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the exchange



SouthWest Ohio DX Association

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# The Prez says.....Tom, NR8Z

As I write this at the end of April, the COVID situation has improved to the point that we're planning on having the next SWODXA meeting in-person (May 13<sup>th</sup>). The CDC recently said that fully vaccinated folks can meet outdoors without masks provided they're not in a compact area like an arena or stadium. Mindi, KC8CKW, has arranged for us to have Shelter #1 at Waldruhe Park (Near Austin Landing exit off I-75). The shelter is ours from 5-9pm and the meeting will start



promptly at 6:30pm. Assuming the weather is nice, come early and enjoy the outdoors. Feel free to wear a mask and we'll spread out. Unfortunately, food service is challenging so we're not planning on providing food, don't come hungry or pack a dinner. Stay tuned to your emails in case we need to modify our plans.

Great progress is being made for the second W8DXCC convention at the Clermont County Fairgrounds in conjunction with the Cincinnati Hamfest<sup>sm</sup> on Saturday, August 28, 2021. As I pointed out last newsletter, this is a great opportunity to showcase our club to hams that may not be aware of our great organization. I'm happy to report that Joe, W8JBL, stepped forward to lead the effort of putting SWODXA's best foot forward. I know he would welcome ideas and help, so don't be shy. Remember, as President, you've given me the power of voluntolding people.

May is usually DX Dinner® time and announcement of the DXPedition of the Year® winner. We'll announce the winner through multiple DX media outlets, so stay tuned. If you're feeling down because Hamvention® was cancelled, this year you can partake virtually. I'm looking forward to the virtual FDIM (Four Days in May) on Saturday, May 22<sup>nd</sup>. Also, you can remotely attend Contest University on Thursday, May 20<sup>th</sup> and Hamvention forums on Friday, May 21<sup>st</sup>.

Keep working DX, the sunspots are coming!

73, Tom—NR8Z



# 2020 DXCC Year End Review

By Joe Reisert, W1JR—1/5/2020

Thanks to Bernie, W3UR and Joe, W1JR for permission to reprint this excellent annual review.



2020 Overview: To say the least 2020 was a DX year like no others. The Orkney Islands DXPedition VP8PJ, one of the top 20 most needed entities came on the air in late February. Then the Covid-19 (CV) pandemic set in worldwide in March. It made travel difficult, especially to rare DXCC entities in Africa and Oceania. Dozens of planned DXpeditions after that date will either be rescheduled to a later date or cancelled altogether. Also most conferences and DX gatherings worldwide were cancelled. All of a sudden call signs with suffixes like StayHome or StaySafe became common.

On top of this, 2020 was also a difficult year for DXers since thes olar flux hit rock bottom and band openings especially on 15 meters and above were all but non-



Members of the Perseverance DX Group put on the February 2020 VP8PJ DXPedition to South Orkney.

existent. Then about mid-year it was announced that the solar scientists determined that solar cycle 24 finally ended statistically in December 2019 and solar cycle 25 began in January 2020. More on this later.

DX wise only about 265 entities were active during this year, far fewer than the usual 285 or so. January was very poor with only about 185 or so entities active versus a usual 225 in good DX years. For comparison, over the past thirty (30) plus years I try to work every available entity. My average is above 275 but in 2020 I only managed a meager 227! It will be interesting to see the CQ Marathon results this year.

The Bouvet DXPedition was delayed again due to CV. None of the top 10 most needed entities on the Club Log DXCC Most Wanted List were active this year and VP8PJ was the only one of the top 20 most needed. The pandemic caused many DXers to work from home. As a result, DX activity was high all year, especially in DX contests using CW, SSB and FT8 modes. CW was very active all year with many discovering the advantage of this mode under poor conditions. Likewise FT8 was extremely active since it can often get through when propagation is poor.

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# 2020 DXCC Year End Review (cont.)

In November it was sadly announced that John Devoldere, ON4UN, author and one of the top Low Band DXers worldwide had become a silent key at age of 79. John's books on low band DXing were prized by many. His final book "Low-Band DXing-Fifth Edition" is a classic. He told me it would be his last as it takes to much effort to complete another edition. I dedicate the "2020 DXCCYear End Review" to John's memory.

Radio Propagation: As mentioned above, radio propagation was down most of this year. There were over 210 days (and some whole months) with zero sunspots through October. Typical solar flux during the first part of the year was 70-75 with a few small deviations until late October when solar flux abruptly soared to 88. Solar flux moving above 80 is a good indicator of improving DX on the upper HF bands. In late November the solar flux rose to 113. The increase greatly improved radio propagation especially during the CQ DX SSB and CW

Contests.

As mentioned in last year's review, there have been dozens and dozens of papers predicting that solar cycle 25 would be a real downer. Now a recent report by Dr. Scott W. Mcintosh et al from The National Center for Atmospheric Research is predicting solar cycle 25 to be one of the best in history. They used (discrete) Hilbert Transforms on more than 270 years of monthly sunspots. Most experts agree that solar cycle 25 will peak around 2025. Time will tell. Let's fix those broken antennas and get on the air.

Here is the March 2020 4U1UN crew including (front row L-R) KO8SCA, K2QI, (middle row L-R) N2RJ, W2IRT, OH2BH (back row L-R) K1JT, G6CBR and VE7NY.

**Club Log:** This website is becoming the main place to check logs especially during DXpeditions. Their "DXCC

Most Wanted List" is always up to date. The 10 most wanted DX entities in order or rarity are still P5, 3Y/B, FT5/W, BS7H, CE0X, BV9P, KH7K, KH3, 3Y0/P and FT5/X. Many other features are available such as OQRS (Online QSL Request Service), DXCC Charts, Log Search etc.

**Digital Operations**: Digital and especially FT8 took on more meaning in 2020. FT8 is known for its ability to copy very weak signals. Furthermore, it allows many smaller and low power stations to participate. During this low sunspot year the higher bands were sometimes open for FT8 contacts when CW or SSB were too marginal. Lately I'm hearing many DXers on FT8. Note that FT8 has a learning curve and users are less likely to spot DX on the DX Clusters. FT4, a higher speed version of FT8 that is slightly less sensitive is now becoming popular.

Thanks to the help from my son Jim, AD1C, I finally got on FT8 late in 2019 hoping to work 3Y/Bouvet and any entities that were active only on FT8. It took only about three weeks to complete DXCC. In six months I had worked 5BDXCC and by now 7BDXCC with DXCC 210 plus.

# 2020 DXCC Year End Review (cont.)

## **Band by Band Activity (Frequencies in MHz):**

**160 Meters:** Activity was low to moderate on CW except during contests when activity filled the band. The cancellation of most of the planned DXpeditions due to CV really hurt 160 DX. FT8 activity is increasing around 1.840. In April, Japan received increased spectrum. Try to avoid frequencies divisible by 5 (e.g., 1.820, 1.825, 1.830 etc.) since broadcast birdies are often there.

- **75/80 Meters:** DX activity was low except during contests and was also hurt by the cancellation of most DXpeditions due to CV. FT8 activity on the other hand is increasing around 3.573.
- **60 Meters:** More entities have now received permission to operate on this band albeit they are often limited to 15 Watts and a dipole antenna. Well over 200 DXCC entities have been active on the band. Most DX activity is now concentrated around the third channel at 5.357 and almost entirely on FT8. The FCC is still looking at non- channelized operation near channel 3 for USA stations. The ARRL DXCC program still does not recognize 60 meter contacts for DXCC credit. Remember that USA stations are limited to 100 Watts output power and a dipole antenna. Use of gain antennas require reduced transmitter power.
- **40 Meters:** This is the workhorse band especially during the night and in the winter local time. SSB activity is especially good during contests and above 7.100. Remember that USA stations cannot operate SSB below 7.125 but best to stay above 7.128 for safety. FT8 activity is now very popular around 7.074.
- **30 Meters:** 30 meters is very popular especially for low power stations. The band is usually open for a few hours before and after sunrise and can be open almost all day during local winter. FT8 can be found 10.136.
- **20 Meters:** 20 meters continues to be the go to DX band especially during daylight although some of the activity has moved to the digital modes near 14.074. SSB activity is still high. The CV has cancelled many DXpeditions that usually park on this band.
- 17 Meters: The lack of sunspots has really hurt the higher bands. 17 meters has been less affected and is often open shortly after 20 meters opens. There is lots of FT8 activity around 18.100. All modes seem to be doing OK on this band.
- **10–15 Meters:** 15 Meters and especially 12 and 10 Meters have been hit extremely hard by the lack of sunspots. Late in this year the solar flux increased slightly and vigilant DXers took advantage of improved radio propagation and openings on 15 through 10 Meters. There is occasional activity here during the summer months when sporadic E propagation occurs.

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# 2020 DXCC Year End Review (cont.)

**6 Meters:** This band in recent years seems to have gone almost all digital. MSK144 is popular all year around 50.260 while FT8 is most popular around 50.313 during summer band openings. EME (Earth-Moon-Earth) DX using digital modes such as JT65 is becoming very popular during local moon rise and set.

Frank, W3LPL is now posting in The Daily DX solar updates on the HF bands based on NOAA/SWPC webpages.

# ир-

S53R, Robert, is working in Kabul for the next few years and QRV as T6AA and T6A in contests.

