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The Prez says... Tom, NR8Z



SWODXA should consider what role we can play in ensuring the future of DXing. Personally, I'm not too worried about having enough DXers looking to work that ATNO or band-country. There seem to be no shortage of DXers in the pileups. Rather, we should ask ourselves whether we'll have enough DXers willing to put those ATNOs and band-countries on the air. While I don't have any hard data SWODXA seems to have fewer members putting rare counties on the air than in the past.

How can we make a difference? Let's look at the issues that get in the way of being a DXpeditioner: time, money and expertise/experience. I don't know how to help folks have the time to go on a DXpedition but I'd love to hear your ideas. On the money factor, to promote new DXpeditioners, we could modify our DXpedition donation program to offer additional funds to first-time DXpeditioners or DXpeditions taking new DXpeditioners along.

We can have an even bigger influence in the future by tackling the expertise and experience factor. What are some of the things we might do?

- ◆ I noticed that Contest University is run consistently at Hamvention and other events but DX University is not. Could we host a DX University session at next year's Hamvention?
- ◆ Like the Dave Kalter Youth DX Adventure we could identify and mentor future DXpeditioners. We have tons of experience and expertise to draw upon. Let's find a way to identify them locally and do what we can to encourage them.
- ◆ We could get back in the DXpedition game as well. Early in my SWODXA time I had the fortune to be a rookie on a well-run J6 DXpedition. Let's re-develop and maintain our DXpedition logistics skills.

As a follow-up to my note in the last newsletter, I mentioned the less-than-positive image my work colleagues have of ham radio operators. Those same colleagues have since mentioned the great work of amateurs providing communication in the absence of infrastructure in Puerto Rico. It is all about the message we project!



DX QRP

By Kevin, W8KJ

Kevin manages a
QRP blog at www.cincinnatiqrp.blogspot.com

QRP Signal Strengths:

Signal strengths are indicated on meters on our HF transceivers. Meters can vary but S Units do give us a mathematical measurement to base signals. An S unit generally indicates a 6 db change in a given signals strength. QRP power levels are not that far reduced from a normal QRO power level as the list below indicates: (Lets assume a signal you hear is running 1000 watts and indicates an S9 on your meter)

S9 1000 watts
S8 250 watts
S7 62.5 watts
S6 15.6 watts
S5 4 watts
S4 1 watt

As you can see, a 5 w QRP signal is a very readable signal at S5.

Antennas for HF QRP

The single most important item that a QRP station can use to level the playing field, among QRO stations, is the antenna. Don't compromise in this area. Erect the highest most near resonate antenna you can. Take advantage of antenna modeling software, and the many antenna analyzers available. Amateur Radio is a technical hobby, antennas are a discipline area in which to read, research, read, and research more. After all is said and done, wire antennas are the best bang for your buck (also the least expensive). Stubs, traps, coils and other items included in most commercial designs are there for convenience. Multiband, full bandwidth, small size, and the like are all features most hams desire. They also adversely affect performance. ARRL publications on antennas are a great starting point. Internet sites also have many articles and information.

Enjoy the results you obtain by using the best antenna you can, in your location, at 5 watts or less.....

Exchange Update

Bill, AJ8B

In this issue, we have some great stuff. My "remote friend", 9J2BO, has submitted a two part article about his radio experiences in Zambia as well as the second part of the HK3C article. K9LA, Carl, has an article on the Solar Numbers and will be a contributor next issue as well! We have an update on the Perseverance DXG QSL management cloud platform as well as an announcement from the NCDXF. All of this as well as our normal contributors on QRP, Computer Logging, 60 meters and DXCC Card Checking and more! Thanks to those who have agreed to be regular contributors to the newsletter!

I may also have an announcement concerning a Propagation Series by NM7M that we will be including each issue for the next 15! Fingers Crossed...



How to Break a Pileup

By Guest Author, John, HK3C

Last month, we enjoyed "Handling Pileups—Critical Success Factors" by HK3Charlie, John. This article received the most feedback that I gathered and I am sure that the second installment will just as well received. Visit John's website (<http://www.hk3c.ca/>) to learn more about John and to view OUTSTANDING images of Colombia. I certainly hope John will share more of his expertise with us in the future. (Maybe something on audio, John?)

The key to busting pileups is listening. The first thing to do is NOT transmit. You can't listen when you're transmitting.

There are things you need to listen for, and find - before you begin to transmit.

First, you need to hear the DX station. Unless you can hear him, and hear him well enough to tell exactly what he's doing, there's no point calling. And once you can hear the DX station well, you need to determine where he's listening. This is easy if he's working simplex. But, more than likely, for any reasonably sized pile-up, he'll be operating split.

If you use a radio that allows listening on two frequencies at the same time, the next step is easy: listen to the DX station on his frequency, and then find the station he's working on his receive frequency.

Depending on skip or propagation, you may not be able to hear who the DX station is coming back to, so you'll need to keep listening and tuning. In so-doing, you'll eventually determine whether the DX station is staying in one spot or tuning around in the pileup. Of course, the best frequency to be when you start transmitting is on the exact spot where the DX station was listening for his last contact.

Only then is it time to call. BTW, if you need to tune up your amp, move away from the DX frequency before doing so.

Keep your calls short - and give your full call sign - then go back to listening. Sometimes you'll need to repeat this cycle two or three times. Once the DX station comes back to someone, there's no sense continuing to transmit - unless the station he called is you.

And even if you start calling, don't stop listening.

Who is the DX station working? Stations in your area, or are they on another continent? Perhaps he's working callers from all over. Listen closely.

Who are the stations he responds to? Are they the earliest, or the strongest callers, or is he picking later in the pileup when the calls die down? Is he accepting, or ignoring tail-enders? Determine the pattern

the DX station is using and use that information to adjust the placement of your calls.

Be patient. Pileups can be huge random events, and if you keep listening and carefully calling, you'll eventually get through. It may be on the first or second call, or it could take a half hour of calling. Don't get discouraged. And remember, despite all your best efforts, some will get away. Propagation will change, or the station will QSY or QRT. You can't control that, so don't worry about it. Importantly - don't let it affect your performance.

Careful listening makes a big difference. It will tell you where to transmit, and when.

Listen to get the rhythm of how exchanges are being made, and what information is being exchanged. For example, is the DX station giving only his call sign and a 5-9 signal report? Or, do exchanges include name and other details. Follow suit - if only call sign and signal report, refrain from giving your QTH and/or name.

Remember - listen, listen - and listen some more. You may pick up clues that will help you make the contact. The DX station may be "*running by the numbers*", or by areas, or you may notice QSB on the band and able to make the contact when the propagation fluctuations are on the rise. Learn by listening and take notes. By listening to a DX station over time, you'll learn about propagation to the DX-station, not just to and from your station, but also to other areas of the world. By listening, you'll learn how to make a contact properly. You'll hear good operating practices, and unfortunately, bad ones. Don't imitate the bad ones. By listening carefully, you'll learn things from a different perspective, which might not otherwise be apparent.

Variations on phonetics and exchanges can be learned through experience, and it's a good idea to listen to how different amateur radio operators make their contacts. Some use techniques with a winning pattern, while others have a hard time. (cont.)

How to Break a Pileup (cont.)

"Tail-ending" - quickly throwing in your call sign right after the non-DX station is about to clear with the DX station - is a technique which can be successful. But be careful not to cause QRM. And know that some DX stations don't like that practice, considering it rude. Some may be unprepared to hear you or log your call sign. When you do this, you're essentially interjecting yourself into another conversation which may interrupt the rhythm of the communication.

