



SHORT SKIP

Volume 66 Issue 1

January 2018

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REPEATERS

Freq	Location
147.000	Merrillville
147.240	St. John
442.075	Merrillville

All Lake County ARC Repeaters are open to all amateurs. All repeaters must have a PL of 131.8 set in order to access.

FROM THE PARADE STAND

by Tim, N9CA, LCARC President



Wishing each and every one of you a Joyous and Happy New Year!

Next Club meeting will be Friday January 12th 2018 at 7:30pm.

First Program half; Radio Frequency Identification or RFID. RFID tags are showing up everywhere. How are they are changing the world.

Second program half: ELF (Extremely Low Frequency reception 200 Hz - 10 kHz). Hear sounds of Earth's Magnetosphere interacting with ionization from the Sun and Earthly storms: Auroral Chorus, Whistlers, chirping, whooshing, barks, squawking, hissing and other bizarre sounds happening even as you read this.

Propagation

According to Spaceweather.com as of December 22 - for all of 2017 so far - 27% of days have had no visible sunspots. In 2016 the days without sunspots was 9%. From the past, the days without sun spots count for year 2009 was 29%.

Sunspot and solar flux numbers are currently so low that coverage for local 75 and 80 meter nets are suffering. Atmosphere ionization is too poor to effectively reflect back high angle transmitted signal radiation (NVIS) for good local 50-200 mile 3.5-4 MHz operation.

Amplifications of the solar wind from coronal holes are expected on December, 30-31, January 1-3, 5-7.

Is this Amateur Radio?

Per ARRL ARLP049 December 2017: "FT8 (the latest mode from K1JT) seems to have taken the amateur radio service by storm in recent months, with an amazing rate of acceptance due to its weak signal capabilities and easy implementation."

In my humble opinion, Ham Radio is about real live people communicating, connecting, and sharing. Although digital modes certainly have their place, FT8 is basically one computer communicating with another computer exchanging the most minimal of information. Though extremely cool, I have to ask, where is the achievement over the odds, the equipment tweaking, the operator skill, the thrill of band openings, plus the dash of luck that make HR rewarding? 73



Now we know what Santa does after delivering all those toys!

May 2081 bring you an abundance of DX (although the predictions are not promising), may it bring you all the ham radio "toys" you want (notice I did not say need), and may you and your family find peace and happiness — *ed*

MEETING MINUTES

December 8, 2017

- Meeting called to order at 7:33PM
- Introductions were made with 21 attending the meeting
- Tim will have a Ham Radio license class in February and will be arranging with the Lake County Library to have a place for the class. He will have 8 class sessions, with the last class date will have VE testing.
- Asking for new business, none heard.
- Asking for program ideas from the members.
- Video presentation on soldering.
- Refreshments were served with cake and coffee.
- Meeting adjourned at 8:30PM

