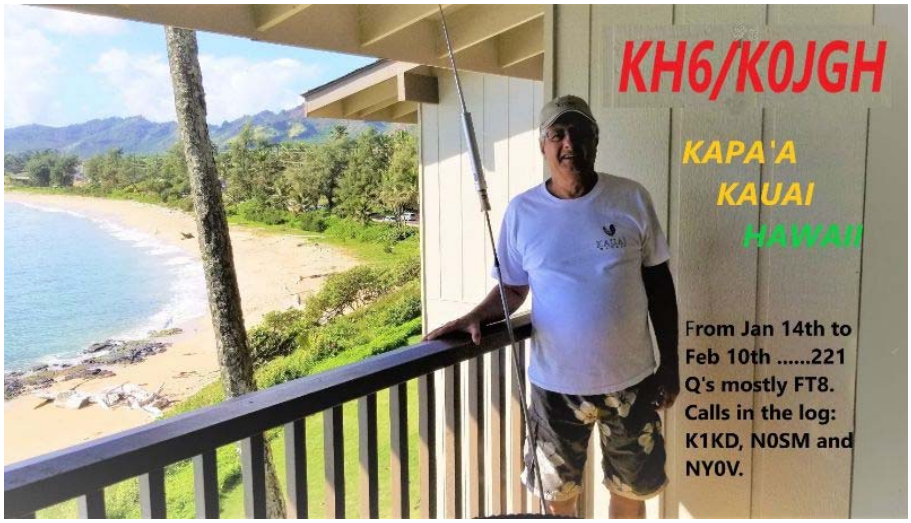
Member News



Congratulations, Tom!

I finally got over 100 on 160m. I feel pretty good about it with only having an inverted-V for 160m and no beverages on dx. Now I guess I need to focus on 6m this summer. - Tom

From Gary KWØJ - I think this sums up everyone's winter - Ed.



Escape from winter...

From Glen KØJGH

For Sale:

Yaesu FT-2000

- Hand mic
- Program plug for on-line updates
- Manual

This is in daily operation but son has now moved the old man into a Flex 5000.

$1100 and I can bring it to a club meeting.

Logbook

Logs

WØGXA: I added four more 160m countries this winter for a total of 48... VP2MSS, CU4DX, PJ4A and NP4Z. Maybe by the time I retire I'll have DXCC-160.

WB8ZRL: 160M ET3AA, MIØSLE

KDØQ: V84SAA on 160, 80 and 40

KØAFN: E44WE, EL2EL/4, A33EW, 5H3MB, EP6RRC, TXØA, TXØM,

ZD7FT, 9LY1JM, P29VCX, 3B9VB, and XX9D (17, LP, 100 watts)

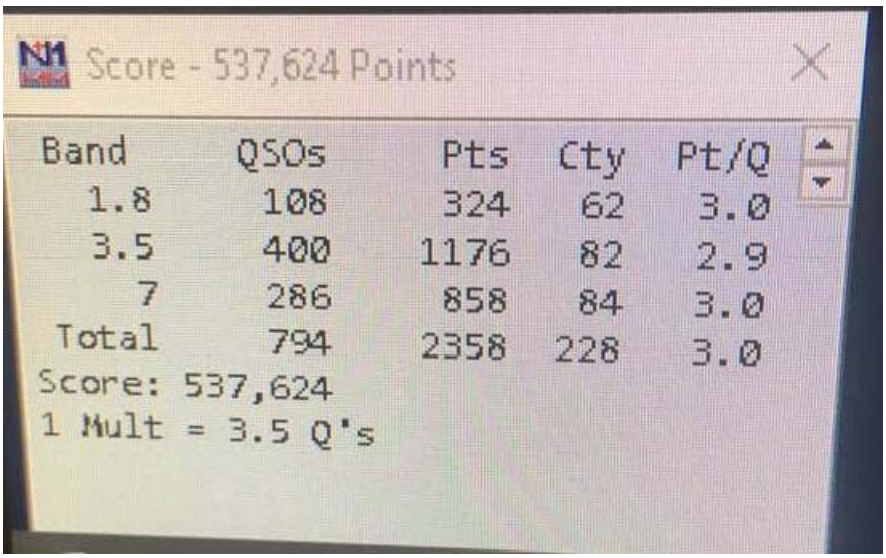
CQ Test

Scores and Soapbox

WØGXA: As usual, I joined Toni, NØNI and Dave, WØFLS for ARRL DX CW; staying only for the first night due to the incoming snow storm.