During a pileup, it sometimes helps to get your call sign in first - right after the DX stops transmitting. However, more than likely, you'll need to let the "roar" of the pileup die down, and just about the time most stations stop transmitting - but before the DX picks a call sign - say your call sign. That's sometimes the best time to call. Listen to see whether he regularly picks up the first station that calls, or if he also lets the pileup settle down for the most part and then picks a call sign near the end, when most stations have stopped calling.

In many cases, "Big Gun" stations will overpower with their strong signal and make the contact. But if you're a "little pistol", running 100W to a wire antenna, smart timing can help you win out.

Sometimes, you should say your call sign only once, and sometimes you should say it once, wait a few seconds, then say it again. Avoid calling continually though, because you risk becoming a nuisance to not only the DX station, but also to everyone - especially if

you call when the DX station returns to someone else.

It's important to observe the timing, pace and flow of exchanges.

Sometimes, the DX station may only get a part of a call sign, and may say: "*the India Tango station*" or just: "*station with Tango*". That's when you would give your call sign again, providing he gave a portion of **your call sign**. There may be other stations who also have a letter of your call sign, so don't call, especially if you know it's the portion of a suffix belonging to another station.

If you hear the DX station ask for: "*the Papa Zulu station*" and no one answers, you might be tempted to throw your call sign in after a second or two. This can be a bit of a gamble. If you do throw your call in, you're sticking your foot in the door - and that door may either open, or it may slam shut.

Finally, when pileups grow too large, DX stations often may begin operating by the numbers, or by country, or by zone. Additionally, some DX stations might not operate "split" when they should. Perhaps this is because they lack the necessary knowledge or experience. But always remember - the DX station is "boss" of the pileup, and he runs it as he sees fit.

Good hunting!

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60 Meters—The Channel Band

By Joe, W8GEX (W8GEX@aol.com)

60 Meter Antennas

With winter fast approaching, I want to talk about low band antennas. As we have shorter days and longer nights, the lower bands get better. So, 60 meters should also improve. Let's talk about the transmit antenna first.

Verticals work really great for DXing if they need a good radial field as they have a lower take-off angle. It's a great DXing choice. If you're using a vertical mounted on the ground, I suggest 32 radial wires. They can be laid on top of the ground or buried. If on top, cut your grass very short, and place your radials in a wheel formation around the antenna.

If on top of the ground, they can be held down by using biodegradable staples. You can dig them in by using a hatchet, but as you can imagine, this is a lot of work. The best way is to rent an invisible dog fence digger, much like a rototiller. These are available at most rent-a-centers. You place your spool of wire on the digger, then start at the vertical and dig out away from the antenna. The machine digs backwards and it is easy to use. It digs, places the wire in the ground, and backfills all in one easy step with no mess. I have done it both ways and this is by far the quickest and easiest.

My main transmit antenna is a vertical off my tower. I have a 60 foot tower with a four foot stand-off at the top. The 43 foot, 60m wire doesn't go to the ground. So, in this case I have three elevated radials. The elevated radials also need to be 43 feet as they are the other half of the antenna and also need to be resonate.

An inverted vee antenna is another good choice as it doesn't require a ground radial field. The apex or top can be hung off your tower, a tree, or your house. Higher is always better, but if not possible, do what you have to do. On my recent trip to the Bahamas, my inverted vee was only 20 feet high and the two ends were about three feet off the ground. It worked very well.

Another good choice is a dipole. They are easy to make and to install and they also don't require any ground radials. Like any antenna, it should also be hung in a free space if possible. I have found most low band verticals antennas don't receive well, as they pick up lots of noises.

So, this brings up the next subject; receiving antennas. My friend Wayne K8LEE once told me that you need a lot of receiving antennas. He also said, which is very true, "If you can't hear them, you can't work them".



So, with this thought in mind let's talk about receive antennas.

A beverage is a great antenna. It is easy to build and low cost. For 15 years, I have had one that is eight feet high. Then two years ago my friend Dave K4SV was telling me that a four feet high beverage would be much better and lower noise than my eight footer, and it's true. Now all of my beverages are four feet high. I drive a four foot long quarter inch rebar into the ground about 15", then place a 1/2" pvc pipe over the rebar. Then I place a 1/2" PVC tee that is slit across the top to receive the wire. These posts need to be about 50 feet apart. Each end of the wire has a bungee cord to keep it taut.

A good length is about 500 feet, but if you don't have the room, make it as long as you can. A 100 foot beverage is better than a 50 footer. If the beverage is un-terminated it will be bidirectional. If terminated, it acts like a beam and will receive towards the termination end. I have both.



I feed deer and was afraid that they would tear down lower wires, so that was my reason my beverages have always been eight feet tall. But after having them four feet high, I found the deer either go under them or leap over them but have never taken them down.

You might already have other low band antennas, such as a 160 wire, that you could switch to, to help make needed QSO's. Sometimes I switch back and forth, just to get the best signal. The bottom line, try any and everything in order to hear. If you can lower the noise floor, there is nothing left but the signal you're trying to hear.

That's it for now - good dxing.

43 Years as 9J2BO—Part 1

By Brian Otter (botter9j2bo@gmail.com)

I first talked to Brian in 1999. It was my first DX “Ragchew” and I enjoyed it so much that I even took notes! Since then, I have worked Brian again in 2006 and then in 2016, this time on CW. Once again Brian proved to be an excellent conversationalist, professional operator and a pleasure to talk to. Brian was eager to provide us with a perspective from “the other side”. Here is part 1.

Although I arrived in Zambia on the 9th of September 1966 I did not obtain my amateur radio licence and the call sign 9J2BO until 1973 the reason being that although I had passed the Radio Amateurs Examination in 1962 as a 17 year old school boy I had not passed the then obligatory 12 words per minute Morse test. My first two attempts which were taken at the Central Telegraph office in Lusaka were met with failure. Sweat poured off me as I attempted to copy the old land line telegraphers sending amongst the clatter of the teleprinters and the buzz of conversation engendered by the presence of this “muzungu” (white man) sitting at a key in the open office.

At that time there were 40 to 50 radio amateurs including a few who had been licenced before Independence and had held VQ2 call signs (Northern Rhodesia). I believe there was only one indigenous Zambian who had a licence. The rest were mostly expatriates and the majority lived and worked on the Copperbelt but there was a growing number in Lusaka working on government contracts. I had left Teacher Training College and accepted a position as a Secondary School teacher. I was employed by the Zambian Government but at the same time was under a British Overseas Aid Scheme which supplemented my salary. I had a free passage to England after 3 years service. It was on my second leave that I finally sat and passed the Morse test at Humber Radio the nearest maritime radio station to my home town of Lincoln. This enabled me to get my full amateur radio licence with the call G4CGC. As soon as I returned to Zambia after leave I applied for my Zambian licence. This was only just in time. The then Postmaster General had decided that there were “enough” amateur radio operators in Zambia and my licence was one of the last if not the last licence to be issued for a long, long time. The situation was not helped by the undeclared state of war that existed between Zambia and the racist regimes in Rhodesia and South Africa.

The school where I taught was about 50Km East of Lusaka. It was in a rural area but had mains electricity and the noise level was low. I came on the air with a borrowed Heath DX40 and a World War 2 surplus communications receiver and a G5RV antenna and had a ball! There was a number of Amateurs in Lusaka and we would get together at each other's homes once a month or so.