2017 Member Attendance

Name	Call	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Russell McComb	KB9HO	1	1	1	1	1	1	1	1	1	1	1	1	11
Kenny Brown	KE9TC	1	1	1	1	1	1	1	1	1	1	1	1	11
Bill Leaming	N4GX	1	1	1	1	1	1	1	1	1	1	1	1	10
William R Young	N9QLS	1	1	1	1	1	1	1	1	1	1	1	1	9
Tim McGillen	N9CA	1	1	1	1	1	1	1	1	1	1	1	1	8
Daniel Ulloa	KD9ARD	1	1	1	1	1	1	1	1	1	1	1	1	8
John Giantti	W9WY	1	1	1	1	1	1	1	1	1	1	1	1	8
Jim Harney	KF9EX	1	1	1	1	1	1	1	1	1	1	1	1	8
Pat Finick	N9FXT	1	1	1	1	1	1	1	1	1	1	1	1	8
Andy Finick	W9FXT	1	1	1	1	1	1	1	1	1	1	1	1	8
Michael O'Day	N9ODM	1	1	1	1	1	1	1	1	1	1	1	1	7
Joe Kundrut	K9JKK	1	1	1	1	1	1	1	1	1	1	1	1	7
John Gielniak	WA9FGC	1	1	1	1	1	1	1	1	1	1	1	1	7
Marty Dziak	WJ9Q	1	1	1	1	1	1	1	1	1	1	1	1	6
Cliff Burns	WA8ZAZ	1	1	1	1	1	1	1	1	1	1	1	1	6
Cassy O'Brien	KD9NER	1	1	1	1	1	1	1	1	1	1	1	1	6
Mark	W9MQ	1	1	1	1	1	1	1	1	1	1	1	1	4
Paul Domazet	KA9HKA	1	1	1	1	1	1	1	1	1	1	1	1	4
Doug Paquette	KD9IAQ	1	1	1	1	1	1	1	1	1	1	1	1	4
Chris Paquette	KD9IAR	1	1	1	1	1	1	1	1	1	1	1	1	4
Steve Vukusic	KQ7E	1	1	1	1	1	1	1	1	1	1	1	1	3
Paul Casault	KD9FWU	1	1	1	1	1	1	1	1	1	1	1	1	3
George Pazak	KD9FCI	1	1	1	1	1	1	1	1	1	1	1	1	2
David Parker	KD9HXU	1	1	1	1	1	1	1	1	1	1	1	1	2
Tom Ruggles	W8FIB	1	1	1	1	1	1	1	1	1	1	1	1	2
Eric	AC9RJ	1	1	1	1	1	1	1	1	1	1	1	1	2
Doug Kiser	KD4CXG	1	1	1	1	1	1	1	1	1	1	1	1	1
Carter Garcia	KC9YGU	1	1	1	1	1	1	1	1	1	1	1	1	1
Chris DeBie	KC9SIZ	1	1	1	1	1	1	1	1	1	1	1	1	1
Mike Swader	KA9E	1	1	1	1	1	1	1	1	1	1	1	1	1
Herman Mitchus	KU9HXV	1	1	1	1	1	1	1	1	1	1	1	1	1
Robert Comdyer	W9RBC	1	1	1	1	1	1	1	1	1	1	1	1	1
Michael Raymond	KD9HTY	1	1	1	1	1	1	1	1	1	1	1	1	1
Sonny	KD9HXV	1	1	1	1	1	1	1	1	1	1	1	1	1
Ryan Mayton	KC9ZSV	1	1	1	1	1	1	1	1	1	1	1	1	1
Tiny	W9ZRO	1	1	1	1	1	1	1	1	1	1	1	1	1
Kerry Orze	KB9ORH	1	1	1	1	1	1	1	1	1	1	1	1	1
Nick	W9UM	1	1	1	1	1	1	1	1	1	1	1	1	1
Adam	KA9DJ	1	1	1	1	1	1	1	1	1	1	1	1	1
Rich Gilles	KA0SVS	1	1	1	1	1	1	1	1	1	1	1	1	1
Visitor	W9MAQ	1	1	1	1	1	1	1	1	1	1	1	1	1
Brent Walls	N9BA	1	1	1	1	1	1	1	1	1	1	1	1	1
Allen Graves		1	1	1	1	1	1	1	1	1	1	1	1	1
Jeff Aagan		1	1	1	1	1	1	1	1	1	1	1	1	1

VIDEOS

(click on the underlined link to view)

The good and the bad with AO-91

What's right and what went a little wrong with AO-91. She hears very well, but she had a heck of a time learning to talk

Into scanners? Lots of info on Uniden scanners, manuals, mods, firmware, etc. at the following site:

<http://new.marksscanners.com/>

Congrats to NA9U Field Day Gang!
by Tom, W8FIB

FIRST PLACE for 2A IN !

Second Place overall out of 67 Indiana entries in all classes and power levels. It took five radio clubs banding together in Indianapolis with 3 transmitters and 48 participants to top the NA9U score.

Second Place in Central Division Class 2A out of 30 entries for Indiana, Wisconsin and Illinois.

7th place overall out of 228 total entries in Central Division in all classes and power levels.

20th Place of 389 2A in US and Canada. 2A is usually the largest class.

108th overall of 2964 Total entries in all classes and power levels in USA and Canada. (Top 3.6%)



If you did not make the December meeting you missed a great program on correct techniques of soldering.

You also missed some great cake, coffee, and fellowship with your fellow LCARC members.

Oh, and if you don't like cake (who doesn't like cake?) there was also a long line of other goodies to help celebrate the Christmas season.

We hope yours was healthy, happy, and fun.

Remember, we meet the second Friday of each month so join us!