## 2020 Month by Month DX Activity Sample:

January: This is always a tough month especially being at the bottom of the solar cycle. This month had only 185-190 active entities, about 30 less than January 2019. Notable rare to semi-rare active stations: S01WS, 4U1UN, TR8CA, T6AA, 9G2HO, and 5A0YL were active on and off all year. 3D2AG/P (Rotuma), ZC4UW (26KQ), E44RU (19.6K),

8Q7BS, 9L1YXJ, VK9NK (58K), C21NH, 9Q1C, XZ2B, HU1DL (60K) and JT5DX (mostly 160

meters) were active.

**February:** Lots of DX contest activity plus TI9A (30K), 5I5TI (47K), 5I4CC (17K), E44CC, TZ1CE, 9N7AM, TN/UA9FGR, TU4PCT (29K), and VP8PJ (S. Orkney-83K) were active.

March: YJ0NC, 9J2LA (35K), T32AZ and VP2VB (18K) were all active.

**April:** Lots of STAYHOME like HZ1STAYHOME, 9K2STAYHOME, A60SH and STAYSAFE were active due to CV worldwide. Many planned DXpeditions started to cancel due to CV.

May: Lots of odd call signs. SV2RSG/A (Mt. Athos) made a brief appearance on CW.

June: OJ0A, OJ0JR (I love that call sign) plus 6O1OO were active.

**July and August:** KH9/WW6RG, XW2DX, OJ0s and ZL7DX (FT8) were active. VK9NK was finally allowed to return home due to CV travel restrictions.

**September:** TO0Z (FJ) and OJ0JR.

**October:** Activity picked up with VQ9T, 5U4IHM, E51WL (N. Cook),7Q6M, JX2US, NL7RR/KH9, Z66DX (33K) and TX0T (FO from a New IOTA).

**November**: Solar flux increased and 15 Meters and up improved. 7Q7RU, JG8NQJ/JD1 (JD/M), TZ1CE, D60AB and 8Q7ZO were all active.



K6ZO, Don, was QRV as D60AB in October and November of last year.

# 2020 DXCC Year End Review (cont.)

**December:** This month has been designated YOTA (Youngsters on the Air) month with many stations using call signs with YOTA in same plus several USA stations using 1X1 call signs like K8Y. Give them a call and encourage them to join the DX community. 3DA0AQ, JX2US, VP6MW, 6O1OO and 3D2AG/P (Rotuma) were all active

<u>Unauthorized Operations:</u> As usual, many fake stations including many DXpeditions (before activation) were active. This is why DXpeditions are reluctant to give out their call signs before commencing operation for fear that their call sign will be pirated. Some of the pirated call signs during this year included many JXs, CE0X, VU4R, VU7AAV, EZ8CQ (EZ operation is illegal since August 2006), D1DX, and ZD9XF 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, please don't spot rare DX on the DX 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 worldwide and unnecessary worry. Finally, don't post rare calls to thank someone for receiving a QSL etc. No one

who is watching cares or appreciates this type of boasting.

CTU and CWA: Let's not forget Contest University under the direction of Tim, K3LR. It is now in its 14th year having had over 7,500 students in 8 DXCC entities so far. CW Academy by CWops, a program to improve CW skills. CWops just celebrated its 11th anniversary. "Improving Your CW" is another Morse Trainer by G4FON. Also K1USN now has weekly slow speed CW activity for beginners.

**IOTA:** Poor propagation and CV really almost shut down many rare and new IOTA



IT9YRE, Nando, and K9AJ, Mike, activated CB0Z from Alejandro Selkirk Island (SA-101) in February 2020.

(Islands on the Air) activity worldwide with many DXpeditions cancelled. Ironically, IOTA became the name of one of the North American hurricanes in November. CB0Z (CE0Z) put this new IOTA (SA101) on in January, 6F3A (NA153), RI0B (AS068), R207RRC new (AS207) and TX0T new (OC298) beat the odds. The IOTA program website is www.iota- world.org. It is filled with info on the program Remember that QSLing can now be conducted for some IOTA operations using LOTW.

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# **DXCC Year End Review (cont.)**

**DX Contesting:** DX contests were everywhere this year using CW, SSB and digital modes. Early reports are that it was a banner year with new record number of entries. Lots of operators worked from home instead of the large DX contest stations and of course lack of DXpeditions. Some larger stations sponsored smaller operations to YOTA operators. The WA7BNM Contest Calendar is a great source of contest activity. The ARRL Contest Update is a biweekly newsletter that often has interesting tidbits on operating etc.

**Equipment, Technology and Accessories**: This was a very poor year for Amateur Radio suppliers. At least one closed shop and others consolidated. The lack of DX gatherings due to CV surely took its toll on displaying new gear etc. There are new gadgets, gear and software but you'll likely

have to shop around perhaps on the internet.

**Safety**: This can never be stressed enough, especially when towers or antennas are involved. Professional expertise is highly recommended. There were some tower related deaths and at least one experienced tower specialist was seriously injured this past year.

Safety equipment is very important on tower or antenna work. Better yet, have a professional tower crew do the work. K1IR has a video showing "Tower Safety" and is well worth viewing www.maarc.ca/news/tower-safety video. Also Zero Falls Alliance. This reminds us



RA9USU, UA3AB, TI2JV and SM6LRR were the team behind the February 2020 TI9A DXPedition.

that every tower climber injury or death is usually preventable.

**Ham Radio and the Internet**: The internet plays an important part in Ham Radio. Most DX clusters are now on the internet as well as LOTW (more on this shortly) and Club Log to mention a few. Also many contests require logs to be submitted via the internet within a few days after the contest. Please remember to show modes such as SSB, CW, FT8, FT8 F/H when spotting stations near band mode overlaps that can confuse operators.

**QSLing and DXPedition Costs:** QSLing is now becoming a lost art. Costs are skyrocketing. As a result of the CV, mail services were discontinued to over 50 countries at one time this year, some for long periods of time. As a result, LOTW (Logbook of the World) at ARRL has become very popular (see ARRL below). OQRS on Club Log is helping to obtain QSLs especially from DXpeditions and very active DX stations. See Note 1.

# 2020 DXCC Year End Review (cont.)

Operating techniques: This past year was a tough one worldwide. Needless to say, the RST report on CW is now almost always 599 and 59 on SSB! FT is more complex. Split frequency operation on rare DX stations is almost always a must. Unfortunately many call right on the DX frequency and hence cause panic! Please don't tune up your transmitter on the common DX frequencies. The old adage still applies: Always Listen, Listen, Listen, before you start to transmit. Since poor operating procedures seem to be repeated over and over and to save space in this report, please refer to note 1.

**Silent Keys (SK):** This is always a tough subject to write about and is even tougher with the CV pandemic. They meant so much to our great hobby. In the past years, they had grown to over 200 in each monthly issue of QST, but the recent lists have decreased below 150. Hopefully this is a good sign and not just under reporting. The following is a partial list of notable DXers, contesters, DXPedition operators, designers or officials in Amateur Radio that I have noted in no particular order who became SKs during 2020.

They include in no particular order: DK5DC, K8LEE, K9HMB, W8ILC, W3AZD, KV4FZ, K2RIW, KB8RQ, K1LPS, PY2NX, W9SR, W3YOZ, F2MA, DK3KR, K1LU, W4QM, HP1AC, W3NQN, 3W2LI, ZP6CW, W5FU, A41KT, OH3VV, N8PR, KN4F, YL2DX, PY0FF, W1AX, ON4UN, G3TEV, IK2DIA, DL9GFB, K2QBV, WF5E, K8CC and K4SSU.



KOSSCA, VE7NY, OH2GEK and OH2BH were part of the VP2VB Yasme Sails Again DXpedition in March

**2020 DXCC and ARRL Matters**: Rumors in the news media tell us that Bougainville, an autonomous region in Papua New Guinea (P29), has voted to become an independent nation. This could take years to happen before it is added to the active DXCC list.

The DXCC yearbook has been published mid-year for many years but now it only lists those who submitted DXCC updates during the prior year. If you want to see the latest DXCC standings, first go to www.arrl.org. Next click "on the air, and

then DXCC Standings." Of course, the ARRL runs LOTW and it is constantly being updated. The LOTW now has over 1.280 billion QSOs on file. New publications were published in 2020 which were primarily aimed at assisting newcomers to the hobby. The ARRL QSL bureau is another service for league members.

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# DXCC Year End Review (cont.)

**And now the Drum Roll:** There were approximately 74 entities that are NOT believed to have been active during 2020. DX was severely affected by travel restrictions due to CV.\*

**Africa (23):** 3B6, 3C, 3C0, 3X, 3Y/B, 5N, 7P, 9U, E3, FH, FT/G, FT/J, FT/T, FT/W, FT/X, FT/Z, [5, S9,T], TL, VK0H, ZD9 and ZS8.

**Antarctica (1):** 3Y0/P

**Asia (9):** 1S, 7O, A5, BS7H, BV9P, EZ, P5, VU4, and YK.

**Europe (2):** 1A0 and R1F

North America (7): CY0, CY9, FO/C, KP1, KP5, XF4 and YV0.

Oceania (25): 3D2 (Conway Reef), E6, FK/C, FO/A, FW, H40 (Temotu), KH1, KH3, KH5, KH7K, KH8, KH8/S, T2, T30, T31, T33, VK0M, VK9C, VK9M, VK9W, VK9X, VP6D, ZK3, ZL8 and ZL9.