My QTH outside of Lusaka made a nice afternoon out from Lusaka for the gang and their wives and children. Life was good, food was cheap and plentiful and we enjoyed a high standard of living. I had no ssb transceiver and was stuck on cw. This was the beginning of my passion for the mode.

In the following years I was transferred to several schools in Zambia where luckily there was always mains electricity and I was able to operate. When moved to a new qth I took it upon myself to inform the local police of my presence, show them my licence and let them know what I was going to do. This proved wise as I had no problems despite the situation with the countries to the south. The schools were mainly boarding schools in rather remote areas of the country. At one time I was 200km from the nearest gas station so would keep a 40 gallon drum of petrol in the house. Life became more difficult. During the school vacations I would drive almost 1000Km to Lusaka to stock up on food and particularly meat. The butcher would fill my cool boxes with meat and freeze it. The meat would be collected and kept in a deep freezer and we would leave at 4am so as to get home before dark and get the meat in the freezer at home. This would have to last us for at least 3 months. If it did not last then there was only goat and dried fish and stringy village chickens. The pupils were not so lucky. They rarely got meat and were fed mainly on beans, cabbage and tiny dried fish called “kapenta”. Water was often a problem. In one school where I served for 6 years the water came from the river in a five kilometer open furrow. The water was supposed to be passed through filter beds of sand before being pumped into a tank for distribution. Instead the water was pumped directly from the furrow into the tank. In the rainy season the water was the colour of cocoa and full of tadpoles. When one had a bath one wondered whether you came out of the bath any cleaner than you went in! When the pump broke down then the girls (it was a girls boarding school) had to walk to the river with buckets and carry water back to the school with the buckets balanced on their heads. Pit latrines had to be dug as there was no water for the toilets. In those years I worked plenty of DX but equally important was keeping in touch with my fellow amateurs in Zambia. (cont.)

43 Years as 9J2BO—Part 1 (cont.)

We had a weekly net on 80m and there was always someone to talk to. My father G3TOA kept a weekly sched with me. I remember when the HT smoothing capacitor in my TS520 went up in smoke he was able to read my T6 note and get a replacement off to me pronto. In those days air mail took only a couple of weeks to reach me now it takes an unbelievable 3 months despite my being in the capital city.

Travel was not easy and distances were long. On one trip to the Copperbelt I had two punctures. There was a 90km strip of road that passed through The Democratic Republic of Congo. This was known as the Pedicle Road. The second puncture stopped the vehicle and my companion set off with one wheel to get the puncture repaired at the border. Towards sunset the last vehicle stopped by me. Paramilitary police jumped out and told me I could not stop there because bandits were active. I had no alternative and lit a fire and spent the night in the car with the doors locked. In the morning one vehicle passed me going in the same direction and left me a bottle of water. It was not until 3pm that the first vehicle a bus arrived from the other direction with my companion and the repaired tyre. Apart from the line of rail most roads were dirt and some barely passable in the rainy season.

At another girls' boarding school where I was posted as Deputy Headmaster, boys from the nearby (5km away) boys boarding school were prone to raid the girls dormitories. My self and other members of staff had to drive them out of the girls' dorms our duty being to protect the girls though I am not sure that all the girls were keen to be protected! The boys would then gather outside the school fence on the hillside behind the dormitories and throw rocks at the dormitories smashing windows and threatening the physical safety of the girls. It was then time to call in the police who would arrive armed with .303 rifles and they would illuminate the hill side with flares when the boys would hopefully run away.

Probably my most interesting qso was when I was in touch with a Canadian Amateur. During the conversation I mentioned that my home town was Lincoln, England. The Canadian then told me that he had spent some time in Lincoln during the 2nd World War. He said that every morning they had to line up for inspection in a park called The Arboretum. I knew it well as it was very close to where my paternal grandparents had lived and not far from where my parents lived. He mentioned that there was a small boy who would make a few pennies for himself by polishing the Canadian soldiers boots. He said the boy was nicknamed "Curly" and his family name was Doeman and that he had become friendly with Curly's sister. This name immediately rang a bell with me as I recalled that my father had often mentioned a "Curly" Doeman who had been apprenticed to him as an

electrician and now had his own business. I contacted my father by radio and he got in touch with "Curly" and we put him in touch with the Canadian again.

I guess my best DX contact was soon after we were granted the 30 meter amateur band after WARC 1979. I could receive using the WWV receive only position on my TS520 tcvr. Much later I bought a kit to modify the TS520 so that it would transmit on 30m. Meanwhile I had a single tube crystal controlled transmitter that had been given to me by a Roman Catholic Priest who had taken up amateur radio but had had to give it up as his Bishop did not approve. It was part of a kit produced by the National Radio Institute, Washington, D.C.. I obtained a 10.1 Mhz crystal, changed the tap on the output coil and voila along with a dipole cut for the band I was QRV on the new band. I made a sched with Jim G6ZO. I should have paid more attention when ordering the crystal as the frequency was occupied by some commercial station. However Jim was not to be beaten as my chirp was so bad that it took enough of my signal out from under the commercial station for him to copy my report to him. Copying his signal was of course no problem. I still have that TX but have not used it for more than 30 years. Making that contact was absolute magic never to be forgotten. The single tube a 6DQ6B beam tetrode 25 Watts input maybe 15 Watts output. The thrill was greater than working Clipperton !



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Smartphone & Computer Apps for Ham Radio

By Richard, KC8RP

Computer Logging & Control

As a retired IT manager and a HAM, it is a natural for me to want to combine both technologies into my hobby. I have tried and invested in several radio control and logging programs such as HRD, Win4DX, TRX-Manager, Logic 8 and so on, but DXLab is by far my favorite. Three advantages to DXLab make it my choice; design, support and it is free, not just free for 30 days, but totally free. Due to the limited space I can only give a quick overview of the software but I have a lot more info on my web site at <http://www.pestingers.net/pages-images/ham-stuff/dxlab/dxlab-software.htm>.

DXLab contains 8 separate modules; most of them can act as a stand-alone but also interact with each other as well as add-on programs such as WSJT-X, JTAAlert, DX Atlas, Google Earth, CW Skimmer, MMTTY, N1MM and more. The DXLab Yahoo forum is an extremely active user group with Dave, AA6YQ, the developer fielding many questions. My station is a complete implementation of DXLab. I currently have an ICOM 7600, Expert 1.3K -FA amp, HF-Auto tuner, LP-700 station monitor, MDS RC-1 rotator controller and a Yaesu G-2800DXA all integrated into my DXLab.

The eight modules referred to are DX Launcher, Commander, DX View, DX Keeper, Path Finder, Propagation View, Spot Collector and Win Warbler. As with any new software package there is a learning curve, sometimes steep, other times manageable. Many hams choose not to bother with software but if taken in bite size pieces or modules, it will become second nature.

DX Launcher will be the first module to install since it controls the launching of the other 7 and external programs. This module also informs you of new program updates and new databases and allows you to install them with just a click of the mouse. Once you choose the modules you want to launch, this program can be minimized, it has done its job. Although it can stand alone it would not be of any use except for updating databases and programs. DX Keeper might be called the heart

of the package since it contains the logs of the station. Some start with this electronic log and expand to other modules as they become familiar with the software. This module is nothing more than a sophisticated log book like the paper logs you have known and used for many years. What makes this a nice addition is the ability to automatically upload to Club log, eQSL and LoTW as well as export to other programs. It also allows you to download from LoTW & eQSL for log confirmations and keep track of all your entities and QSLing.