Oh, and thanks Jim and all those who provided the eats!!



Check out the LCARC website at www.w9lj.org and the Hoosier DMR Best Practices Guide at <http://tinyurl.com/nbvo7xh>

3Y0Z BOUVET IN EARLY 2018

Carl Luetzelschwab K9LA

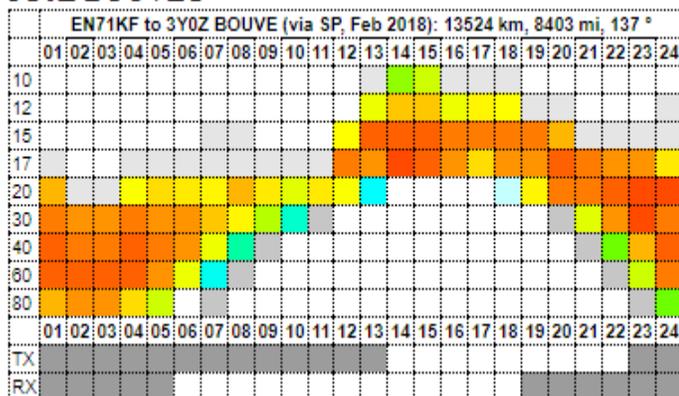
If you're a DXer, the upcoming DXpedition to 3Y0Z Bouvet in early 2018 is an important one to get worked and confirmed since it's currently #2 on the DXCC Most Wanted List at ClubLog (<https://secure.clublog.org/loginform.php>). It may be years before another operation takes place.

In addition to 3Y0Z, there are many other DXpeditions to DXCC entities that you may need. How do you determine when the best time is for you to work them? You can roll your own propagation predictions or go to the web site of the DXpedition as many have propagation info.

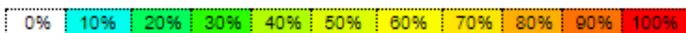
Another way is to visit <http://www.voacap.com/dx.html>. This web site has VOACAP predictions for many DXpeditions, and is offered by Jari OH6BG, James HZ1JW and Juho OH8GLV. You input your 6-character grid square, and predictions to all the listed DXpeditions are calculated. As an example, here are the predictions for my location in EN71kf to 3Y0Z.

The color coding is as follows: The percentages, in simple terms, indicate the probability of making a QSO on the desired band at the desired time. For your best shot, concentrate on the yellow-orange-red blocks.

3Y0Z BOUVET

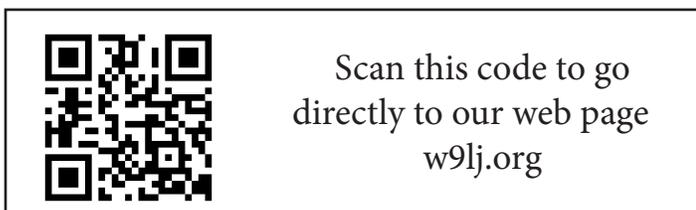


The predictions assume the DXpedition has a 3-ele Yagi at about 30 feet on 20m thru 10m and a quarter-wave vertical over good ground on the low bands. On your side, a 3-ele Yagi at about 60 feet and a quarter-wave vertical over good ground are assumed. The



transmit power for both the DX station and you is 1.5 kW. Having a more modest station than the above assumptions means you may not in reality have any yellow-orange-red blocks, but the colors will still indicate the highest probabilities.

Finally, by hovering your cursor over any block gives the color-coded probability, the estimated monthly median signal power in dBW (add 30 to get to dBm) and the probability that the operating frequency is below the MUF (maximum useable frequency).



Amateur Radio Volunteers Active in Latest Round of California Wildfires

ARRL News

The massive and barely contained Thomas Fire in Southern California has consumed more than 230,500 acres, and the emergency has caused residents in fire-threatened areas to evacuate. Amateur Radio volunteers remain active supporting communication for American Red Cross shelters in Ventura County. More evacuations are likely, although the need for Amateur Radio assistance remains dynamic. Cal Fire said today (December 11) that evacuation operations will occur ahead of westward fire growth, speeded by low humidity and gusty Santa Ana winds, which will push the fire further into Santa Barbara, County. One of several fires that have broken out across Southern California, the Thomas Fire is far and away the largest.

