

October 2022

Volume 23

Issue 10

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OCTOBER 1

Allen County HamNews

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"WELCOME"
BEACONS

Indiana Trail 100 Mile Run Public Service Opportunity

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And much more!

Hamming It Up With the Editor

Fall has arrived—along with the October edition of HamNews! This month's edition includes a wide variety of topics and events. Several highlights follow.

IT-100 Event

Allen County hams are supporting the IT-100 run next weekend. If you are able to help with this event, please see page 4 for Jim's contact information.

DX is back!

Over this weekend, the higher HF bands came alive quite nicely. N8KR and K9FW both reported contacts with Israel, French Polynesia, and several other choice DX entities on 10m. I worked VK9DX from Norfolk Island on 10m CW. Hopefully, propagation on the upper bands will continue throughout the fall and winter.

Sunspots

On a related note, just this evening I am reading that another large sunpot appeared on the sun. You can read about this at the Spaceweather.com site.

Hurricanes

As you may have seen in the news, the damage from Hurricane Ian was devastating. If you are able, please consider a way in which you might be able to help the people impacted by this deadly storm. Hams and the American Red Cross have been involved in relief efforts so far.

Happy Halloween

This year's Zombie Shuffle is coming up at the end of the month. Check out the column that describes this colorful event later in this edition of HamNews.

Wrapping Up

As always, thank you to each of the contributors for this edition of HamNews. You are the ones who make this monthly publication possible.

Catch you on the airwaves!

73.

Josh, W9HT (sometimes portable V42)



ALLEN COUNTY HAMNEWS

HamNews is a monthly, joint publication of the Fort Wayne Radio Club, the Allen County Amateur Radio Technical Society, and the Fort Wayne DX Association.

Articles are written by members and friends of the three clubs. New submissions for HamNews are always welcome. Please send your information to the editor within two days of the end of the month for inclusion in the next edition.

HamNews Editor
Josh Long, W9HT
drjoshlong (at) gmail.com



ARES Simulated Emergency Test (SET)

By Brian Kibiger, AC9XU, AEC Chapter 6: The Simulated Emergency Test - SET (ARES Manual)

The ARRL Simulated Emergency Test is a nationwide exercise in emergency communications, administered by ARRL Emergency Coordinators and Net Managers. Both ARES and the National Traffic System (NTS) are involved. The SET weekend gives communicators the opportunity to focus on the emergency communications capability within their community while interacting with NTS nets.

6.1 Purpose of SET

1) To determine strengths and weaknesses, in an exercise environment, of ARES groups at local and section levels.

Many times we think we are prepared but don't really know until it might be too late. How we maintain our equipment, how we have educated ourselves, and how we have practiced over the year can be put under extreme pressure in an emergency environment. A SET allows us to capitalize on our strengths and define our need of improvement through our weaknesses. In this case, identifying our weakness with a corrective action plan will make us better ARES operators.

2) To provide a public demonstra-

tion of Amateur Radio Service capabilities to partner organizations and agencies during times of emergency or disaster.

In careful review of this point, "public demonstration" stands out. To clarify, public is defined as "the community" and demonstration is defined as "practical exhibition and explanation of how something works". The SET is a once-a-year event where the ARES community is granted the privilege to show our friends, family, and community what it is we do. This is the time to get into the details of how ARES (we) best serves our community and partner agencies. We must always remember that while showing off our equipment and talent is exciting, operational excellence will be the lasting memory to those we serve.

3) To help radio amateurs gain experience in communications using standard procedures and a variety of modes under simulated emergency conditions.

Every week we gather for an ARES net. Several times a year we support local organizations through public service events and now we must prepare for the annual SET. Again, we have an opportunity to take what we talk about and put it into practice. Let us put Theory Into Practice:





Summary

Allen County ARES will again participate in the ARRL SET event. Take time now to test your equipment, anticipate the unexpected to root out any weaknesses, and educate yourself on best practices. The time is now to show our community just what it is we do and how we execute with excellence. The challenge comes as we are open to learning, practicing again routine task, and serving in the community we live. The real question is:

Are you ready for the ARRL SET 2022?