Spot Collector is the next most useful module, in my opinion. This module displays active spots being posted using up to 4 different spot sources. In addition to displaying spots, it also color codes them to inform you if you have worked it, confirmed on both band and modes and indicates if they are LoTW & eQSL members.

DX View is the next module I find very helpful and works automatically with the first two. Although this module can stand alone, it is of little use without DX Keeper and spot collector. If you double click on a Spot Collector entry it will show up in DX View which will report all progress on that entry that is in your log book. If you are using rotator control it will also set the short path and long path direction and move your antenna if you click on SP or LP. This module can control multiple rotators using N1MM rotator control software. A world map is loaded to display contact locations, gray line etc. Instead of the built-in map, CW Atlas can be used or Google Earth.

Path Finder would be the next module to install. The advantage is that it provides the detailed info about the call sign from QRZ and other databases. This information is included in your log-book when you click to log the contact.

Commander module makes the link between your radio and the rest of the software to completely automate your station. Some choose not to link to the radio; I find it quick and easy when chasing DX. A double click on the Spot Collector and everything including your radio,

Computer Logging & Control (cont.)

amplifier, auto tuner and antenna are ready to go. Commander can control up to 4 radios plus transverters, user defined devices, filter group and external software such as CW Skimmer, Win4K3 etc. The band spread module is useful to see all the activity in the area; this is built into Commander.

Propagation View is useful for those who want a lot of information about propagation, predictions and trends. I find it useful but sometimes it can be information overload.

Win Warbler, the final module, is the digital interface. This is, by its nature, the most complex of the 8. All your basic digital modes can be implemented within this module, RTTY, PSK (all flavors) and CW. The newer and more trendy modes such as JT65 WSPR, JT9 and the fast and furious FT8 must be implemented via packages like WSJT-X. This is as far as I will go with Win Warbler and is the least used of all the modules. I use my radio's RTTY, PSK & CW for these modes and WSJT-X for the newer modes. This is a good module, and I built a modified W3YY with USB interface to work with it. As time permits I will fully integrate this module.

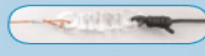
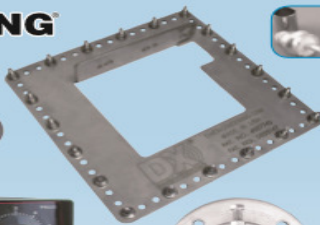


K8JE, Jim Weaver Honored!

Our very own past-president and former ARRL Great Lakes Director, Jim Weaver, K8JE, addressing the audience after being awarded the George S. Wilson III W4OYI Lifetime Achievement Award. Rick Roderick, K5UR, (r) presented the award to Jim at the Great Lakes Hamcon in Michigan.

Congrats to Jim!!!

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The Sun, the Earth, the Ionosphere: What the Numbers Mean, and Propagation Predictions--a brief introduction to propagation and the major factors affecting it.

By Guest Author, *Carl Luetzelschwab, K9LA (k9la@arrl.net)*



I had read this article years ago and kept it as a reference. Carl has kindly allowed us to use this article. In fact, Carl has also gotten permission for me to use excerpts from The Little Pistols' Guide to HF Propagation by Robert Brown, NM7M (SK) Part 1 of that will appear in the next issue. Thanks Carl for your support.

The sun emits electromagnetic radiation and matter as a consequence of the nuclear fusion process. Electromagnetic radiation at wavelengths of 10 to 100 nanometers (extreme ultraviolet) ionizes the F region, radiation at 1 to 10 nanometers (soft X-rays) ionizes the E region, and radiation at 0.1 to 1 nanometers (hard X-rays) ionizes the D region. Solar matter (which includes charged particles—electrons and protons) is ejected from the sun on a regular basis, and this comprises the solar wind. On a “quiet” solar day, the speed of this solar wind heading toward Earth averages about 400 km per second.

The sun’s solar wind significantly impacts Earth’s magnetic field. Although the Earth’s magnetic field can be thought of as a simple bar magnet, the Sun’s influence compresses the Earth’s magnetic field on the side facing the Sun and stretches out the magnetic field on side away from the Sun (the magnetotail, which extends tens of earth radii downwind). While the Sun’s electromagnetic radiation can impact the entire ionosphere that is in daylight, charged particles ejected by the Sun that are trapped in the Earth’s magnetosphere can eventually be guided into the ionosphere along magnetic field lines – and generally only impact high latitudes where the magnetic field lines go into the Earth.

Additionally, when electromagnetic radiation from the Sun strips an electron off a neutral constituent in the atmosphere, the resulting electron can spiral along a magnetic field line (it spirals around the magnetic field line at what’s called the electron gyro-frequency). Thus Earth’s magnetic field plays an important and critical role in propagation.

Variations in Earth’s magnetic field are measured by magnetometers. There are two measurements readily available from magnetometer data – the daily A index and the three-hour K index. The A index is an average of the eight 3-hour K indices, and uses a linear scale and goes from 0 (quiet) to 400 (severe storm).

The K index uses a quasi-logarithmic scale (which essentially is a compressed version of the A index) and goes from 0 to 9 (with 0 being quiet and 9 being severe storm). Generally an A index at or below 15 or a K index at or below 3 is best for propagation.

Sunspots are areas on the Sun associated with extreme ultraviolet radiation. Thus they are tied to ionization of the F region. The daily sunspot number, when plotted over a month time frame, is very spiky. Averaging the daily sunspot numbers over a month results in the monthly mean (monthly average) sunspot number, but it is also rather spiky when plotted. Thus a more averaged, or smoothed, measurement is used to measure solar cycles. This is the smoothed sunspot number (R_{12} , where the R refers to the international sunspot number and the lower-case 12 refers to a 12-month average). R_{12} is calculated using six months of data before and six months of data after the desired month, plus the data for the desired month. Because of this amount of smoothing, the official R_{12} is 6 months behind the current month. Unfortunately this amount of smoothing may mask any unusual short-term solar activity that may enhance (or hinder) propagation.

Sunspots come and go in an approximate 11-year cycle. The rise to maximum (roughly an average of 4 years) is faster than the descent to minimum (roughly an average of 7 years). At and near the maximum of a solar cycle, the increased number of sunspots causes more extreme ultraviolet radiation to impinge on the atmosphere. This results in significantly more F region ionization, allowing the ionosphere to refract higher frequencies (15, 12, 10, and even 6 meters) back to Earth for DX contacts. At and near the minimum between solar cycles, the number of sunspots is so low that the higher frequencies go through the ionosphere into space. (cont.)

The Sun, the Earth, the Ionosphere (cont.)

Commensurate with solar minimum, though, is less absorption and a more stable ionosphere due to a quiet magnetic field, resulting in the best propagation on the lower frequencies (160 and 80 meters). Thus, in general, high smoothed sunspot numbers are best for high-frequency propagation, and low smoothed sunspot numbers are best for low-frequency propagation.

Disturbances to propagation come from solar flares (most prevalent around solar maximum), coronal mass ejections (CMEs – most prevalent around solar maximum) and coronal holes (most prevalent during the decline of a solar cycle). The solar flares that affect propagation are X-ray flares due to their wavelength being in the 0.1 to 0.8 nanometer range. X-ray flares are classified by magnitude as B (minor), C (small), M (medium size), and X (the biggest). Class C flares usually have minimal impact to propagation. Class M and X flares can have a progressively adverse impact to propagation.