Ventura County Auxiliary Communication Service (ACS)/ARES activated a week ago to support Red Cross shelters there, providing communications between shelters. Radio amateurs also have deployed to the Ventura County Emergency Operations Center (EOC). ACS/ARES expects to be deployed while shelters are open. According to ARRL Ventura County District Emergency Coordinator Rob Hanson, W6RH, the ACS/ARES volunteers are staffing four evacuation centers, in addition to the EOC.

Santa Barbara Section Manager Jim Fortney, K6IYK, told ARRL, an Amateur Radio digital network (ARDN) MESH video network has been live streaming images from several sites, as long as the network remains up.

“Loss of primary power has required using the solar power backup capabilities, but, unfortunately, the heavy smoke has made that backup less than fully reliable,” he said. In addition some sites are down because of power outages, and at least one hilltop site was overrun by fire.

“The Santa Barbara District ARES organization works closely with Santa Barbara County OEM [and] is prepared to support any requests as the Thomas Fire continues to burn into Santa Barbara County,” Fortney said.

Rich Beisigl, N6NKJ, reported that the Fallbrook Amateur Radio Group and other groups in the North County (San Diego) are providing communication at some evacuation centers, and the Red Cross has activated its Amateur Radio group. He said a group in Carlsbad also was providing shelter communication support.

In addition to power loss to repeater sites, solar panels charging off-grid batteries have been affected by the huge plumes of smoke blocking the sun.

ARRL Los Angeles Section Manager Diana Feinberg, AI6DF, said little official use of Amateur Radio was made during the fires in her Section. “All city and county governmental radio systems, commercial cellphone networks, and landline phone systems operated normally throughout the three fires in Los Angeles County, with just a few minor power outages of short duration.” At one point, the ARES-LAX Northwest District was very briefly in standby mode when it was thought that power might become intermittent at a hospital in the Santa Clarita area.

Feinberg said the City of Los Angeles Fire Department ACS opened a net for any traffic resulting from the small Skirball Fire, which claimed a half-dozen expensive homes and shut down a major freeway during the morning commute.

EMP PROTECTION FOR THE RADIO AMATEUR.

Chris Warren November 19, 2017 -- <http://offgridham.com/>

Radio amateurs are often motivated to have off grid power capabilities as part of preparing for short term emergencies and long term SHTF scenarios. But what about protecting your radio equipment and off grid systems? Your stuff can't help you in a disaster if it's the victim of a disaster itself. EMP, or electromagnetic pulse, is one of the most dangerous hazards to your radio & off grid gear, yet it's seldom taken seriously. What is an EMP, why should you care, and what to do about them?

What exactly is an EMP?

In the simplest terms, an EMP is a short burst of electrical or magnetic energy. It can propagate through the air and does not necessarily need wire or any particular type of conductor to get from one place to another. The radio frequency of an EMP can vary depending on the source of the energy. EMP's can occur literally anywhere in the spectrum from "DC to daylight".

Where EMP's come from & why they can be dangerous.

There are electromagnetic pulses all around us. Every time you turn on an electric motor, flip a light switch, or use almost any electrical device, an EMP of some kind is generated. The spark plug in your lawnmower generates an EMP; so does the static "crack" you sometimes experience when touching a metal object. Very powerful electromagnetic pulses can also come from lightning, the Sun, and nuclear explosions.

An electromagnetic pulse is very, very brief, on the order of nanoseconds (0.000000001). That doesn't sound like a lot of time, and it isn't, but it's long enough to overload and permanently damage electrical circuits. The three "biggies" off grid hams need to be concerned with is EMP created by lightning, the Sun, and nuclear weapons. There is no meaningful danger from electromagnetic pulses emitted by common items, such as electric motors.

How an EMP damages electronics is very simple: The pulse of electrical or magnetic energy enters your equipment either through the air or through connected wires, which act like antennas. The energy overwhelms semiconductors, microprocessors, and other sensitive electronics, effectively burning them out and leaving you with a box of junk. Except for a direct lightning strike, there will be no visible damage. Your stuff just drops dead, or works erratically.

EMP's are not inherently hazardous to humans, plants, or animals, but individuals with cardiac pacemakers or who depend on medical technology (oxygen generators, renal dialysis, CPAP machines, etc.) are vulnerable.

Electromagnetic pulses are a great unknown.