TIP - Theory into Practice Acronym, Education Concept

Background Stock Photo Image of development,
coaching: 221185298
(dreamstime.com)

Volunteers Needed

INDIANA
TRAIL 100

Ham radio operators are needed to support the race.

More information:
Contact Jim
Moehring,
KB9WWM at
servo300 (at)
aol.com

October 8-9.
2022
Chain of Lakes
State Park





FORT WAYNE RADIO CLUB MEETING MINUTES

16 September 2022

The September meeting of the Ft. Wayne Radio Club was held at the Good Shepherd United Methodist Church (GSUMC) on 16 September, 2022, Rausch Hall.

President Carole Burke, (WB9RUS) welcomed all attendees (about 20) and led them in the pledge of allegiance. Then everyone gave their name and callsign.

Treasurer Bob Streeter, (W8ST) provided data regarding the current club Treasury status as of 16, September, 2022, to wit:

Savings-	\$1,844.46
Checking-	\$6,344.76
Vanguard Money Market	\$11,380.60
Year-To-Date Income	\$1,912.03
Year-To-Date Expenses	\$2,738.60
Club members count	154
Prepaid for 2023	3

Joseph Lawrence, K9RFZ reminded everyone that the FWRC would be participating in the Allen County Safety Fair on Saturday, September 24 at the Allen County Public Safety Academy from 10am to 1pm. We will set up a Special Events Station and operate on 40M, 20M and vhf to demonstrate the hobby to the public.

Al Burke, WB9SSE reminded everyone that a Disaster Relief Conference is being hosted at Concordia Seminary on 28 -30 September that will include a Spe-

cial Events Station activity under the call-sign W9E, organized by Reverend Philip W. Zabell, KI6SMN. Phil is attempting to show-off the benefits of ham radio to the Disaster Relief participants, the majority of whom are not hams. It appears that Jim Moehring, our Allen County EC has agreed to create a disaster simulation scenario that can be used to practice handling of a simulated event with ham radio participation. Several area hams are involved but more participants would be helpful. If you are interested in helping you are encouraged to contact Phil at:

Philip W. Zabell, KI6SMN 530-520-1458 Pzcard (at) yahoo.com

Al announced that the Board is looking into creating a FWRC decal that FWRC members can display on their automobiles or other devices. We want a decal that includes the W9TE callsign in the ARRL diamond that is depicted on FWRC's letterhead. (See below).



Steve Nardin, W9SAN for one is working on a design. Other club members are encouraged to do the same and send any suggestions to Steve. We would like to have a design and hence decals

available for distribution for those who re-up their FWRC 2023 membership during the membership re-up promotion during the FWA Hamvention the weekend of 19-20 November, 2022. The first decal will be free to those who re-up their 2023 membership, and we will offer additional decals for \$1.00 each.

FWRC Activities for 2022 Foxhunts Board Meetings Club Meetings 10/2/2022 10/11/2022 10/21/2022 11/6/2022 11/8/2022 11/18/2022 - 11/29/2022 12/9/2022

FWRC Officers 2022

President

Carole Burke, WB9RUS (260) 637-1989 wb9rus(at)comcast.net

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Communications Manager

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Terry Bowman, K9FMX (260) 705-7128 tjbowman(at)frontier.com

Larry Temenoff, KB9OS

Newsletter Editor Josh Long, W9HT Paul Prestia, KA3EZP reported that all club repeaters are up and functioning normally. The 146.91 machine now operates with two satellite receivers, one at the 146.940 Fusion/444.99875 D-Star site on Parrott Rd., the second at Jim Wolf, KR9U's QTH on Union Chapel and Auburn Rd. Thus it provides excellent coverage with hand-helds in the northern part of the city. We are currently considering implementing another satellite receiver in the south part of town and we are investigating reducing the amount of receiver desense occurring at the 146.91 site on PU's campus.