The electromagnetic radiation from a class X flare in the 0.1 to 0.8 nanometer range can cause the loss of all propagation on the sunlit side of Earth due to increased D region absorption. Additionally, big class X flares can emit very energetic protons that are guided into the polar cap by Earth's magnetic field. This can result in a polar cap absorption event (PCA), with high D-region absorption on paths passing through the polar areas of Earth.

A CME is an explosive ejection of a large amount of solar matter, and can cause the average solar wind speed to take a dramatic jump upward – kind of like a shock wave heading toward Earth. If the polarity of the interplanetary magnetic field is southward when the shock wave hits Earth's magnetic field, the shock wave couples into Earth's magnetic field and can cause large variations in Earth's magnetic field. This is seen as an increase in the A and K indices (elevated geomagnetic field activity).

In addition to auroral activity, these variations to the magnetic field can cause those electrons spiraling around magnetic field lines to be lost into the magnetotail. With electrons gone, maximum usable frequencies (MUFs) decrease, and return only after the magnetic field returns to normal and the process of ionization replenishes lost electrons. Most of the time, elevated A and K indices reduce MUFs, but MUFs at low latitudes may increase (due to a complicated process) when the A and K indices are elevated.

Solar flares and CMEs are related, but they can happen simultaneously or separately. Scientists are still trying to understand the relationship between them. One thing is certain, though – the electromagnetic radiation from a big flare traveling at the speed of light can cause

short-term radio blackouts on the sunlit side of Earth within about 8-9 minutes of eruption. Unfortunately we detect the flare visually at the same time as the radio blackout, since both the visible light from the flare and the electromagnetic radiation in the 0.1 to 0.8 nanometer range from the flare travel at the speed of light – in other words, we have no warning. On the other hand, the energetic protons ejected from a flare can take up to several hours to reach Earth, and the shock wave from a CME can take up to several days to reach Earth, thus giving us some warning of their impending disruptions.

Each day the Space Weather Prediction Center (a part of NOAA, the National Oceanographic and Atmospheric Administration) and the US Air Force jointly put out a Report and Forecast of Solar and Geophysical Activity. This report is at <http://www.swpc.noaa.gov/products/report-and-forecast-solar-and-geophysical-activity>. It consists of 6 parts.

Part IA gives an analysis of solar activity, including flares and CMEs. Part IB gives a forecast of solar activity. Part IIA gives a summary of geophysical activity. Part IIB gives a forecast of geophysical activity. Part III gives probabilities of flare and CME events. These first three parts can be summarized as follows: normal propagation (no disturbances) generally occurs when no X-ray flares higher than class C are reported or forecasted, along with solar wind speeds due to CMEs/coronal holes near the average of 400km/sec.

Part IV gives observed and predicted 10.7-cm solar flux. A comment about the daily solar flux – it has little to do with what the ionosphere is doing on that day. This will be explained later.

Part V gives observed and predicted A indices. Part VI gives geomagnetic activity probabilities. These last two parts can be summarized as follows: good propagation generally occurs when the forecast for the daily A index is at or below 15 (this corresponds to a K index of 3 or below). WWV at 18 minutes past the hour every hour and WWVH at 45 minutes past the hour every hour put out a shortened version of this report. A new format began March 12, 2002. The new format gives the previous day's 10.7-cm solar flux, the previous day's mid-latitude A index, and the current mid-latitude three-hour K index. A general indicator of space weather for the last 24 hours and next 24 hours is given next. (cont.)

The Sun, the Earth, the Ionosphere (cont.)

This is followed by detailed information for the three disturbances that impact space weather: geomagnetic storms (caused by gusts in the solar wind speed), solar radiation storms (the numbers of energetic particles increase), and radio blackouts (caused by X-ray emissions). For detailed descriptions of the WWV/WWVH messages, visit <http://www.swpc.noaa.gov/products/geophysical-alert-wwv-text> and <http://www.swpc.noaa.gov/noaa-scales-explanation>.

Normal propagation (no disturbances) is expected when the space weather indicators are minor. A comment is appropriate here. These reports give a status of general solar activity. This is *not* a status of the 11-year sunspot cycle, but rather a status on solar disturbances (CMEs, particles, and flares). For example, if the solar activity is reported as low or minor, that doesn't mean we're at the bottom of the solar cycle; it means the sun has not produced any major space weather disturbances.

In order to predict propagation, much effort was put into finding a correlation between sunspots and the state of the ionosphere. The best correlation turned out to be between R_{12} (the smoothed sunspot number) and monthly median ionospheric parameters. This is the correlation that our propagation prediction programs are based on, which means the outputs (usually MUF and signal strength) are values with probabilities over a month time frame. They are not absolutes; they are statistical in nature. Understanding this is a key to the proper use of propagation predictions.

Sunspots are a subjective measurement. They are counted visually. It would be nice to have a more objective measurement – one that actually measures the Sun's output. The 10.7-cm solar flux has become this measurement. But it is only a general measure of the activity of the sun, since a wavelength of 10.7-cm is way too low in energy to cause any ionization. Thus 10.7 cm solar flux has nothing to do with the formation of the ionosphere – it is simply a proxy for the true ionizing radiation for each region. The best correlation between 10.7 cm solar flux and sunspots is the smoothed 10.7 cm solar flux and the smoothed sunspot number – the correlation between daily values, or even monthly average values, is not very acceptable.

Since our propagation prediction programs were set up based on a correlation between the smoothed sunspot number and monthly median ionospheric parameters, the use of R_{12} or the equivalent smoothed 10.7 cm solar flux gives the best results. Using the daily 10.7 cm solar flux – or even the daily sunspot number – can introduce a sizable error into the propagation predictions outputs due to the fact that the ionosphere does not react to

the small daily variations of the sun. To reiterate, for best results use the smoothed sunspot number or smoothed 10.7 cm solar flux, and understand the concept of monthly median values.

For short-term predictions, the use of the effective sunspot number (SSNe) may be helpful. In this method, an appropriate sunspot number is input to the propagation prediction software to force it to agree with daily ionosonde measurements. Details of this method can be found at <https://spawx.nwra.com/spawx/ssne24.html>.



- I will listen, and listen, and then listen again before calling.
- I will only call if I can copy the DX station properly.
- I will not trust the DX cluster and will be sure of the DX station's call sign before calling.
- I will not interfere with the DX station nor anyone calling and will never tune up on the DX frequency or in the QSX slot.
- I will wait for the DX station to end a contact before I call.
- I will always send my full call sign.
- I will call and then listen for a reasonable interval. I will not call continuously.
- I will not transmit when the DX operator calls another call sign, not mine.
- I will not transmit when the DX operator queries a call sign not like mine.
- I will not transmit when the DX station requests geographic areas other than mine.
- When the DX operator calls me, I will not repeat my call sign unless I think he has copied it incorrectly.
- I will be thankful if and when I do make a contact.
- I will respect my fellow hams and conduct myself so as to earn their respect.

www.dx-code.org

DXCC Card Checking

By Dave, K8DV

As a member of SWODXA and ARRL card checker, wanted to take a few minutes and share some information concerning checking cards.