If you take a casual browse around the internet, you'll find that EMP is a very popular topic on survival & prepping forums, yet they are barely mentioned in the amateur radio world. Unfortunately, most of what is out there is speculation and guessing by "internet experts".

The truth is, there are very few real-world examples of what an electromagnetic pulse will do, and of the examples we have to draw from, none are recent enough to include computers, cellphones, the internet, or any modern technology.

The most often cited incident is the Carrington Event, which was a solar storm that emitted an enormous amount of energy that ultimately reached Earth. Technically, it was a coronal mass ejection (CME) that produced an EMP, and not an EMP itself. Carrington is

not a particularly good case study because it happened in 1859 before there were modern electronics and power grids. What did exist at the time, telegraphs, were heavily damaged worldwide. Most experts agree that if the Carrington Event were to happen today, and this is not an exaggeration, it would very likely be an apocalyptic, civilization-altering SHTF incident.

More recently, the US government conducted a nuclear bomb experiment called Starfish Prime in 1962. While not intended specifically as an EMP test, it did produce some telling side effects. The resulting EMP fouled up scientific instruments used to monitor the test and caused major malfunctions in street lights and the telephone network in Hawaii, almost 900 miles away from the explosion point.

As radical Islamic terrorism and rogue nations such as North Korea continue to command headlines, attention to EMP hazards have been elevated. These concerns are legitimate: Some of the world's nutjobs already have nuclear capabilities. That their capabilities are not well developed should not bring comfort to anyone. A poorly made nuclear weapon can still generate a devastating EMP even if it is not successful as a bomb.

The bottom line is that no one knows for sure what exactly will happen in an EMP event, other than it will probably be real, real bad.

How off grid hams can protect themselves from an EMP.

As for what you can do to protect your electronics from electromagnetic pulses, there is good news and bad news. The good news is that it's fairly easy and inexpensive. The bad news is that you will not know if your homebrew measures are effective until and unless you experience an actual EMP event, and if your protection is insufficient, there is no do-over. Without testing your EMP shielding in a lab, it's just guessing and hoping you got it right.

Enclosures designed to protect from electromagnetic energy are collectively known as Faraday cages. Commercially made versions can run into thousands of dollars, so most radio amateurs make their own. An Off Grid Ham reader recently contacted me and proceeded to describe in great detail his plan for a very elaborate Faraday cage. It will probably work, but there is no need to go through that much trouble. As long as you follow a few guidelines, you should be ok:

A complete metal enclosure that fully encases the equipment.

Very important: No exposed cracks or points of entry. Aluminum HVAC tape, available at any hardware store, is perfect for sealing any holes.

Also very important: The protected equipment should be fully insulated from other items and the outer metal enclosure. Again, don't overthink it. It's as easy as packing your gear in cardboard boxes, then placing the boxes in the metal enclosure. Plastic storage bins are good too.

There is no need to ground your Faraday cage. In some situations, a ground wire can act as antenna and introduce more electromagnetic energy than would otherwise be present.

A common method is to use a galvanized metal garbage can with a matching lid. Be sure to run some aluminum HVAC tape around the lid to make a good seal. Another cheap but less effective EMP shield is to place your electronics in a box, then wrap the box with

Continued on page 6

MORSE CODE: A STAPLE IN THE NAVY IW TOOLKIT

Story Number: NNS160129-12 Release Date: 1/29/2016 3:36:00 PM

By Carla M. McCarthy, Center for Information Dominance Public Affairs



PENSACOLA, Fla. (NNS) -- The cryptologic technician (collection) (CTR) student cohort in the first revised Basic Manual Morse Trainer (BMMT) course wrapped up, Jan. 28, at the Center for Information Dominance (CID) Unit Corry Station.

The update included the latest Manual Morse software used by the Department of Defense and was tested out in a nine-week pilot course that concluded in September.

The self-paced course provides basic instruction and practical application in the interception of Morse-type communications.

“Morse code continues to be an inexpensive and efficient means of communication for many states throughout the globe,” said Senior Chief Cryptologic Technician (Collection) (IDW/NAC/SW/AW) Tony Gonzales, CTR rate training manager for CID headquarters. “Manual Morse operators here at Corry Station are learning a skill set that has stood the test of time. Many of our most senior CTRs began their careers as Manual Morse operators.”