South America (7): CEO/X, HC8, HK0/M, PY0/S, PY0/T, VP8 (S. Georgia), and VP8 (S. Sandwich).

\*Please note that some rare entities may not be on this list for 2020 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/B, 3Y/P, BV9P, BS7H, CE0X, EZ, FT/G, FT/W, KH7K, KH3, P5 and YV0. This means that an avid DXer working hard at DXCC may take over 13 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, FT5/W and BQ9P in that order.



#### **DXers Have** A Choice



**The Daily DX** - is a text DX bulletin that can be sent via for 2020 may be activated late in 2021 but that is email to your home or office Monday through Friday, and includes DX news, IOTA news, QSN reports, QSL information, a DX Calendar, propagation forecast and much, much more. With a subscription to The Daily DX, you will also receive DX news flashes and other interesting DX tidbits. Subscriptions are \$49.00 for one year or \$28.00 for 6 mos.

The Weekly DX - is a product of The Daily DX that can be sent weekly to your home or office via email in the form of a PDF (portable document format). It includes DX news, IOTA news, QSN reports, QSL information, a DX Calendar, propagation forecast and graphics. Subscriptions are \$27.00 for one year.

Get two weeks of The Daily DX or a sample of The Weekly DX free by sending a request to bernie@dailydx.com, or at http://www.dailydx.com/trial.htm. **Upcoming DXpeditions:** There is still a chance for 3Y0I to activate Bouvet Island late in 2021. Due to the CV, many DX peditions planned very speculative. Unless CV comes more under controlled, it may be a dull DX year with less entities active similar to 2020. Stay tuned and check the www.ng3k.com/misc/adxo.html and Daily DX calendars at: http://www.dailydx.com/thedaily-dx- calendar/ for future operations.

**Looking ahead to 2021 and Beyond:** As stated above, solar cycle 25 should be gearing up in 2021. DX has really changed in the last few years with FT8 and CV problems.

# 2020 DXCC Year End Review (cont.)

Some DXers chase the DXCC Honor Roll, the DXCC Challenge or the DX Marathon. 1,625 DXers have confirmed all 340 entities on the present DXCC list including nearly one thousand DXers from outside the U.S. More than 200 DXers have now achieved the very difficult DXCC Challenge 3000 level. Fernando, EA8AK now has an amazing 3264 entities and still leads the DXCC Challenge.

It's time to improve your 10 thru 15 meters as well as keeping your 80 and 160 meter antennas in repair. Then there are the never ending DX Contests, DX Marathon, DXCC Challenge and IO-TA chasing. There are lots of things to do. Don't let the airways die for lack of activity. HF radio conditions on the upper HF bands are improving. Try to stay active and join the fun. Also don't forget to support the various DX Foundations around the world that help make DX peditions 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 16th year and for his valuable inputs and critique. Thanks also to John, K9EL, Michael, G7VJR and especially Frank, W3LPL for their valuable inputs as well as my son Jim, AD1C for his computer help! Previous reviews can be read on the K8CX Ham Gallery website.

## 73, Joe Reisert, W1JR

**Note 1**. To keep the size of this report under control, some additional information which may be repetitive has been in my 2019 or prior reports on the K8CX website especially on the Colvin QSLs.

**NOTE:** Obviously all the opinions etc. expressed are solely mine as are any errors that I have made. This End of Year Review is copyrighted. Therefore copies or use of this review MUST first be approved by Bernie, W3UR and then a courtesy copy of the reprint sent to Joe, W1JR. Best of DX to you in 2021. I'll see you in the pile ups.



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# 60 Meters—The Channel Band

By Joe, W8GEX—w8gex@aol.com

There have been 245 countries on 60 meters so far with the latest being A25RU from Botswana. Stations were wall-to-wall trying to get into his log.

### 60M Facebook Update

Hi Joe,

Thanks again for the nice newsletter, I just want to inform you that some time ago I changed the name of our Facebookgroup to:

https://www.facebook.com/groups/ hamradio60m (The old address still works, but the new name is easier to remember.) 73 de Frank PH2M

Hi All,

The latest edition of The 5 MHz Newsletter (No 26 –Spring 2021) is now available for free pdf download from the 'External Links' section of the Wikipedia 60m Band page

https://en.wikipedia.org/wiki/60meter\_band#External\_links

or the RSGB 5 MHz page

http://rsgb.org/main/operating/band-plans/hf/5mhz/





This edition includes 5 MHz news from 4 countries, MARS on 5 MHz! The SARL Worked All ZS 5 MHz Award, the latest World of 5 MHz Map, Useful Websites for 5 MHz, Readers Feedback and CQ Serenade.

— Enjoy, Keep Safe,

V47JA - I will again be operating from our Calypso Bay, St. Kitts, West Indies vacation home, located 200 feet from the Caribbean Sea, from June 12 - July 10 and October 16 - Nov. 12, 2021 and active on 6-160m, (incl. 60m), SSB and FT8. Radio: Yaesu FT1000MP, FT450D and Elecraft KPA500 Amplifier. Antennas: Mosley Mini32A 10/15/20m, 33' Vertical 10-40m, 35' Top Loaded 80m Vertical, 160m Vertical and 6m a 5el Yagi. ALL QSL's DIRECT or LoTW.

PJ5/W5JON - Saint Eustatius. In the middle of my June/July and Oct/Nov trips to St. Kitts, I will be going to St. Eustatius, June 22 - June 28, and Oct 25 - Nov. 1, 2021. Radio: Yaesu FT-450D, Elecraft KPA-500 and dipoles. Active on 6-40m, SSB and FT8. I will be extending the 40m Dipole to 60m, for a day or two while there and so I will see you 60m. ALL QSL's DIRECT or LoTW.

# My 'First' DX QSO By Jay, K4ZLE

Everyone knows their parents walked 5 miles to school, barefooted, in the snow, uphill to and fro, right? I have a similar story. Mine involves riding my bicycle 16 miles each way to attend summer school where an electronics shop from my own class was given. The electronics shop was really a front for getting a ham license and for using the shop equipment to build one's own projects. I did this for two summers, the first to get my Novice license and the second to get the extra high school credit.

I say that to say this. After class one afternoon, I went to the QTH of a classmate's who lived near the school in order to see his station. I'm an old fart. This was in 1959, just after the peak of the best sunspot cycle in modern times. My rig was a converted 40m ARC-5 receiver and a homebrew 6V6 oscillator. I do not remember exactly what his station was, but it was commercial equipment. We were tuning around 10m AM when we heard a VP2 station, so we called him and he came back to us. After establishing contact, I got my turn at the mic. Wow!

For me this was magic. My best 'DX' was some VE3 on 40 CW meager station.



Here we were talking to someone in the Caribbean.

Being the young, erudite show off that I was, I went back to him in my best, literally, sophomoric Spanish. Once I turned it back to him, he responded with an apparent chuckle in his voice and informed me that VP2 stations were part of the British Empire and his language of choice was English!

Hummm, Red faced! OK, so now I knew. And from that day on I have made it a point to know something of the socio-political aspects of the entities I work. BTW, it's still magic!



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# Interview with Mic, FK8IK

After a great QSO, I queried Mic about answering our questions. He responded quickly and the result is below. Thanks Mic!

**AJ8B**: How did you first get interested in amateur radio?

**FK8IK**: In 1974 when I did my military service, the cw tests showed me abilities that seemed favorable for me to do telegraph training. And as there was a radio club in the military barracks I discovered this activity with passion but I waited a long time to pass my license which dates only from 2010

AJ8B: Do you have a favorite band or mode? FK8IK: The cw is of course my true passion, but I also do ssb. For the bands, it is the HF from 80m to 10m but I made some attempts on 160m even if I lack room for this band

**AJ8B**: What time of day and days do you like to operate?

**FK8IK**: I have no favorite days or hours I am retired so when there is propagation, expeditions, contests or just insomnia then radio makes me happy.

AJ8B: Any secrets to your success?

FK8IK: Unfortunately no, just an exotic call

AJ8B: Any tips that you can share?

FK8IK: No advice, just passion

**AJ8B**: Describe what you are currently using: **FK8IK**: Currently I have an Icom 7600, a SPE 1K amp, an 18m tower, an Ultrabeam 640 VL2-3 antenna (6 to 10m) and an inverted V dipole for the 80m



**AJ8B**: What advice do you have for those of us trying to break pileups to work DX?

**FK8IK**: It is very difficult for me to answer this question because I am more often the prey than the hunter. But a little patience, a little power, a little cunning and a lot of luck.

AJ8B: You are a veteran of many DXPeditions. Is there one that really stands out and why?

FK8IK: I only participated in a modest expedition, with the code TO5FP in 2016 in St Pierre and Miquelon with F4HEC, F1RAF and F5TMJ, it was for me a very beautiful adventure. I also

had the chance to go to Chesterfield Island but it

was a scientific expedition and so my radio con-

tacts were very rare due to lack of time, a different adventure but also full of memories. I sailed across the Pacific with friends at 40° SOUTH latitude between New Zealand and Chilean Patagonia (48 days at sea without seeing the land or a single boat). I was every day in QSO with FO5QB, FK4RD, F1RAF, ZL2UO, XQ6CF and many others that allowed us to have weather forecasts and also news of our families. I also have other adventures in Europe on a motorcycle, in a caravan, on foot but it would take time to tell all these beautiful adventures.