40m had been interesting. Dave predicted it would be dead within three hours of the opening bell. MUF had been dropping to 5MHz in the days leading up to the contest. So, Dave and Toni worked 40m until it died off. I focused on 80m and was reasonably productive. Over the course of 13 hours, we managed to log over 500 Qs on 80. Overall, the band was good. No crazy fast runs. It was steady with a couple distinct peaks where you might run 150/hour for 30 minutes.

Our score at 3:25AM on night 1



Society of Midwest Contesters

Annual Contest Symposium

SMC sponsors an annual gathering of contesters in IA, WI, IL and IN. They always have a great slate of speakers on contesting topics. It starts Friday evening, 8/23 and goes through Saturday 8/24 in

Bloomington IL. It's worth a drive over...

Info here: https://goo.gl/3sscZn

QRM

Duga radar: Enormous abandoned antenna hidden in forests near Chernobyl

From CNN.com here

(CNN) — The peaceful untouched forest north of Ukraine's capital, Kiev, is a perfect spot to enjoy the outdoors -- save for one fact.

It contains the radiation-contaminated Chernobyl Exclusion Zone, established in 1986 after the world's worst nuclear disaster sent a wave of radiation fallout across Europe.

Since 2011 it's been a major draw for adventurous tourists, but the forests here conceal another legacy of the Cold War, with a far more sinister and mysterious reputation.

The Duga radar.

Though once a closely guarded secret, this immense structure can be seen for miles around, rearing up through the mist over the horizon --

a surreal sight.

From a distance, it appears to be a gigantic wall. On close inspection, it's an enormous, dilapidated structure made up of hundreds of huge antennas and turbines.

The Duga radar (which translates as "The Arc") was once one of the most powerful military facilities in the Soviet Union's communist empire.

It still stands a towering 150 meters (492 feet) high and stretches almost 700 meters in length. But, left to rot in the radioactive winds of Chernobyl, it's now in a sad state of industrial decay.

Anyone exploring the undergrowth at its feet will stumble upon neglected vehicles, steel barrels, broken electronic devices and metallic rubbish, the remainders of the hasty evacuation shortly after the nuclear disaster.

The purpose of the "Russian Woodpecker" is still not fully understood.

For decades, the Duga has stood in the middle of nowhere with no one to witness its slow demise. Since 2013, visitors exploring the Chernobyl Exclusion Zone have been permitted access to the radar installation as part of a guided group.

Even those aware of its presence are still struck by the sheer scale of it, says Yaroslav Yemelianenko, director of Chernobyl Tour, which conducts trips to the Duga.

Anyone recognize anything?

"Tourists are overwhelmed by the enormous size of the installation and its aesthetic high-tech beauty," he tells CNN Travel. "No one expects that it is that big.

"They feel very sorry that it's semi-ruined and is under threat of total destruction," he adds.

Even decades after the collapse of the Soviet Union, the story behind the Duga still poses more questions than answers, its true purpose not fully understood.

Construction of the Duga began in 1972 when Soviet scientists looking for ways to mitigate long-range missile threats came up with the idea of building a huge over-the-horizon-radar, that would bounce signals off the ionosphere to peer over the Earth's curvature.

Despite the gigantic scale of the project, it transpired the scientists lacked full understanding of how the ionosphere works -- unwittingly dooming it to failure before it was even built.

Some of what we know today about the Duga -- also known as Chernobyl-2 -- comes from Volodymyr Musiyets, a former commander of the radar complex.

"The Chernobyl-2 object, as a part of the anti-missile and anti-space defense of the Soviet military, was created with a sole purpose," he told the Ukrainian newspaper Fakty, "to detect the nuclear attack on the USSR in the first two-three minutes after the launch of the ballistic

missiles."

The Duga radar was only a signal receiver, the transmitting center was built some 60 kilometers away in a town called Lubech-1, now also abandoned.

These top-secret facilities were protected with extensive security measures.