To avoid problems with field checking your application be sure to follow the instructions on the ARRL website <http://www.arrl.org/dxcc-rules>. Note that as of April 2, 2012, there are 2 ways of doing a paper card submission, online and traditional. You can no longer do a hybrid LoTW and paper card submission on a single application. It is absolutely necessary that you follow all the instructions and have all the paperwork properly filled out or I will not be able to check your cards. Submissions via LoTW and paper cards are treated as 2 separate applications, the good news is there is no longer any up charge for submitting more than a single application per year any longer.

If you use the preferred Online Electronic DXCC Application <http://www.arrl.org/online-dxcc-application> for your paper cards it will be easier and cheaper for you. It will also go a lot faster at HQ when they get your paperwork since you already entered your card data in the ARRL system. With the online application you can enter the cards in any order. Just make sure to enter the QSOs on cards with multiple QSOs together to facilitate checking. The reason you don't have to sort by band then mode is because there is minimal data entry work at HQ when they get your field checked application. Payment is made online and not handled by the card checker.

You can also use the Traditional Application forms <http://www.arrl.org/dxcc-forms> where you fill in and print the PDF forms for the application and record sheets. Make sure to follow those instructions. A traditional application will cost you roughly twice as much as the online application to cover data entry costs at HQ. With a traditional application you must sort cards by band then by mode with all the multiple QSO cards



being listed last to facilitate data entry at ARRL HQ. If you use the traditional application make sure you include valid credit card info on the bottom of the PDF application form. Payment by card is best as cash presents problems for the checker as I have to deposit the cash and pay via my own card or write a check to cover.

Whichever way you do it, follow those instructions and make sure the cards are properly sorted in the same order as your DXCC Record Sheet. Also make certain that all the QSL card information (call, date, band, mode, country) has been entered correctly on the record sheet.

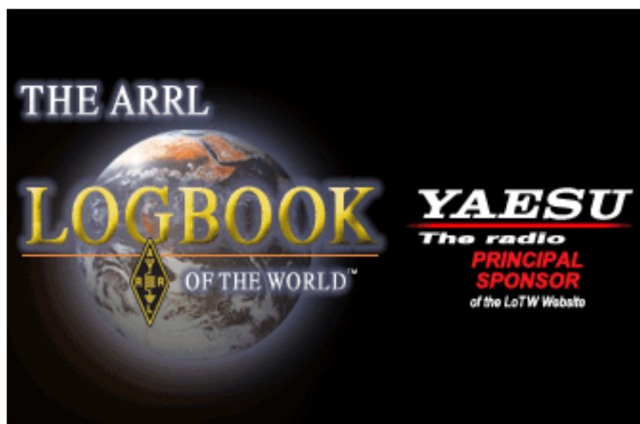
As a card checker and holder of 160 DXCC, I can check cards for 160, I can also check deleted countries. In addition to DXCC, I can check WAS, VUCC, WAC cards for award credit.

Bring the following:

- Cards sorted per your Record Sheet
- Printed copy of the signed and dated Application Sheet
- Printed copy of the DXCC Record Sheet
- Stamped envelope addressed to DXCC Desk, ARRL HQ, 225 Main Street, Newington, CT 06111 so we can mail your application to HQ.

73,

Dave, K8DV



DX
WORLD.net

For Biweekly DX Summaries,
visit www.dx-world.net



Bouvet Island DXpedition 3Y0Z Update for SWODXA

By Bob, K4UEE

After over 10 years of dreaming and 2 years of rigorous planning, we have turned a page. Our team is intact and ready. We have 17,000 pounds of equipment. It has been tested, sorted, inventoried and packed into our 40-foot sea container. We have discussed all conceivable contingencies, including rough seas, clouds and fog, high winds and emergencies at sea and on shore. We have studied propagation, maximized our location on the island, selected the best radio equipment, and have thought first and foremost of safety. All of this culminated when we sealed our sea container on October 9th, entered it into customs bond, placed it on a truck and watched it begin its journey to Punta Arenas, Chile. Our die has been cast. Now, a new chapter begins: one of reflection, waiting anxiously and hoping (praying) that all will go well from this point on.

We have been blessed by the worldwide support of individual amateur radio operators, clubs and foundations. They have backed us, overwhelmingly. We are inspired by the support we have received, both financially and in spirit. We want to live up to all that is expected of us on this "generational" DXpedition, which is likely the largest and most challenging DXpedition --- ever. Indeed, there may never be another like it. We now have time to appreciate the responsibility that this project thrusts upon us. We feel it, and we will do our utmost to meet the DX world's expectations from Bouvet - the number 2 "most wanted" entity.

You will start seeing band plans, more detailed propagation information, QSL information and more on our website. Our Facebook and Twitter social media outlets will keep their conversational tone, but shift their focus to how you can best work us, plus current events and news of interest. Our updated propagation forecasts continue to validate our predictions, as visualized on our website propagation page.

Our team now has a singular focal point, King George Island, where the next chapter begins. We will meet our ship there on January 13th, and sail 2,200 miles to Bouvet. By departing from King George Island rather than Punta Arenas, we save about 400 miles of sea travel. This essentially gives us one or two more days on the air from Bouvet. We will savor those days, because they will give us QSOs that otherwise would not have been made.

We have asked more from our team members than for any previous DXpedition. This includes their time, effort and money. We thank all of you who are helping to defray some of their costs. We continue to welcome new and additional support to help with these expenses.

We are counting the days.....

73,
Bob-K4UEE Ralph-KØIR Erling-LA6VM

What is your most memorable QSL and Why?

PAKISTAN ZONE 21					
AP2-JZB					
Confirming QSO with		A J 8 B			
DAY	MONTH	YEAR	UTC	MZH	RST 2-WAY
22	FEB	90	13:49	28.380	4/4 SSB
CONFIRMED BY: G0D00 VEY 73.					73: BOB QTH: Karachi

One day, nearly 30 years ago, I was testing out a homebrew vertical. Of course, I was asking "QRL?" A distant voice answered "Go Ahead, the frequency is yours" I started the QSO with that anonymous person, who turned out to be AP2JZB. With 75 watts and a home brew vertical, this was probably the only chance I had to work AP, but I did and have the card to prove it!

Send me your card and story for the next issue!

An Adaptation of the Parable of the Fishless Fishermen

By Jay, K4ZLE

(Jay's article is not directed at anyone in particular and is meant to encourage ALL to be more active!)

Now it came to pass that a group existed who called themselves fishermen. And lo, there were many fish in the waters all around. In fact, the whole area was surrounded by streams and lakes filled with fish. And the fish were hungry. Members of this group would gather together and go fish.

As time went by the members decided to form a club that promoted fishing. The club was formed. Year after year these who called themselves fishermen met in meetings and talked about their call to fish, the abundance of fish, and how they might go about fishing.

Continually they searched for new and better definitions of fishing. They sponsored costly nationwide and worldwide congresses to discuss fishing and to promote fishing and hear about all the ways of fishing.

They organized a board to send out fishermen to where there were many fish. The board was formed by those who had the great vision and courage to speak about fishing, to define fishing, and to promote the idea of fishing in far-away streams and lakes where many other fish existed.

Also, the board hired staffs and appointed committees and held many meetings to define fishing, to defend fishing, and to decide what new streams should be thought about. But the members, the staff and committee members did not fish.

Expensive training centers were built to teach fishermen how to fish. Large printing houses sprang up to publish fishing guides. Every year at "Fishvention" a Fish University program was presented. Those who taught had doctorates in fishology. Year after year, graduates went forth but all they did

was join other regional Fish Clubs. They did not fish.