# Interview with Mic, FK8IK (cont.)

On the radio expeditions in general I have a lot of **FK8IK**:In Nouméa: Tjibaou Cultural Center, Coadmiration for Om who take their time of their money to make us live such intense moments to try to contact them. Bravo to them. For me there are no small or big expeditions, there is every time a beautiful human adventure

**AJ8B**: Where are you going next? **FK8IK**: For now very difficult to predict anything serious with Covid so patience is in order

**AJ8B**: If you contest, which is your favorite one? **FK8IK**: There are many interesting contests, the CQWW SSB and CW, the Océania contest SSB and CW, the WPX SSB and CW, the Russian DX are for me the main interesting contests

**AJ8B**: Any QSLing hints? **FK8IK**:Lotw and Eqsl

AJ8B: What coaching/ advice would you give new amateurs? **FK8IK**:It is always difficult to give advice because each of us does not always seek the same thing, perhaps modesty and passion

**AJ8B**: If I were to stop by for a visit, what local place would you want us to visit?

conut Palms Square, Nouméa Market, The Ouen Toro Hill, Amédée Lighthouse Outside Nouméa: the island of Ouvéa, the island of Pines

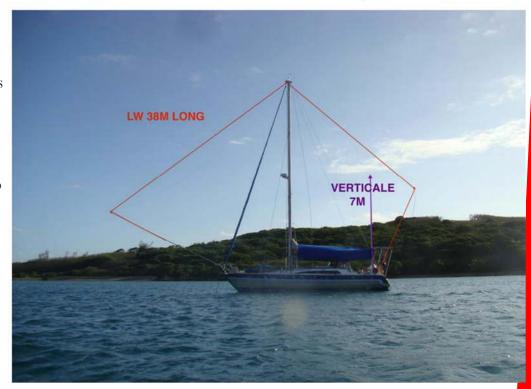
AJ8B: What local food would you want me to try?

FK8IK: Tahitian Salad, Bougna, Lobster, marinated deer salad

**AJ8B**: Thanks for taking the time to answer my questions. Is there anything you would like to share with us?

**FK8IK**: It was a pleasure for me. What was shared? Just the pleasure of contact and may one day be the pleasure of meeting.

# Mobile station on the FK Lagoon or /MM



PAGE 15 THE EXCHANGE

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## Its' Not Real Ham Radio

I queried our DX Friends about their attitudes towards FT4/FT8. One of them directed me to a blog by G7DDN—Chris. Even though it is from 2018, I found it interesting reading. This is a good Segway in to our next section. (https://network-radios.com/index.php/2018/03/07/its-not-real-ham-radio-by-chris-g7ddn/)

Bill, I am glad this article continues to make people think, which was one of the main reasons I originally wrote it.

No problem with reprinting or republishing this of course, though I would add one caveat - namely the date I wrote it. :)

Time goes on, views change (sometimes not of course) and that article is a correct representation of my thinking as of the date it was written. Whether I would change any of it in 2021, I am not sure - I must re-read it someday and see... Ha ha!

Best wishes from the UK and a very happy Easter to you. I look forward to seeing it in print once again...Regards—Chris

#### A Pioneering Background

I was musing recently on the wonderful history of Amateur Radio, from the early pioneers with spark transmitters and the race to get the first signals across the Atlantic, up to the Microwave enthusiasts who developed the way forward for space communications and satellite technology (and, whisper this, mobile phone technology!)

The history of Ham Radio and RF technology is inextricably linked – there was even a time here in the UK where it was believed, anecdotally, that a Ham Radio callsign would help you to get a job with the BBC!

However change came very quickly, relatively speaking, in the early history of radio. From Marconi's experiments to the first Public Broadcast Stations was only 25 or so years. TV was only another 15 years or so behind that, and so on...

## Resistance (or not feeling at "Ohm")

Yet the history of Ham Radio is also one of resistance to change — not from the pioneers, they were often instigators of it, but from the "everyday" Hams.

Let me see if I can give you some examples, with my tongue planted very firmly in my cheek...

#### "That's not Real Ham Radio!"

The early Hams used CW pretty much exclusively. So when AM arrived as one of the first of the voice modes, there was a bit of an uproar... "It's not real Ham Radio! Real Ham Radio involves using a Morse Key! What in world is the hobby coming to, using voice to communicate over the airwaves? It's sacrilege!"

But life went on, AM found acceptance and all was well in Hamland once again.

(Cont. On Page 18)

PAGE 17 THE EXCHANGE

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## It's Not Real Ham Radio (cont.)

Then transistor technology arrived in the late 1940s and early 1950s, provoking quite a response. "Hang on! That's not real Ham Radio. Real Ham Radios glow in the dark — we can't be having this miniature technology – they'll never last as long as valves or be as reliable"

But life went on, solid state devices found acceptance and all was well in Hamland once again.

Then SSB arrived and there was more discontent... "That's not real Ham Radio. Real Ham Radios don't sound like Donald Duck! It's a fad, it will soon fall away once people get fed up of hearing those silly voices"

But life went on, SSB found acceptance and all was well in Hamland once again.

Then FM and repeaters arrived and there was polarisation within the hobby (and it wasn't horizontal or vertical either!) "That's not real Ham Radio. Real Ham Radio doesn't need to use that thing on top of the hill to help your signal get somewhere! Real Ham Radio is point to point!"

But life went on, FM & repeaters found acceptance and all was well in Hamland once again.

Then FM and repeaters arrived and there was polarisation within the hobby (and it wasn't horizontal or vertical either!) "That's not real Ham Radio. Real Ham Radio doesn't need to use that thing on top of the hill to help your signal get hard for my license, everyone else should have to somewhere! Real Ham Radio is point to point!"

But life went on, FM & repeaters found acceptance and all was well in Hamland once again.

Then Packet Radio arrived and there was real trouble... "That's not real Ham Radio. Real

Ham Radio doesn't need one of those newfangled computer thingies in order to work. Get your key or your mic out and start working other Hams properly!"

But life went on, Packet Radio found acceptance and all was well in Hamland once again.

Then Digimodes arrived and there was yet more strife... "That's not real Ham Radio. Real Ham Radio doesn't involve typing messages to other Hams – and those perishing computers again! What on Earth are they doing in the hobby?"

But life went on, Digimodes found acceptance and all was well in Hamland once again.

Then Digital Voice modes arrived and there were some very serious disagreements... "That's not real Ham Radio. Real Ham Radios don't sound like R2D2! Real radios don't use the Internet to help them get round the world, they ABSOLUTELY HAVE to use atmospheric propagation. What is happening to this hobby???"

But life went on, D-STAR and other Digital Voice modes found acceptance and all was well in Hamland once again.

Then we arrive at today and Network Radios come onto the scene and all hell breaks loose! "That's not real Ham Radio. This is playing at Ham Radio – there's no Amateur RF so it is simply not Ham Radio. What is more, I worked too! How dare people enjoy communications in an incorrect manner!"

So will life go on and will all ever be well in Hamland again?

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## It's Not Real Ham Radio (cont.)

## The 21st Century Challenge

This is why the advent of Network Radios represents such a challenge to us as Hams – it becoming ever more fluid. Why would this be? is causing us to completely rethink what it means to be a Radio Amateur in 2018 and beyond.

And we will have to start facing up to questions similar to these...

- What exactly defines a Radio Amateur?
- What do we mean by "Amateur RF"?
- Is it RF generated by someone who is an Amateur?
- Or is it RF generated on a particular band allocated to us by the government?
- If so, does it absolutely HAVE to be that?
- Can it be nothing else?
- Does any of this really matter?

### What about our bands?

As Hams we are very "attached" to our bands. Whether it be 160m or 2m, we almost have a psychological sense of "ownership" of them.

We have "favorite" bands, we have bands we never frequent.

We even have "our" spot frequencies and some Hams will get somewhat "assertive" if a fellow amateur who is not in their "group" dares to use "their" frequency!



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And yet in the 21st Century, I believe that the whole concept of bands & frequencies is

## An example from Broadcast Radio

Not that long ago, we could tune into broadcast stations on Long Wave (LF), Medium Wave (MF), Short Wave (HF) and FM (VHF) Band II). Stations frequently referred to themselves by frequency: "247 metres Radio 1" or "1152 AM" for example. It was seen part of the station's identity – many had the frequency in their station names!

But today, we increasingly hear less of this. When you listen to broadcast stations these days, they seem to be eschewing giving out frequencies, instead they just announce that they are on "FM, DAB and Digital" or something similar to that.

Why? Because radio is something you probably increasingly consume in one of two ways – either digitally (via DAB or Satellite or similar means) or by streaming via the Internet. Frequencies and by extension, bands, are not as relevant as they once were.

# **Moving Out!**

The large broadcasters are also increasingly moving away from "traditional" radio.

> On Short Wave – only a few countries & various religious groups seem to operate there now. The big guys are moving out of Long and Medium Wave too. If commercial broadcasters are moving away, we need to ask why.

## It's Not Real Ham Radio (cont.)

#### Do Bands matter?

I have a suspicion that this is, in part at least, because bands and frequencies don't matter so much these days. Domestic radio appliances are more about push buttons and screens that get you to your station instantly, rather than tuning dials with frequencies. It's the end product that is important, not necessarily the manner in which it gets to you.