Wild speculations

To confuse their "enemies," Soviet command often designated such installations with numbers or fake identities.

On Soviet maps, the Duga radar was marked as a children's camp (there's even a bizarre bus stop on the road to one facility decorated with a bear mascot from the 1980 Summer Olympics in Moscow.

The radar was buried deep in a forest, with fake signs disguising its presence.

Legend has it that Phil Donahue, one of the first US journalists to be granted access to Chernobyl after the disaster, asked his official guide about the surreal sight of the Duga on the horizon and was told it was an unfinished hotel.

When it was in operation, according to Musiyets, the Duga supposedly used short radio waves capable of traveling thousands of kilometers using a technique called "over-the-horizon" radiolocation to detect the exhaust flames of launching missiles.

In 1976 the world heard for the first time the eerie woodpecker-like

repetitive pulse coming from the transmitters.
Conspiracy theories followed instantly, generating Western media headlines about mind and weather control.

Russian Woodpecker

Amid growing fears of nuclear war some claimed that the low-frequency "Russian signal" could change human behavior and destroy brain cells.

Such wild speculations were further fueled by the Soviet Union's denial of the very existence of the radar -- it was a children's camp after all.

While it's highly unlikely that Duga was used as a mind control weapon directed at Americans, its true purpose and the important details of its functioning are covered in mystery.

Was there a connection to the nearby Chernobyl Nuclear Power Plant? It's speculated that the doomed facility was built in the particular area in order to provide the enormous radar with energy.
Supporters of this idea point out that the Duga radar cost the Soviet Union twice as much as the power plant, despite its questionable military capabilities.

A Sundance-awarded 2015 documentary "Russian Woodpecker" goes deep into this theory following Ukrainian artist Fedor Alexandrovich's investigation into the causes of the Chernobyl tragedy, with the Duga radar playing a role at the core of the conspiracy.

The explosion at Chernobyl on April 26, 1986 was the beginning of the end for the Duga array. The complex was closed due to the radiation contamination and its workers evacuated -- the silence only broken by the sound of crackling geiger counters tracking radiation.

Due to the Duga's top-secret status, all the documents about its operation were either destroyed or archived in Moscow, a state of things that continues to the present day. The antenna's vital components transported to Moscow or spirited away by looters.
In the chaos that followed the collapse of the Soviet Union, the radar's fate was entrenched by its location in the middle of the Chernobyl Exclusion Zone, sealed off from the public for more than two decades.

The Chernobyl catastrophe impacted the lives of thousands of

innocent people, covered the whole continent in radiation and led to death and decay.

Enduring fascination for the incident and the Cold War, perhaps some of it inspired by recent diplomatic strains between East and West, have meant no shortage of people wanting to explore such forsaken relics.

"Many people have heard about it," says Yemelianenko. "Mostly they like [the radar] because their personal life story is in some ways connected with the history of the Cold War.

"Some people were engaged in these events ... They would like to witness [Duga] with their own eyes," he says, adding that most of visitors are from the United States, aged from 30 to 60. Yemelianenko, among a group of Ukrainian tourism professionals working to get the Exclusion Zone inscribed on UNESCO's World Heritage list, adds that many visitors to the Exclusion Zone claim that seeing the Duga is the highlight of their trip.

So, while the sinister woodpecker sound may have departed the radio waves, the Duga continues to transmit its eerie presence across the abandoned landscape.

The Soviet Union may have gone forever but its ghosts still haunt Ukraine.

Marie Zimmerman: The First Woman Radio Station Owner

By Donna Halper, reprinted from www.thebdr.net

Marie Zimmerman probably did not plan to be a radio pioneer. But when station WIAE in Vinton, IA received a license from the Department of Commerce in mid-July 1922, she became the first woman to own a radio station.

It was a time when women generally were expected to be homemakers and, while Marie volunteered for the Red Cross during the war, she seems to have had no plans to work fulltime – in fact, on her husband Robert’s 1918 draft card, he stated that he was the sole support of his wife. But something changed for the young couple in

1920; Robert's brother Carroll came from Illinois to visit, and he introduced them to a new hobby – amateur radio. Both were instantly hooked.

FIRST GENERATION AMERICAN

Marie Ciesielski was born in Iowa on March 1894. Her parents, Andrew and Julia, had emigrated from Germany and settled on a farm in Jesup, in Buchanan County. Marie was the second of eleven children.