Some also said they wanted to be part of the fishing party, but they felt called to furnish fishing equipment. Others felt their job was to relate to

the fish in a good way so the fish would know the difference between good and bad fishermen. Some decided to study fishing from the fish's point of view.

After one stirring meeting on "The Necessity for Fishing," a young fellow left the meeting and actually went fishing. At the next meeting he reported he had caught two outstanding fish. He was honored for his excellent catch and scheduled to visit all the big meetings possible to tell how he did it.

So, he quit his fishing in order to have time to tell about the experience to the other fishermen. He was also placed on the Fishermen's Governing Board as a person having considerable experience.

One day the lad realized that he spoke with authority about fishing but had not dipped his line in the water in many moons. He called some fellow members of the Fishing Society and invited them to go fishing with him. He has not been seen at a Fishing Society's meeting in many, many years.

One day another of the long-standing members of the Royal Order of Fishermen saw him in a sporting goods store and asked why he no longer came to meetings. Imagine how hurt that member was when the young lad suggested that those who didn't catch fish were not real fishermen. Now change the subject from fishing to DXing? When was the last time you "dipped your line in the water?"



SEDCO Thoughts

By Bill, AJ8B

I attended my first SEDCO in September and thought I would share some of my experiences with you. Reflecting back, my thought is not what SEDCO is, but, what it *isn't*! The vendors who set up there aren't allowed to sell anything! They are there to allow you to touch, feel, test and learn. I FINALLY found a paddle (Vibroplex Vibrocube) that really works well for me after spending over 20 minutes trying two or three different models. I realized that I enjoyed being able to talk about rigs, operating techniques etc. without the pressure of buying. It is about fellowship and information exchange and not about vendors selling equipment.

SWODXA was very well represented with 21 members attending. Our members were: Steve K8UD, Jim AB8YK, Don N6JRL, Sandy N3TQU, Ron N9RC, Jay K4ZLE, Joe W8GEX, Janet W8CAA, Bill AJ8B, Mindi KC8CKW, Kevin W8KJ, Beverly N8GGE, Barney N8HP, Joe W8JBL, Mike W8RKO, Larry N8QNM, Ken KB8KE, Chuck K8CR, John N8AA, Eileen K8EWG, and Ken KB8KE. We almost had a quorum! (In fact, we passed an amendment making NR8Z President until 2025!)

Due to a family medical issue, we had to leave Saturday morning so I did not get to enjoy the Saturday session which is the main session! However, based on our experience this year, we are already

planning to attend the entire weekend next year plus a day or two to enjoy more of the smokies and the food.

Kevin, W8KJ, did a fantastic job organizing and running the Friday bootcamp which was VERY well attended. Jay, K4ZLE, gave an excellent presentation on Building a 40 meter Vertical with some excellent thoughts on radials and Joe, W8GEX and Rob, W8MRL reviewed JT-65, FT-8 etc. Excellent stuff!

Contact any of the folks listed if you need more information.



NCDXF announces major support for the KH1 Baker Island DXpedition

The Northern California DX Foundation (NCDXF) is pleased to announce it will be a major contributor to the KH1 Baker Island DXpedition planned for June 2018. Baker-Howland is #4 on the ClubLog Most Wanted List now, but will be #3 after the upcoming Bouvet DXpedition.

In 2016, NCDXF-supported DXpeditions activated five of the ten most-needed entities. These DXpeditions put nearly 500,000 QSOs into DXers' logs! That year we spent \$156,000 to fund these and other DXpeditions. It is possible that the Bouvet and Baker DXpeditions could add another 200,000 QSOs to that number! www.baker2018.net has details of the KH1 Baker

DXpedition.

DXpeditions to rare entities like Baker-Howland that are so remote are becoming more expensive, a trend that we believe will continue.

We wish the KH1B team a safe and very successful trip to Baker Island next year.

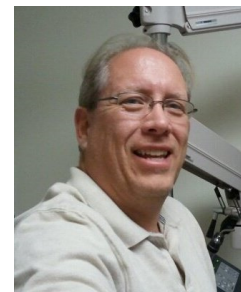
73 .

Glenn Johnson, W0GJ
NCDXF Vice President

<http://www.ncdxf.org>

Digital Corner

By Rob, W8MRL



As I was gathering background information for this edition of the Digital Corner, I discovered an excellent source of information on Olivia by Gary Robinson, WB8ROL. The following information and much more is available at Gary's website at WWW.OLIVIAMODE.COM. Gary can be contacted at WB8ROL@ARRL.NET.

What is Olivia? Olivia is a ham radio digital mode designed to work in difficult (low s/n ratios plus multipath propagation) conditions on HF bands (though it also works as well on VHF/UHF). The signal can be decoded even when it is 10-14 db below the noise floor (i.e. when the amplitude of the noise is slightly over 3 times that of the signal). It can also decode well under other noise, QSB, QRM, flutter (polar path) and auroral conditions. Currently the only other digital modes that match or exceed Olivia in sensitivity are some of the WSJT program modes that include JT65A which are certainly limited in usage and definitely NOT ragchew capable.

It was developed at the end of 2003 by Pawel Jalocho. The first on-the-air tests were performed by two radio amateurs, Fred OH/DK4ZC and Les VK2DSG on the Europe-Australia path in the 20-meter amateur band. The tests proved that the protocol works well and can allow regular intercontinental radio contacts at very low power levels. It therefore lends itself to be an excellent QRP and ragchew mode.

Olivia has many formats some of which are considered standard and they all have different characteristics. The formats vary in bandwidth (125,250,500,1000, and 2000hz) and number of tones used (2,4,8,16,32,64,128, or 256). This makes it possible to have 40 different Olivia formats which have different characteristics, speeds, and capabilities. Luckily only a relatively few are commonly used.

The standard Olivia formats (bandwidth/tones) are 125/4, 250/8, 500/16, 1000/32, and 2000/64. However the most commonly used formats in order of use are 500/8, 500/16, 250/8, 1000/32, and 1000/16. This can cause some confusion and problems with so many formats and so many other digital modes. After getting used to the sound and look of Olivia in the waterfall, though, it becomes easier to identify the format when you encounter it. About 98% of all current Olivia HF activity is one of the 7 following configurations : 1000/32, 1000/16, 500/16, 500/8, 250/8, 250/4, and 125/4.

Olivia is only available in a handful of programs at this time.

Ham Radio Deluxe - DM780 : The Ham Radio Deluxe suite consists of Ham Radio Deluxe which is a general rig control program that can be used by itself OR in conjunction with DM780. DM780 is a digital mode soundcard program that has quite a few modes and can be used by itself and/or with the Ham Radio Deluxe program. It is available ONLY on the Windows operating system and was originally designed for Windows XP. Some people have ran it on earlier versions of Windows and Vista. It has continued to be updated and now runs on the latest versions of Windows. HRD used to be a freeware program with donation support. It is now a Commercial software program and is fee based. The software can be purchased at : <http://hrdsoftwarellc.com/>

FLDigi: The FLDigi program is available for the Linux, Windows (XP, Vista), and Macintosh operating systems and is FREE and open source. It also has multiple modes and built-in rig control capability. A deceptively simple and elegant user interface and works well with most any modern Linux distribution, Windows XP or Vista, or Macintosh OSX. It is available at : <http://www.w1hkj.com>