Who tunes a modern broadcast radio in these days with a manual tuning dial? Anyone? It was the main knob on all radios not that many years ago! I can even remember tuning old VHF TV in with a dial in my early days on this planet — that really seems odd now!

Going one step further, many broadcast stations are not even using direct RF at all these days! We still refer to them as "radio stations" (or occasionally "Internet radio stations")

Is there any reason to think Ham Radio as a hobby will not invariably move in a similar kind of direction? One of our strengths historically as Hams has been that we are good at embracing new technologies and adapting them for our own uses.

The point I am leading up to is this — I suspect "bands" and "frequencies" are not really as big an issue in the digital age as we might like them to be.

In essence, bands only exist because of propagation.

## **Propagation again**

160, 40m, 20m, 10m, 2m etc. are all, in reality, "line-of-sight" bands. To over-simplify the subject, it is the ionospheric or tropospheric lay-

ers that enhance this line-of-sight propagation and turn it into something else.

Each band has differing propagation qualities as a result, giving each band its "character" and for some, the study of propagation in itself is a fascinating part of the hobby.

## Man-made propagation is just different

When we think of (and use) the Internet as a man-made propagating medium (which is what it is — it propagates signals around the world) then the concept of bands becomes redundant.

The Internet is like one, almost infinitely wide, worldwide "band", constantly open S9+40 to all countries 24/7 with few vagaries – and not just for voice, but for vision and other digital modes as well.

Put like that, who wouldn't want to use it? Would it actually matter what "band" you were (or were not) on, if there even were one?

So the concept of "bands", by which so many of us define our activities, may be crumbling in front of us in this digital age and we may not even realise it yet! That is not to say our bands don't still exist, by the way — clearly they do. It is just that, to many people these days, bands are a foreign concept.

#### And then what?

As the hobby starts to come to terms with some of the implications of this, other issues then start to arise, such as...

- Do we need an exam any more to get a licence?
- Do we even need a licence?

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## It's Not Real Ham Radio (cont.)

- What form or forms should it take, if so?
- Might we see an influx of new people coming into the hobby because the entry to it is more straightforward?
- ♦ How would we cope with that?
- Do we even want new people coming in, especially if their views differ from ours?
- What will the hobby even look like in 20 years time?
- What happens to our "traditional" bands?

I expect to see a lot of discussion in the future about this — it's actually quite exciting!

#### Out of the Comfort Zone...

However it will make many of us feel extremely uncomfortable – the ground is shifting beneath our feet and the traditional raison d'être of Ham Radio is waiting to be challenged to change and adapt...

I don't see this as a bad thing — intelligent honest debate is to be welcomed. The most important thing is to keep our minds and our thinking wide open. We shouldn't reject something just because it is new or because it challenges our preconceived ideas of where radio is going in general.

Equally, we shouldn't throw the baby out with the bathwater and reject traditional Ham Radio as it has been for years. The Ionosphere and the Internet are complementary, not in competition.

# My own opinion?

If you have read this far and you really want my personal thoughts...

Why can we not have the best of both worlds? Surely we can.

Network radios (at this stage in their development at least) are not contest radios for example, and the Internet is not yet a contest-friendly mode of propagation. (That might change of course!) so contesting is still best on the traditional Ham bands. I'll see you on  $80 \, \text{metres} - 59 \, 001 \, \text{OM}...$ 

However, regular reliable high-quality contacts around the world are but one thing Network Radios excel at, so why not just use that when you want to (or when the HF bands are full of noise or are otherwise dead)? I do! I don't see the expansion of choice in the hobby as a bad thing.

## Enjoyment is the key

Does the fact that I am transmitting on cellular frequencies at 800MHz, 900MHz, 1800MHz, 2100MHz or on Wi-Fi on 2.4GHz or 5GHz matter? Is there something intrinsically evil about that? Is there more virtue in using 21 MHz or 432MHz, for example? They are just "frequencies" after all. I prefer to see myself following the motto of my local radio club, "Having fun with RF". Whether I choose to use a Network Radio or a Yaecomwood super-duper base station is not as relevant to me. Enjoyment of the hobby is everything, otherwise why have a hobby?

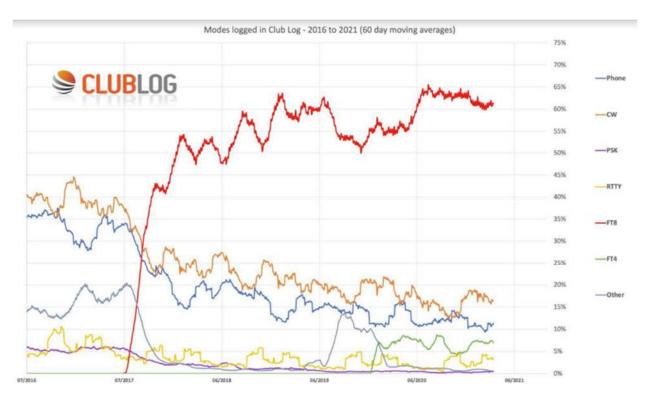
Whichever way this debate goes and whichever direction this great hobby takes, my line would be to keep all the richness of every aspect of the hobby.

In other words, to go back to the title of this piece and change but one word, "It's ALL 'real' Ham Radio"

© March 2018 – Chris Rolinson G7DDN

## How Do Our DX Friends view FT4/FT8?

This edition's question for our esteemed DXers was "How has FT4/FT8 impacted Amateur Radio? Do you like it? Do you use it? Is it too "mechanical"; relying on the computer too much?" Many of them responded..enjoy...



Clublog graph showing the growth of FT4/FT8 QSOs uploaded

Good morning Bill—I want to answer your question about FT8 with excitement.

FT8 is wonderful digital program. I have been using it since it was born and I love it. Yes it is HF radio and a PC communicating, but it opens another world for everyone in communication that does not have the capability of putting up a expensive HF station.

There are hams out there saying it is not ham radio but everyone on this planet cannot afford the expensive equipment. The reality is it is there and the hams use it!

The creator of this program really thought is through when he started with this the first time with assistance from other hams in this field but it is fantastic when you make that first QSO on the other side of the planet. YES sometimes it is a bit boring but when bands are good you can talk to the world.

73 enjoy your Sunday have a Blessed day and be safe

De **ZS2EC**—Theunis

(Cont. On Page 24)

PAGE 23 THE EXCHANGE

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# How Do Our DX Friends view FT4/FT8? (cont.)

Hi Bill... I Will help you!

In my opinion, and First of all, FT Modes has help amateur during bad propagation solar cycle because no CW / SSB were possible with big or small antennas. Another point is that small stations with a small cable antenna can work many new DXCC never Heard by them...

I am using these modes (never in FT Contests) because I like Digi Modes but I should prefer PSK, RTTY or JT65 but no activity... I start in 2012 my Radio activity and I enjoyed too much with these old modes... Now, FT's are too much mechanical... but we have no option to choose... For this case, I participate in PSK and RTTY Contest when I have some free time.

Finally, I hate as some operator connect his PC + Radio and go out from home... Incredible... ROBOT Radio is a Bad way for our Hobby...

Well, Bill, I am not a Good writer, but I offer my opinión, you are free to change anything...

#### Best 73 de Jose EC6DX

Dear Bill,

I have never used FT8. Both of my friends 9J2BS and 9J2MM have used it extensively. I have seen it used but cannot say that I understood it.

I am very happy using cw as by far my main mode of operation and from what little that I have seen of it, FT8 does not attract me. I have no objections to its use . If you enjoy using it then it is fine by me it is just not for me.

## 73 Brian 9J2BO

Hi Bill,

My personal opinions.

How has FT8/FT4 impacted Amateur Radio?

I think it is always better to have more activity on bands, and FT8 helps to bring more ham's to the bands. Now we are invaded for the noise, and is the solution for many hams come back to make the DXCC List like 80's when the hams used his stations at home in the middle of the city and QSO's with any place on Phone or CW.

-too "mechanical" relying on the computer too much?

Of course is too mechanical, but depend of each person, may be a ham in his home with the simple dipole and 20w and work 100 countries is Fantastic and to fun.

73 de **CE3CT** 

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## How Do Our DX Friends view FT4/FT8? (cont.)

Hi Bill, - Nice to read from you again; you are always welcome; thank you for the last edition. Concerning FT8, which is a quite a controversial mode, I think it is a great mode which arrived just in time when the propagation was at its worst.

Great mode for the following reasons:-

- 1. Great for the Award and Grid locator hunters
- 2. For DXPedition using the Fox and Hound feature.
- 3. Great for QRP operators
- 4. Satisfying a maximum of stations during pileups
- 5. Low power and poor propagation mode.
- 6. Finally, connecting US when most other conventional modes won't.

Digital modes are the future of Ham radio so if you don't follow the stream you'll stay behind as spectators. Be assured, I'm not against any mode, you do as you feel better. I wish all good health and the best to come.

73s

#### Pat—3B8FA

Hi Bill,

My answer to that question is, I don't have anything against it but can only stand it for a period of time, where it's most useful for me is check propagation, especially on the low bands.

It has helped me with some new DXCC on 160m where CW was not even cutting it. As

for Ft4, I have probably used it about 10 times so far, these modes are a great help to the new upcoming Op's in these time of poor propagations. So again there is nothing wrong with it but please remember to use your Mic and keyer when conditions are good .