In 1915, she married Robert Zimmerman, a native of Taylorville IL who had come to Independence, IA to work in construction.

Robert, who had the nickname "Zim," pursued an interest in electronics, becoming the city electrician in nearby Vinton, while Marie focused on learning as much as she could about how radio worked.

FROM LISTENERS TO BROADCASTERS

At first, she and her husband built their own small receiving set. But by 1921, what was then called "radiophone" broadcasting had come to Iowa, and Marie and her husband began listening in to it. Zim soon found creative ways to put a receiver in their car, so they could enjoy the music and speeches from distant stations.

Early in 1922, Marie decided it might be fun to operate their own radiophone station, and her husband agreed. Although neither he nor Marie had the $300 that the equipment would cost, Zim set out to raise enough money to buy the necessary equipment. A sympathetic article in the local Vinton newspaper called attention to their plan, and the money was raised.

On July 21, 1922, the Department of Commerce (which licensed stations before the creation of the Federal Radio Commission) issued a limited commercial license to "Mrs. Robert E. Zimmerman" of "Venton" Iowa, to operate station WIAE. The name of the city may have been misspelled – and the station went on the air with only 40 Watts – but the people in the area were very pleased to have their own local station (in those early days of broadcasting, 40 Watts could go a considerable distance).

LOCAL RADIO

The station itself was in a separate building, adjacent to their home; Zim also built a special studio for the performers. Marie was able to organize some local musicians, and they became WIAE's regular

orchestra. The studio also had a Brunswick phonograph so records could be played when there were no live guests available. Like most of the small stations of that era, WIAE was not on the air every day. It broadcast on Tuesdays, Thursdays, and Saturdays, usually from 9 PM to 10 PM, featuring music and news. On Wednesdays at 8 PM, there was a band concert; and on occasional Sundays at 2:30 PM, there was another live concert.

WIAE also became a source for local events. In late August, Zim set up a remote broadcast from the Benton County Farm Bureau's annual picnic. Few Vinton residents had ever seen a live radio broadcast, and even the local newspapers reported on it. WIAE also provided political news.

A LADY AT THE TOP

But unlike the other stations of that time, Zim was not the one who ran things; Marie was the person in charge. Zim had bought the equipment and installed the transmitter, but Marie did the rest – she booked the guests, found the performers, and even did the announcing. (Marie told a reporter that she hoped to expand the broadcast day, and she wanted to offer morning concerts for school-children, so they could learn music appreciation at a young age.)

Within several weeks of the station going on the air, Marie was getting fan mail from as far away as Connecticut and Louisiana, proving that the station's signal could travel a surprising number of miles.

By late 1922, many candidates had discovered that broadcasting a speech, it enabled them to reach a potentially larger audience. Among the first local candidates to use WIAE was Vernon J. Youel, Republican candidate for the office of county auditor. After he gave his talk in early November, he received a number of phone calls from listeners, and area newspapers wrote about the new innovation of campaigning by radio.

DIFFICULT TIMES FOR A TINY STATION

Unfortunately for little stations like WIAE, late 1922 saw the radio craze take hold nationwide, as hundreds of new stations took to the air. In Iowa, several of those stations were bigger, more powerful, and better funded than WIAE, most notably WJAM in nearby Cedar Rapids, owned by the Cedar Rapids Gazette. WJAM was able to give listeners free radios as prizes; some of their contests offered the chance to win as much as $100 in cash (a large sum in those days).

In those years before spot commercials were common, more than a

few radio entrepreneurs kept their stations out of their personal funds – until their money ran out. For Marie, too, running WIAE was a labor of love, but it was becoming more and more expensive. Soon the Zimmermans found themselves unable to compete.

By early 1923, the Zimmermans knew they could no longer afford the station's expenses. Marie did not renew WIAE's license in April (in those days, licenses were renewed every three months), and so the Department of Commerce officially deleted the station in late June. It had lasted not quite one year.

AFTER RADIO

After WIAE left the air, the Zimmermans left Vinton and moved to Kenosha, Wisconsin. Zim found some work in advertising, while Marie took a job in retail at Block's Department Store. She would stay there, moving from saleslady up to buyer.