In the updated course, Sailors learn how to operate radio-receiving and associated computer-based equipment. From basic safeguards of security to communication procedures and systems theory to operation of communications equipment, the course teaches how to intercept Morse communications, as well as copy and send Morse code.

“There is something special about learning a skill that Sailors have been performing since World War II,” said Gonzales. “The connection between the past, present and future cryptologic technician (collection) is rarely seen in our line of work as technologies are forever changing.”

Morse is just one tool that CTRs use as members of the Navy’s Information Warfare (IW) community to perform collection, analysis and reporting on communication signals.

“Morse code is not only used in military operations but also in commercial navigation,” said Cryptologic Technician (Collection) 1st Class (IDW/SW) Gabriel Albarran, the BMMT course supervisor. “Search and rescue, science navigations and weather status are frequently passed in automated Morse code.”

Sailors can take the course immediately following CTR “A” school or can be assigned as fleet returnees to the course as part of their transfer. The course is now offered to about 40 CTRs each year in the pay grades of E-1 through E-5.

“It’s a language,” said Cryptologic Technician (Collection) Seaman Mary Kaitlin McKeeby, who beat the course record set during the pilot by two days, finishing the self-paced course in 39 days. “If you have a knack for languages, (Morse code) is going to be easier to pick up.”

She stressed the importance of staying composed while learning Morse code and persisting through the lessons even when making a mistake.

Graduates receive NEC 9169 as a Morse code intercept operator and undergraduate college credit through the American Council on Education. They may also be eligible for selective re-enlistment bonuses in both zones A and B.

Morse code training has been taking place continuously at Naval Air Station Pensacola Corry Station since 2005, when the Navy moved the training back to Corry Station, in favor of cost and time savings by relocating the course with the cryptology “A” school. A long partnership with the Army providing the training came to an end at that time.

The Center for Information Dominance (CID) based at Corry Station in Pensacola, Florida, is the Navy’s learning center that leads, manages and delivers Navy and joint forces training in information operations, information warfare, information technology, cryptology and intelligence.

With nearly 1,300 military, civilian and contracted staff members, CID provides training for approximately 22,000 members of the U.S. armed services and allied forces each year. CID oversees the development and administration of more than 200 courses at four commands, two detachments and 12 learning sites throughout the United States and Japan.

For more information on the Center for Information Dominance, visit <http://www.netc.navy.mil/centers/ceninfodom/>; [facebook.com/CenterForInformationDominance/](https://www.facebook.com/CenterForInformationDominance/); and twitter.com/CenterInfoDom/.

For more news from Center for Information Dominance, visit www.navy.mil/local/cid/

POLAR PRINCE UNDERWAY TO HALIFAX,

WSPR Call Sign VE0EXP 12/21/2017

Thanks to Radio Amateurs of Canada

Carrying a WSPR beacon identifying as VE0EXP, the Polar Prince departed Victoria, British Columbia, on December 8 and is currently sailing past Mexico and Central America on its way to

Halifax via the Panama Canal. The WSPR beacon transmits on 40, 30, and 20 meters. Track the Polar Prince via APRS.

Continued from page 6

a few layers of aluminum foil.

I've seen Faraday cages made from old microwave ovens, refrigerators, file cabinets...there's a lot of imagination on YouTube. Again, it's important to point out that none of these ideas are tested and proven and some are demonstrably ineffective.

Dispelling EMP myths.

All EMP solutions, including commercially made Faraday cages, will never be 100%. For example, a well sealed galvanized trash can will provide about 50 dB of attenuation. By comparison, the U.S. military requires a minimum of 80 dB, which is 1000 times more attenuation than 50 dB. Unless you're using known, tested techniques and materials, EMP protection is just glorified gambling. Put forth your best effort and hope that it's enough, but understand that there are no guarantees.

About using microwave ovens: It's been floating around for years that a microwave oven is the perfect Faraday cage. They do provide an amazing level of shielding, but only at microwave frequencies! For everything else, they're just another metal box. Don't get suckered by the legend that you can stuff your stuff in a microwave oven and call it good.

Electromagnetic pulse and off grid power.