73 De **Chris 9Y4D**.



# How Do Our DX Friends view FT4/FT8? (cont.)

Hello Bill—Here are my answers - hope its ok.

I find that FT8/FT4 do have a great positiv impact on the activity on the bands and also I think that there are many active Digi operators that get more contacts in more different countries. In this way I do believe that many new HF operators have become active and enjoy exploring the HF bands.

It is a great opportunity for new radio amateurs to be interested in our hobby and the lower bands, only using a modest amount of money. They do not need the big antennas and the high power to get a positive experience.

I do not know if I like it in such a way that I should use it myself - maybe in the future. Right now I do not use Digi modes (or phone). The reason for this is my complete compassion for CW. CW is the reason for me to be a radio amateur and I use CW for contests and for activating SES (Special Event Stations). And also I use CW when I am traveling in foreign countries.

I have been arranging many SES in Denmark using all modes and usually, more of our participants use Digi modes with the call sign. Often, in the end of the activity, the total number of DXCC with Digi mode operation exceeds the number of DXCC in the other modes. I think the FT4/FT8 has given a lift in the activity from many countries and I think it is a mode giving sense for the younger radio amateurs.

Have a nice spring time!

Vy 73 de **OZ2I Henning** 

Hey, Bill!

I use FT4/8 very often as I used all other digital modes. I always like operating digital, I was always using the computers and that's why I don't think negatively about the mode. But digital - I mean RTTY, PSK where the operator needs to have some at least minimal skills to make the QSO.

The question is does a computer need me to make the QSO's on FT4/8. I think not. All I need to do is to press Enter at the end of the QSO and press Enable TX to continue with transmission. I can even surf the net at the same time computer run and make QSO's on FT4/8. I like to CW CQ'ing on 40m band in the mornings. The band is almost empty at the same time checking FT4/8 frequency it's hard to find free frequency there.

I even know some people have computers running QSO's - the owners are on their job. No operator there. If this is HAM radio - well, I'm not the part of this. Mostly I work new ones - DX-Peditions, but my daily activity is mostly on human modes. I think that FT4/8 is not something good for HAM radio.

Best of luck! 73 es DX de Janez S51DX

Primary e-mail: s51dx@yahoo.com - URL: http://www.qsl.net/s51dx/

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## How Do Our DX Friends view FT4/FT8? (cont.)

Hello Bill

Yes I use FT4/8 and other data modes plus SSB and CW. I like it and find it very enjoyable, it helped me get DXCC plus numerous other awards. Those that bad-mouthing the mode will just get left behind by technology and live in a very secluded section of amateur radio

Kind regards

## **Doug GOLUH**

Hello again Bill,

Now this is a tricky one! FT8/FT4 have certainly had a huge impact on the hobby.

I was very skeptical at first but eventually installed the software to see what all the hype was about. I do use Digimodes, eg PSK, RTTY and SSTV so naturally I wanted to see FT8 in action. So, I set it up (eventually) and used it. It proved successful in so far as I had lots of QSOs.

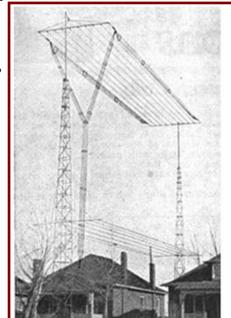
So, the impact on the hobby, many say it will be the death of CW etc., but look at the bands whenever there is a contest, there is no sign of cw to vanish, let it be known I too use CW and the majority of my confirmed entities are in cw. Is it too automated? Perhaps but at least, you need an HF rig and antenna so it needs RF to work. But surely a mode that can help amateurs with no possibility of having large antennas or the opportunity to run power to work the world can't be a bad thing? If I see a country on the cluster that I haven't worked on a particular band etc and there on FT8 , I will try to work them.

At the end of the day its all about opinions, and that's all they are. I don't think there's any

definitive answer to whether FT8 is good or bad for the hobby, I don't think that I am a "lesser" amateur for using it. Its here to stay, so, if you like it, I say use it, if you don't like it, I say don't use it.

Very touchy subject Bill, hope that s okay for you. Stay safe and I look forward to seeing the rest of the views.

Very best 73 de **EI8IU, Brian**.



This is my plan for the 160M antenna for 2021-2022.

Looking for volunteers to assist....

AJ8B

# CQ DX

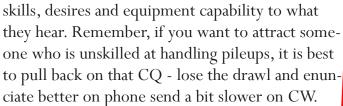
By Jay, K4ZLE

This originally appeared in <u>The DX Magazine</u> in the January/ February 2011 Edition. Thanks to Jay for granting permission to reprint this.

Next to DX nets, the next most maligned method of adding new ones to one's tally is probably calling "CQ DX." I've heard many Master DXers pontificate that real DXers don't call CQ DX. My response is, "Balderdash!" Ecclesiastically speaking, for everything there is a season and calling CQ DX is no exception. Let's examine where this technique just might be the right one to use.

We are emerging from a period of nearnegative sunspots. The higher frequency bands might be open, but we'll never know until someone transmits. If you have been on the air recently, you will understand this phenomenon. Recent DXpeditions have had quite a bit of unexpected activity on 12 and I0 meters. A properly timed and directed CQ just may open a dead' band. (Here is where it pays to know something about propagation, how to use the A and K numbers, when long path may be open, etc.) Another reason a CQ DX may be the right thing to do is it is an excellent way to snag the DX station who doesn't like "shoot and scoot" QSOs. When a rare or semi-rare station calls CQ, they generate a pileup in direct proportion to the rarity of their prefix. However, when they answer someone else's CQ, they have a better chance of engaging in a meaningful QSO/rag chew. This is also a way to contact those stations with old unsophisticated equipment and/or DX operators lacking pileup handling skills or who otherwise don't like pileup operations.

By answering a CQ they can more easily match their



Some rare and semi-rare entities are in the same skip zone as some garden variety DX. For instance, if the band is open to Japan, it could just as well be open to HL, BV, BY, JT, UAOY, or even across the pole a bit further to DU, 9M, XW, XU, etc. If a DXer in n area just described were to get on and call CQ, he'd probably generate a JA pileup. If he tunes around and answers your CQ DX, he can bypass the morass of 'locals' and work a few deserving (or undeserving) Ws.

Not only will a properly timed and directed CQ open a dead band, but it just may be the ticket to working that really, really rare one. This takes research. For instance, suppose you need Fantasy Island. By reading QSN reports, watching cluster spots, and, heaven forbid, actually listening on the air, you determine that the current operator likes to get on 14.301 MHz at 0300Z most nights. If you wait until he calls CQ and the hyenas pounce, you may not stand a chance.

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# CQ DX (cont.)

However, if you are there calling CQ DX on 14.301 Mhz at 0259Z. You just may be his first contact for the night! Certainly your chances are greater being the one called rather than calling after he makes the first QSO with someone else. Of course this trick will not work first time or every time, but until others catch on, it just might work for you.

Let the Master DXers snub their noses at someone who calls CQ DX. I prefer to flaunt the confirmed QSO over a false sense of Pharisaical pride. For this technique there definitely is a season; let your dials turn, turn and let the false prophets spurn, spurn, spurn.

€ 1998-2010 by J.J. Slough. KAZLE





Two Captions:

#1—I thought this would be the fastest way to pass COAX through the wall!

#2—Is this choke big enough?

The Exchange—5/1/2021—SouthWest Ohio DX Association

# NCDXF / IARU DX Beacon Update

By AA7A / Ned and K6TD / Kevin

I read this article in the Spring edition of the NCDXF newsletter and was sure that our members would be interested in this. I hope that most of you are contributors to the NCDXF and may have read this already, but if not, why not read the article and then send something along to them? This is repreinted with the permission of AA7A and K6TD



Our goal for this article is to cover the version 2 (V2) update program to the DX beacons, additions to the beacon program, and the development of a new antenna, well suited for the DX beacons, both transmitting and receiving, and for, ahem, FT8.

The DX beacons are familiar to most DXers. They are a group of 18 stations, transmitting a CW call sign and tones on all the high bands 20 Meters on up. Through a lot of international work, the frequency in each band has been licensed to operate automatic, unattended beacons. These frequencies generally remain clear of other signals. The DX beacons all share the frequency on each band using a timing scheme such that only one DX beacon is transmitting on the frequency at a time, worldwide.

The DX beacons were created on the idea to help a DXer get an idea when a band is open in a specific direction. Turn your radio on, pick a beacon frequency (i.e., 14.100Mhz), point your Yagi where you want to work, and copy the CW signals for the beacons heard. You will hear the CW call sign of the beacon at 22WPM, then a series of four dashes, one second in duration, at power levels of 100 watts, 10 watts, 1 watt and 1/0th of a watt. Your observed S-meter reading will give you an idea of DX signals you might hear in that direction.

## **Version 2 program**

DX beacon stations are operated by volunteers — which could be an individual operator or a club — and the equipment at each site consists of an antenna, transmit radio, custom controller, power supply and a GPS receiver. These units were first distributed and installed in 1995, and 20 years later, the equipment reached the end of its life. In 2013, we began the V2 program.

A new custom controller was designed, based on an Arduino Leonardo MCU board. The custom shield contained circuits to interface to ICOM CI-V, power, display, and a 12-channel GPS receiver.