MultiPSK : The MultiPSK program is also FREE except for a few "Professional modes" included in it and is available only for Windows. It has a huge number of digital modes in it - some of which are ONLY currently available in this program. It works well with many older and newer computers and is worth having on the computer of any digital operator. The only caveat is that the user interface looks tremendously messy and daunting. It can discourage a user at first glance and looks very difficult but it's basic operation is fairly simple after you get used to the awful looking user interface. Olivia is in at least versions 4.23 and later. The program can be downloaded at : http://f6cte.free.fr/index_anglais.htm

MixW : The MixW program is NOT FREE and costs \$50 to register online. It can be downloaded and used for 15 days before it must be registered. It is available only on Windows computers and has a large number of digital modes and a DLL support file that can be downloaded to allow it to work with the Olivia mode. It can be found at : <http://mixw.net/>

CWOPS Update

By Bill, AJ8B CWops ID #1567

CW Academy



Last issue I gave an overview of the CW Operators club (CWops), how it started and some of its' activities. This issue I will focus on the CW Academy (CWA). CWA is an internet based morse code training program. CWA was formed to directly address growing problems including a lack of skilled advisors, lack of training in sending and the geographical dispersion of interested students. The solution was to organize a volunteer group of CW skilled advisors, provide training in sending AND copying and to use online video/audio conferencing for training. The results have been nothing



short of amazing. We have been averaging over 80 students per semester and 80% of those complete the program. In addition, a growing number surpass the 25-wpm rate, and

some become CW Academy advisors!

Currently CWA is staffed by CWops and its members. There are over 20 volunteer advisors. It is a very unique training program that has three levels. The program is given three times per year with each semester lasting 8 weeks.

The 3 levels of training are broken out as Level 1 (beginners), Level 2(those with speed above 10 wpm and below 20 wpm and Level 3. (for those with speeds above 20 wpm)

CWA is held three times per year – Jan-Feb, Apr

-May and Sep-Oct. Each eight-week semester typically has groups of 5 students (or less) with an assigned advisor who meets 'online' two evenings per week for about 45 minutes per session.

Level 1 spends 5 weeks learning all Morse characters, numbers, some punctuation, useful Q-signs. The remaining 3 weeks are spent doing simulated CW QSOing, contesting, and DX pile-up training. The objective of Level 1 is to attain speeds above 10 wpm, to attain skill with QSO protocols, to get acquainted with CW contesting and DXing

Level 2 is tailored to the aspirations of the students in each group. It stresses improved head copying skills, better sending, further training in QSOing, contesting, and DXing. The objective of level 2 is to attain speeds above 20-wpm, to attain skill with QSO protocols, to gain experience with CW contesting and DXing

Level 3 is also tailored to the aspirations of the students in each group. It stresses improved head copying skills, better sending, further training in QSOing, contesting, and DXing. The objective to Level 3 is basically the same as Level 2 but at 25 WPM and above, namely, to attain speeds above 25- wpm, to attain skill with QSO protocols, to gain experience with CW contesting and DXing.

Next issue, I will provide more details on the training approach that makes this so unique and successful.



Sad News and Happy News

Carl Smith, N4AA—SK

QRZ DX and The DX Magazine Publisher and Editor Carl Smith, N4AA, of Asheville, North Carolina, died on October 20. An ARRL member, he was 77 and had been a radio amateur and DXer for more than 6 decades. Smith and his late wife Miriam, KB4C, bought the two publications' parent DX Publishing in 1997 "Carl was a ham's ham, as he dabbled in many aspects of our great hobby," The Daily DX Editor Bernie McClenney, W3UR, observed. "He did a lot for Amateur Radio over the years."

Licensed in Kansas City in 1954 as WNOYFT (later WOYFT), Smith served in the US Air Force from 1958 until 1966. He became W4NQA after moving to North Carolina.

From 1968 until 1970, Smith was on the ARRL Headquarters staff and held the call sign W1ETU. When he moved to Virginia in 1970, he regained W4NQA and, after moving back to North Carolina, obtained N4AA in 1976. An avid DXer and at the top of the DXCC Honor Roll, Smith was inducted into the CQ DX Hall of Fame in 2012.

Smith was a member of the Potomac Valley Radio Club (PVRC). He re-established QCWA Chapter 145 for the primary purpose of establishing the Southern Appalachian Radio Museum - now the

Asheville Radio Museum - on the campus of Asheville-Buncombe

Community College. He also was a long-time Roanoke Division

Assistant Director. For many years, he was the owner and manager of Georgetown Communications, an Amateur Radio store in Asheville.

He also established the KB4C Miriam Smith Award, in memory of his late wife. The award, presented annually by the ARRL Roanoke Division, honors an Amateur Radio operator from Western North Carolina who has demonstrated an active commitment to public service and emergency communication through ARES/RACES.

Smith was among the founders of the Southeastern DX and Contesting Organization (SEDCO) W4DXCC Convention, and his wife's call sign is used on the air at the annual convention and for various operating activities.

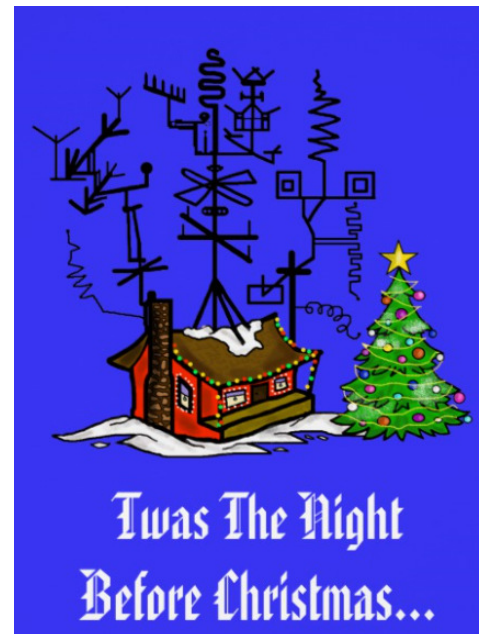
SWODXA 2017 Christmas Party

The SWODXA Christmas Party will be held on Thursday, December 14th at 6pm at the Spinning Fork Italian Restaurant, 2229 N. Verity Parkway, Middletown SWODXA members and a guest (\$5 per person)

This year SWODXA has half of the restaurant reserved. Please RSVP!! SignUpGenius is available and you are encouraged to sign up so we can let the Spinning Fork know how many to expect. <http://www.signupgenius.com/go/9040C4FA8AC2BA02-swodxa4>

We will also accept payments at the November meeting. (If you pay at the meeting, still go to SignUpGenius and click "pay in person") Adult beverages will be available - however they must be paid for by the individual. SWODXA will not be responsible for any alcohol sales. Again, this year I will be collecting money or unwrapped gifts for less fortunate children in the Fairfield Schools. Thank you in advance!

Mindi—kc8ckw@arrrl.net



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.

(<http://aj8b.com/application-for-dxpedition-grant/>) .

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 a DXpedition Funding Request Approval

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

To join SWODXA, go to <http://swodxa.org/member.htm>



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: <http://aj8b.com/application-for-dxpedition-grant/> 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 <http://swodxa.org/member.htm>

Meetings: The club meets on the second Thursday or each month at Marions Piazza on Kingsridge Dr. in Dayton, OH. 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 Steve Coy, K8UD; Secretary Mindi Jones, KC8CKW and Treasurer Mike Suhar, W8RKO.

Website: We maintain a website at www.swodxa.org; managed by Richard, KC8RP and www.swodxaevents.org managed by Bill, AJ8B. These sites provide information about a variety of subjects related to the club and DXing.