While there is evidence that both remained fans of radio, neither was able to get back into broadcasting. After Zim died suddenly in December 1946, Marie moved back to the farm in Jesup, where she cared for her ailing mother, as well as several other siblings.

Marie Zimmerman died on 23 January 1973, at age 77. Half a century removed from WIAE, her obituary said nothing about her pioneering involvement in radio, nor did her relatives recall her even speaking about her days as a station owner. (In fact, when the 75th anniversary of WIAE occurred in August 1997, I wrote an article for Vinton's newspaper, the Cedar Valley Times, and in researching Marie's story, I spoke with several of her relatives. They said she was not the kind of person who would have bragged about her achievements. Perhaps she felt that since the station did not last very long, it was nothing special. They were quite surprised to learn that she had been the first woman to own a station.)

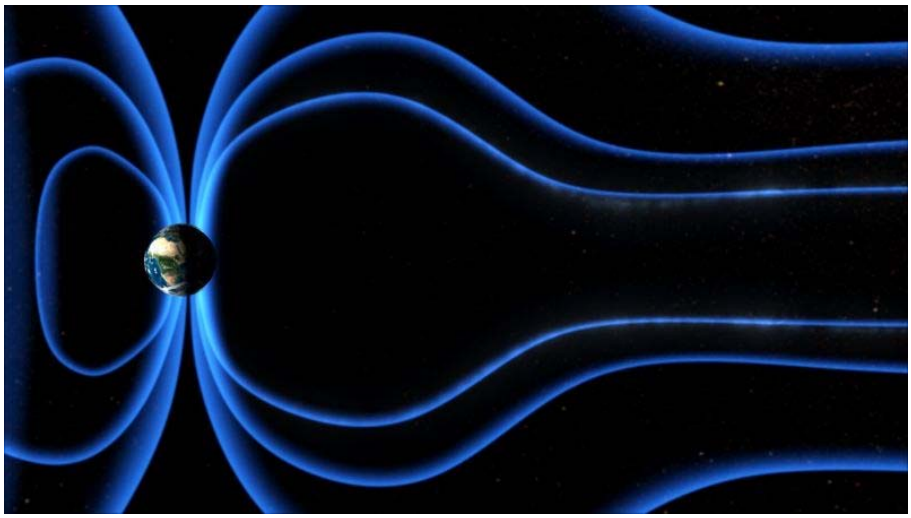
Although WIAE's time on the air was short – as was life for many early broadcasters – what Marie Zimmerman did in radio's early days was unique. With a supportive husband and a shoestring budget, she proved to the local community that even a small station could have an impact.

And as a reporter who visited her station wrote, "Mrs Zimmerman is ... the first to show [the men] what a woman can do in radio."

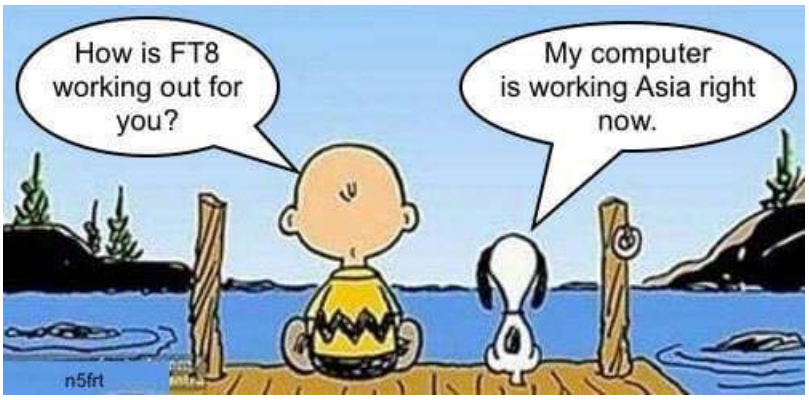
The link for this story can be found here on The Broadcasters Desktop

Resource.

In case you were busy shoveling snow and missed it...



The earth's magnetic north moved enough to require an out-of-cycle update. Read more here: https://www.theweathernetwork.com/news/articles/north-magnetic-pole-shifting-so-quickly-prompts-early-gps-navigation-update/123941



Thanks Jerry - Ed.

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