The remainder of the equipment consists of an Astron PSU, an ICOM IC-7200, a MA5V antenna, a GPS timing standard antenna plus various cables and coaxes. The units were tested, burned in, and shipping commenced to each of the 18 locations.

As of this writing, the V2 units have been installed at 15 of the 18 locations, with shipments completed to 17. The last location, RR9O, will complete shortly.

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# NCDXF / IARU DX Beacon Update (cont.)

When the V2 program was started, we looked at alternatives, such as WSPR (FT8 hadn't been invented), but all the alternatives required specialized software to hear, decode and track the signals. CW is the "universal" mode, easy to decode with just a radio, yet software can decode and track. Hence, the V2 program was designed to replace failing hardware, yet keep the same program and concept.

The development of V2 involved a team of operators: Leigh Klotz, WA5ZNU; Lance Ginner, K6GSJ; Tom Berson, ND2T; Peter Jennings, VE3SUN; Charlie Mason, W4NJK; Walt Wilson, N6XG, and Don Greenbaum, N1DG, along with the authors, Ned Stearns, AA7A and Kevin Rowett, K6TD.

One particular note is the support from ICOM and Ray Novak, N9JV. Ray was able to locate plenty of used IC-7200 radios, have them refurbished and supplied to the program at no cost. This was especially important and helpful, as we'd to that site. A new V2 package was shipped to the designed the V2 program around the IC-7200, and then ICOM discontinued the product in favor of the IC-7300. This program couldn't have gone forward without Ray's support and efforts. Thanks Ray!

N6XG took on the task of final testing finished units, and the logistics of V2 packages to existing ops. This involved considerable coordination with the ops, learning their issues and shipping communications equipment into some countries. Walt excelled at getting each site running.

# DX beacons sites and ops

Each operator has taken great care of their beacons, doing a significant amount of repair and upkeep as the beacons aged, or were affected by environmental issues, such as antenna corrosion and lightning strikes.

We also had some problems with the V2 controller, but local operators often bugged in and helped us diagnose or even repair the issue. Ruwan Abeykoon, 4S6RUA, was able to repair a V2 controller failure; Marcelo Duca, LU1AET, completely rebuilt the software, converting it to work with a different model of ICOM radio after the original 7200 failed and couldn't be repaired and there was no way to ship in a new radio. Frank Schneider, ZS6GE, repaired the LCD for the ZS6DN beacon, and Thomas Worthington, NH6Y and Alan Maenchen, AD6E, adopted KH6RS when the prior operator retired and moved off Oahu.

If it weren't for the volunteer operators the beacons would not be on the air, nor would they stay on the air.

The 4U1UN beacon has been off the air since January 2020, due to an antenna failure, and COVID-19 has made it impossible to gain access 5Z4B in 2019, but the DX beacons team has lost all contact with the operator for this beacon. If you can help, please contact www.ncdxf. org/ beacons.

# Monitoring tools and resources

Here is a list of monitoring tools available for the beacons.

Intended for spotting DX stations is www.reversebeacon.net. It is also used extensively to spot CW and RTTY stations during contests, and has a menu dedicated to spotting for the DX beacons. Using the Spot Analysis tool, you can learn info about band openings.

VE3SUN has written several tools for the DX beacons (visit ve3sun.com).

# NCDXF / IARU DX Beacon Update (cont.)

KiwiSDR is a wide band HF monitoring receiver with over 500 sites deployed. Peter wrote an extension for the KiwiSDR webpage, providing direct timing and monitoring of DX beacons, at a specific receiver. Peter has gone on to organize a webpage that is very helpful in tracking where the DX beacons are heard (ve3sun. com/KiwiSDR).

All of these programs provide real time audio reception of DX beacons at the location of the receiver.

Much can be learned about propagation at your location, by setting up a FAROS-based monitoring station. Peter also has a webpage providing step-by-step instructions to create a monitoring station and post the info to a webpage.

FAROS software was created by Alex Shovkoplyas, VE3NEA, and it is still available; however, Alex has not updated the software to work on WIN10. The application seems to work on WIN10 but may not survive some future update to the operating system.

# Antenna development

An extensive search for alternatives to the beacon network's standard MA5V antenna took place in 2017. Slow, steady degradation of electrical and mechanical features in deployed antennas have been observed in many of the installations. Replacement antennas and parts are no longer available, so the NCDXF beacon team was tasked to find, or create, replacement antennas, with the challenge being to provide a reliable, maintainable antenna that can be shipped commercially, and will also provide acceptable technical performance that supports the beacon network's mission.

Following the exploration of alternatives, AA7A created a unique antenna concept called the Dual Band Discone (DBD) that appears to

meet all of the requirements for the beacon network. The footprint of the antenna is slightly larger than the MA5V, but the electrical bandwidth is extremely wide, and the radiation pattern is superior to that of a trapped vertical. The challenge of making a single antenna that has both good SWR and low angle radiation pattern over a 2:1 frequency range (e.g., 14 to 28 MHz) is extremely high. A single discone antenna will present a good SWR over an octave frequency range but the radiation pattern at the high end is very poor. The novelty of the DBD approach is that there are essentially two discone antennas in the same location fed by a single feedline. One of the two discones essentially covers the 20 Meter band, while the second covers the 17M through 10M bands. This approach provides good SWR on all the beacon network bands while also producing very good, low-angle radiation patterns.



The Dual Band Discone (DBD) prototype.

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# NCDXF / IARU DX Beacon Update (cont.)

A prototype DBD was built in the AA7A The Future antenna lab and tested on a small antenna range. Side-by-side comparisons of the DBD prototype and the last MA5V antenna in the inventory were performed using WSPR transmissions conducted over a time span of several weeks. The results of received signals on all the HF bands using data collected on WSPRNet indicated that the DBD's performance was consistently better than the MA5V and the favorable performance difference of the DBD got better on the higher HF bands.

The initial DBD prototype was delivered to the W6WX beacon site in November 2018 and, for a period of time, was operated with the prototype. The signal strength comparisons between the previous MA5V vertical were compared to those using the DBD and after only a short time it was quite clear that the DBD was a superior antenna. Soon after the installation of the DBD at W6WX, a strong winter storm with 100 mph winds blew through the site and demolished the MA6V; the DBD was unaffected. As a result, the decision was made in February 2019 to operate this beacon site with the DBD and move forward with the development of a production antenna drawing package.

Five production DBD antennas have been built and are ready to ship. Clearly, this antenna requires some installation techniques that are different than those for a small trapped vertical, but the performance and reliability of the antenna will likely make the investment in time to install this antenna at remote beacon sites worth the effort.

The value of the DX beacons is in using the beacon signal to learn about current propagation and how it is changing (are signals building or fading?) compared to the recent past. This is especially useful at the operator's location.

Now that the V2 program is well on its way to completion and improvements to the antennas are in progress, the DX beacons team is moving on to providing direct aids for the use of an operator at each location.

The most helpful is a real time graph showing signal strength, per band, over a period of time. FAROS, with a local DX beacon receiver is the premier tool for that information. These days, most Ops would prefer to get relevant information via a webpage.

Our team is looking at regional, or local receiver options, methods and software for data collection, and access to the information via a webserver. One of the areas of investigation is the work done by HamSci — especially the personal space WX station — as a local receiver. The team will also join the upcoming HamSCi Workshop on 19-20 March.

Cycle 25 is upon us. One NCAR solar scientist is predicting a cycle like Cycle 19 in 1959. HF propagation models, including VOACAP and ITU tell us what might happen. Knowing today, and last week, locally can also provide some insight to when and how to work those rare DXpeditions (3Y) that should start to peak about the time Cycle 25 peaks.

Over the next year, look for the DX beacons to provide info about what has actually happened on the bands.

# Interesting Trans-Equatorial Propagation (TEP) on 6 Meters

By Carl Luetzelschwab, K9LA

I found this article really interesting and it has prompted me to begin my "research" into 6 meters. Reprinted with permission of Carl from www.k9la.us. Thanks Carl!

In December, I received an e-mail from Pete, VE3IKV/VA3RA relating his TEP QSOs from the Caribbean on 6 meters. In November 2003 he went to Saba PJ6. After sunset, he worked deep into Patagonia (a sparsely populated region at the southern end of South America, governed by Argentina and Chile) on SSB. November 2003 was almost two years after the second peak of Cycle 23, with a smoothed sunspot number of around 90 (per the new sunspot record). I took a look at this path with the mapping feature in W6ELProp. This is that image with my additional annotations.

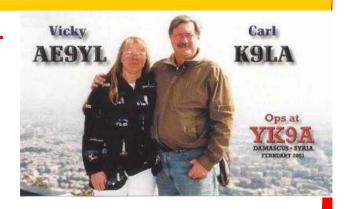
The TEP path is the red line (it's also the short path between Saba and Patagonia, whereas the black line is the long path), and

November 15, 2003

Saba

Magnetic equator

Patagonia



is just under 7,000 km. This is a classical TEP path because:

- 1) it's pretty much North-South
- 2) the magnetic equator is close to the middle of the path and is perpendicular to the path
- 3) Saba and Patagonia are located such that they can take advantage of the two high-electron-density areas on each side of the magnetic equator (not shown more on this later)

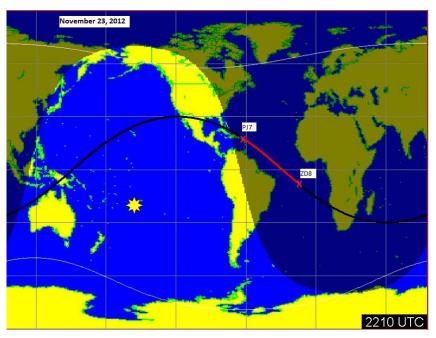
In November 2012 (between the two peaks of Cycle 24 at a smoothed sunspot number of around 85), Pete traveled to PJ7. On November 23 at 2210 UTC he heard the

ZD8VHF 6m beacon (6,080 km) and at 2220 UTC he worked TR8CA (8,158 km) on 6m CW.