The off grid radio amateur has extra challenges. In addition to the usual radio equipment, all the things needed for off grid power need EMP protection too. At the very minimum, you'll want to have a charge controller in your Faraday cage, and maybe an inverter too. Solar panels themselves are generally regarded as immune from all but the most severe EMP's, but if you have panels with an integrated micro inverter, then you're accepting a big vulnerability since there is no practical way to protect all of them. As added insurance it would be wise to stock a large conventional panel or two (without the micro inverter) as they do not need protection.

tection.

It's understandable that not too many people can afford to buy extra equipment for the sole purpose of storing it "just in case". Keep in mind that it's a good idea to have two of everything, so if you do have spares, then protect them from EMP.

One option for those who do not have the means to own redundant equipment is to set up your working gear such that it can be quickly broken down and stored in a Faraday cage. If world events deteriorate or conditions on the Sun foretell an CME, then you can store your equipment in the cage until the danger passes. This of course is not an ideal plan, but since the factors that can incite electromagnetic pulses are (sort of) predictable, you will hopefully have some lead time to take action.

Another low budget possibility is to keep some older tube equipment around. Vacuum tubes have a built-in resistance to EMP (but are not "EMP proof") and are far less likely to fail under EMP conditions. Tube equipment is also easier to repair if it breaks. Make sure you keep a spare set (or two) of tubes in a protected environment.

The goal is not to be perfect, it's to do as much as you can to give yourself a fighting chance.

What you need to know.

The peril of electromagnetic pulses (EMP) are not delusional rants from way-out-there conspiracy theorists and doomsday survivalists. The threat is real, and the consequences are real, but there is a lot the average radio amateur can do to improve their odds of getting through it in one piece. Even with their unproven efficacy, homebrew solutions are much better than nothing and relatively easy & inexpensive to employ.

LOTW TO ADD SUPPORT FOR CQ WAZ AWARD

ARRL News http://www.arrrl.org/news/view/logbook-of-the-world-to-add-support-for-cq-waz-award?utm_source=amateur-radio-weekly&utm_medium=email&utm_campaign=newsletter

12/14/2017

Participants in CQ magazine's Worked All Zones (**WAZ**) award program will soon be able to use the Logbook of the World (**LoTW**) system of ARRL, the national association for Amateur Radio, to apply for the WAZ award and its endorsements, both ARRL and CQ announced on December 14.

Amateur Radio operators will be able to use LoTW logs to generate lists of confirmed contacts to be submitted for WAZ credit. Standard LoTW credit fees and separate CQ award fees will apply.

Implementation, documentation, and internal testing of the link between LoTW and WAZ is complete. ARRL and CQ are now assembling a team of external "beta testers" to assure that the link is ready for widespread use. A separate announcement will be made when LoTW's support for CQ WAZ is available to everyone.

Logbook of the World is ARRL's electronic confirmation system for Amateur Radio contacts. It provides a confirmation when both stations in a contact submit their logs to the system and a match between the logs is confirmed. LoTW has supported the CQ WPX Award program since 2012.

"I am very pleased that participants in the CQ Worked All Zones award program will finally be able to use Logbook of the

World confirmations in their applications for WAZ awards and endorsements," said CQ magazine Editor Rich Moseson, W2VU, adding that "WPX program participants have made excellent use of this service for the past five years and we look forward to providing it to WAZ program participants as well."

"We are excited about the prospect of supporting CQ magazine's WAZ program through Logbook of the World, as it is something that many ham radio operators have been asking for," said Greg Widin, K0GW, ARRL First Vice President and chair of the Logbook Study Committee. "We believe this partnership will enhance the amateur radio experience for many practitioners."

CQ Communications, Inc. is the publisher of CQ Amateur Radio magazine and is the world's largest independent publisher of Amateur Radio magazines, books and videos. Worked All Zones is the second-oldest active Amateur Radio award program, behind the International Amateur Radio Union's Worked All Continents (WAC) award.

FM Satellites: Good Operating Practices for Beginning and Experienced Operators

December 11, 2017 by Sean Kutzko



With the success of AMSAT's Fox project, more FM satellites are in the sky, and more are on the way. As a result, many radio

amateurs are getting interested in working satellites for the first time. If you are new to FM satellite operating, welcome!

While working stations through an FM satellite is fairly easy, there are some operating practices that all operators should follow. Since FM satellites are a shared resource, all operators during a pass need to help keep the passes accessible for as many stations as possible.