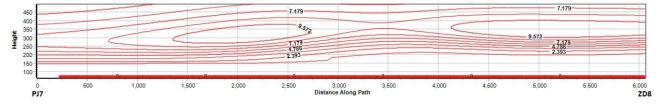
I looked at the path from PJ7 to ZD8, again with the mapping feature in W6ELProp. The figure at the top of the next page is that image.

# Interesting Trans-Equatorial Propagation (TEP) on 6 Meters (Cont.)

My first thought was "this isn't a TEP path because it's not North-South". But I decided to look at the electron densities along the path. Figure 3 comes from Proplab Pro V3 (a ray tracing program from Solar Terrestrial Dispatch using IRI 2007 as its F2 region model) for the ZD8VHF beacon reception at PJ7 on November 23, 2012 at 2210 UTC. The data on Figure 3 is in terms of the plasma frequency along the path. The electron density in electrons per cubic



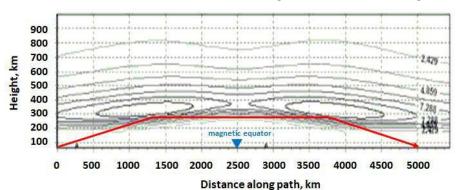
meter equals the plasma frequency squared over 81. The higher the plasma frequency, the higher the electron density.



PJ7 is on the extreme left at 0 km and ZD8 is on the extreme right at 6,080 km. Note the two areas of the highest plasma frequencies (9.572 MHz, which equals 1.13 x 1012 electrons per cubic meter) on either side of about 3,500 km from PJ7. This 3,500 km distance from PJ7 is the magnetic equator.

These two areas of high electron density (also known as the crests of the equatorial ionosphere) are the tell-tale signature of a TEP path. The stations are far enough away from the magnet-

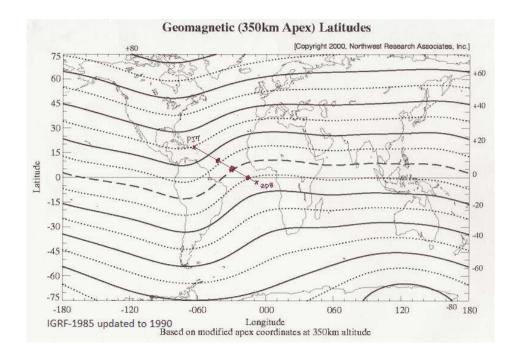
ic equator to take advantage of a chordal hop across the magnetic equator. The chart on the right is a sketch of this concept.



# Interesting Trans-Equatorial Propagation (TEP) on 6 Meters (Cont.)

Note that the chordal hop does not have to be bent to return to Earth for a second hop — it covers its extreme distance in one "hop". The result of this is that the MUF (maximum useable frequency) for a chordal hop is higher than for two normal F2 hops, and it avoids a ground reflection loss from two normal hops (the frequency is high enough such that absorption from two extra transits through the D region is minimal).

So why was this a TEP path when it was not North-South? Let's look at the geomagnetic latitude map from NorthWest Research Associates at https://spawx.nwra.com/spawx/maps/maplats.html. On it I'll add the PJ7-to-ZD8 path, red circles indicating the midpoints of each crest and a red square for the magnetic equator. Below is this map.



The red square (the magnetic equator derived from Figure 3) indeed falls right on the dashed magnetic equator line of the NWRA map. And the midpoints of the crests (also derived from Figure 3) are at latitudes about 10-110 north and south of the magnetic equator — this is about where they should be.

Thus what enabled this path (and the PJ7-to-TR8CA path) was the fact that the magnetic equator was not east-west as in Figure 1. It was roughly southwest-northeast, which allowed a path pretty much perpendicular to it to take advantage of a TEP chordal hop.

# Mark Your Calendars!

# Cincinnati Hamfest<sup>SM</sup>

The Premier Hamfest of Greater Cincinnati

Saturday, August 28th, 2021

"Shake off those COVID Blues"

Rafffles

Yaesu FTM-400XDR

BaoFeng BF-R3 Tri-Band





Need Not Be Present to Win!

Details at www.cincinnatihamfest.org

# W8DXCC is ON!!!!!

The 2021 W8DXCC Convention will be held in Conjunction with the Cincinnati Hamfest

The 2021 Date is Saturday, August 28th 1 PM to 6 PM

We have the best lineup of speakers ever! Mark your Calendars and plan to attend!

You could Win an ICOM IC-7300 Graciously provided by ICOM and DXEngineering!



Details in the July 1st edition of "The Exchange"

Visit www.w8dxcc.com for notifications and details.

# SouthWest Ohio DX Association (SWODXA) Club Fact Sheet

**Who We Are:** *SWODXA* is comprised of active DX'ers and contesters with a deep passion for all aspects of Amateur Radio. We welcome everyone who is interested in joining our club to please contact us. *SWODXA* members are active in all facets of DX and Contesting. We also travel to, and fund various DXpeditions all over the world. *SWODXA* sponsors the annual DX Dinner held on the Friday evening of Hamvention weekend in Dayton, Ohio. In addition, *SWODXA* members moderate the Hamvention DX Forum. *SWODXA* is proud sponsor of the prestigious *DXPedition of the Year Award*.

**DX Donation Policy**: The policy supports major DXPeditions that meet our requirements for financial sponsorship. Details are available on the website at: <a href="https://www.swodxa.org/dxgrant-application/">https://www.swodxa.org/dxgrant-application/</a> and elsewhere in this newsletter

**Club History:** The Southwest Ohio DX Association (SWODXA) is one of the country's premier amateur radio clubs. Though loosely formed in mid-1977, the club had its first formal organizational meeting in August of 1981 where Frank Schwob, W8OK (sk), was elected our first President. While organized primarily as a DX club, SWODXA members are active in all aspects of our hobby.

**Requirements for Membership**: We welcome all hams who have an interest in DXing. It doesn't matter whether you're a newcomer, or an old-timer to DXing; everyone is welcome!

Visit <a href="http://swodxa.org/member.htm">http://swodxa.org/member.htm</a>

**Meetings:** The club meets on the second Thursday or each month alternating locations between at Marions Piazza on Kingsridge Dr. in Dayton, OH or Marions Piazza in West Chester. (Check the website) Members gather early in the private room for dinner and then a short business agenda at 6:30 PM, followed by a program. If you enjoy a night out on the town with friends, you'll enjoy this get together. Meeting attendance is NOT a requirement for membership.

**Club Officers**: Four presiding officers and the past president (or past VP) make up the Board of Directors The current roster of officers are: President Tom Inglin, NR8Z; Vice President Kevin Jones, W8KJ; Secretary Mindi Jones, KC8CKW, and Treasurer Mike Suhar, W8RKO.

**Website:** We maintain websites at <a href="www.swodxa.org">www.swodxa.org</a> and <a href="www.swodxaevents.org">www.swodxaevents.org</a> managed by Bill, AJ8B. These sites provide information about a variety of subjects related to the club and DXing.

# SouthWest Ohio DX Association (SWODXA) DX Donation Policy

The mission of SWODXA is to support DXing and major DXpeditions by providing funding. A funding request from the organizers of a planned DXPedition should be directed to the DX committee by filling out an online funding request.

(https://www.swodxa.org/dx-grant-application/)

The DX Grant committee will determine how well the DXPedition plans meet key considerations (see below). If the DX Grant committee recommends supporting the DXPedition in question, a recommended funding amount is determined based on the criteria below. The chairman of the committee will make a recommendation at the general meeting on the donation.

Factors Affecting	Ta DXPedition	Funding	Request A	Approval
ractors Amecung	2 a DAFEGIUOII	Tununng	Request I	approvar

DXPedition destination	Website with logos of club
	sponsors
Ranking on the Clublog Most Wanted	QSLs with logos of club sponsors
Survey	
Online logs and pilot stations	Logistics and transportation costs
Number of operators and their cre-	Number of stations on the air
dentials	
LoTW log submissions	Bands, modes and duration of
	operation

H40GC	H44GC	ZL9HR	XX9D	HK0NA	FT4TA
KH1/KH7Z	EP2A	FT5ZM	C21GC	VK9WA	NH8S
K4M	CY9C	VK9MA	PT0S	FT4JA	YJ0X
6060	VP6D	TO4E	XR0ZR	VP8STI	SP8SGI
W1AW/KH8	K1N	3D2C	VK0EK	S21ZBB	E30FB
ST0RY	TI9/3Z9DX	VK9MT	K5P	9U4M	TX3X
VU7AB	3Y0Z	3C0L	TX7EU	CE0Z	3C1L
TI9A	3D2CR	3B7A	K9W	VU7RI	6070
C21WW	CE0Z	T30GC	T30L	D68CCC	