Many of these guidelines are based around two simple "Golden Rules" of satellite operating: Don't transmit if you can't hear the satellite, and operate using full-duplex capabilities if at all possible, meaning you can transmit and receive at the same time. Some radios offer full-duplex capabilities, or you can use two separate radios to achieve this.

1. Share the Pass

FM satellites are just like a repeater: only one person may transmit at a time. Since a satellite is overhead for 15 minutes at most, each operator will want to make some contacts. Please don't monopolize a pass; let your other ham colleagues have some time on the pass as well. It takes a lot of self-discipline, but sometimes the best engagement is to make one single QSO and sit back to listen for the remainder of the pass.

2. Let Other QSOs Finish

Please let other stations complete their QSO before you call another station. It's very frustrating when you are calling a station to complete a QSO and another station starts a call before your QSO is completed. Calling someone who has just called another station is considered rude. It's the equivalent of being interrupted; nobody likes being interrupted. If you hear a QSO in progress, please let that QSO finish before you make your own call.

3. Minimize Repeat QSOs

There are often times where you will hear stations on a pass that you have already worked several times. If a pass has other callers, please refrain from calling a station you have already made contact with numerous times. If you think about it, there are only so many QSOs that can be made during a given pass. Each QSO that is made between two stations that have already contacted each other prevents another QSO from happening, one that might be a new grid square or state for another station, or a station's first QSO.

4. Don't Call CQ

Please don't call "CQ Satellite" on an FM satellite. It's the same as calling CQ on a repeater; you just don't do it. Generally, it's better to pick out a station and call them directly. However, if you want to announce your presence on an FM satellite pass during a pass with low activity, simply give your call and grid (example: "W1ABC FN32"). If you have given your callsign several times and are not getting calls, there may be a problem with your station. Take a break and examine your station before transmitting again.

5. Use Phonetics

It can be very difficult during a busy pass to hear and understand a callsign correctly. Using standard phonetics will make initial copy of your callsign much easier, which reduces the need for repeated transmissions. This makes each QSO shorter, which makes more of the pass available for others. It is not a race. There is no need to give your callsign quickly.

6. Rare/Portable Stations Take Priority

It is common for satellite operators to take their equipment with them to portable locations, to transmit from rare grid squares or other DX countries. Courtesy should be extended to these stations; they are providing a rare location to all satellite operators and will be at that location for a limited time. If you hear a station on from a rare grid or DXCC entity, use good judgement before calling stations in more common grids. If the rarer station is working a lot of people on a pass, it may be best to let that station work as many people as possible. There will always be another pass to work more common stations. Info on how to know when rare stations will be on is at the bottom of this list.

7. Use Only the Minimum Power Required

Generally, 5 watts from an HT and a directional antenna is plenty of power to work an FM satellite from horizon to horizon.

8. Work the New Stations

Satellites are for everybody, and the satellite community LOVES hearing new calls on the FM birds. Regular satellite operators should pay close attention during a pass; if you hear a callsign that's new to you, take the time to call them. You may be that station's first satellite QSO; what an honor!

How to Get the Latest News on Satellite Activity

There are several ways satellite operators can stay abreast of operations from rare grids or DXCC entities. AMSAT's website has an area for Upcoming Satellite Operations; check this regularly for the latest info. If you're on Facebook, you can also join the AMSAT-NA Facebook group; many operators post their activity news in the group. It's also a good place to meet other satellite operators and ask questions if you're new.

Many of the most active satellite operators use Twitter to post their real-time activity. If you're on Twitter, look for posts that tag @AMSAT or use the hash tag #AMSAT. You will quickly see who the frequent posters are; be sure to follow them for the latest info on where they will be operating from.

If you're not interested in social media, you can subscribe to the AMSAT email reflector or the AMSAT Weekly News Bulletin, which features an area highlighting upcoming operations.

Lastly, you can always listen to a pass. If a lot of people are calling a specific station, that's a good indicator they are at a rare location. This is especially important at the beginning or ending of a pass, when the satellite's footprint is more likely to include DX stations.

We hope that these guidelines provide a way for all satellite users to cooperate and share each pass. We want you to work lots of stations and have fun, but not in a way that prevents others from having a good time on the satellites, too. Be neighborly and a good steward of the satellites, and we can all have fun for a long time.