The speaker for the September meeting was Carlos Felix-Ortiz, KD9OLN who described the development and use of a

Automatic Dependent Broadcast-Surveillance (ADS-B) receiver system comprised of a DSP receiver mated to a Raspberry-4 computer and suitable implementing software. The system works with ADS-B beacons installed in all commercial aircraft and allows for the real-time location of aircraft with-in several hundred miles of the ADS-B receiver including it's tail number, altitude, speed and direction of flight. Carlos provided a demonstration of the equipment during his presentation. The system operates at 1090 MHz and functions similar to FM-Packet radio. For

those interested in the details contained in this truly impressive presentation they missed if they were not at the September meeting, see:

https://youtu.be/DUo8eBu Cno

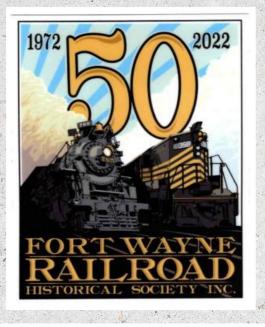
The meeting concluded about 8:45 pm.

Respectfully submitted,

Al Burke, WB9SSE

Secretary, Fort Wayne Radio Club





UPCOMING SPECIAL EVENT STATION

Stay tuned to the Allen County HamNews for more information on this historic special event this fall! **Public Service Special Report for HamNews**

FWRC Participates in 2022 Allen County Safety Fair

The FWRC participated in this year's Allen County Safety Fair held on 24 September at the Public Safety Academy in south Fort Wayne. About 40 exhibitors were there ranging from representatives from the Ft. Wayne police and Allen County Sheriff's department to Homeland Security to the Ft. Wayne Fire Department to I&M Electrical Safety to Animal Control to the Lutheran Hospital Lifeline Helicopter, and many other organizations with a message related to safety.

Carole Burke, WB9RUS, Terry Bowman, K9FMX, Charles Ward, KC9MUT and Al Burke, WB9SSE set up and operated a 40m phone station using a 40m end-fed antenna and Charles' HF rig. They also set up a 2m station.





They had fun making contacts (40m was cooking) and enjoyed answering questions and demonstrating the hobby to attendees.

State of the Arts

Allen County Amateur Radio Technical Society

P.O. Box 10342, Fort Wayne, IN

FROM THE ACARTS PRESIDENT

CHRIS, W9TSB



Hello everyone!

First off, our thoughts and prayers are with those affected by hurricane lan. This hurricane left lots of devastation behind it. I myself had family that got hit by Ian. They are okay and safe, but they have some damage to their home. The hurricane net control operators did a great job of keeping all listening updated on current information. To those that setup emergency communication stations there, you are true heroes for helping others to get the services they need. Or connecting them with a loved one to let them know you are okay.

Our September general meeting, we were joined by John W6NCB. John talked about skin effect. The video of the meeting will be posted on the ACARTS YouTube channel soon. https://www.youtube.com/channel/UCHob43ZkqPfgmQiwZ3F3b8w.

We still have the Secretary position open on the ACARTS board. If anyone is interested in being a part of our board, please email me at w9tsb (at) outlook.com.

Our October general meeting will be a Hamfest prep meeting. This will be a virtual meeting on Zoom, the link will be posted on the ACARTS website at www.acarts.com about a week or two before the meeting. Those that wish to help with the Ham fest are welcome to join the meeting.

Thank you, all!

73.

Chris McCullough, W9TSB

ACARTS Officers 2022

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Dave Lindquist W9LKH 260-485-6135 w9lkh(at)comcast.net

50th FORT WAYNE HAMFEST & Computer Expo



ARRL Forum - Saturday 10:00 AM

Carl Luetzelschwab K9LA

ARRL Central Division Director

Brent Walls N9BA

ARRL Central Division Vice - Director

Bob Burns AK9R

ARRL Indiana Section Manager

Jim Moehring KB9WWM

ARRL Indiana Section Emergency Coordinator

Ham Radio License Testing All Classes (\$14) 9 AM till 12 PM Saturday

WAS & DXCC Card Checking and CQ Awards

Youth Lounge (under 12 accompanied by adult)

New & Used Ham Equipment Dealers

Main & Hourly Door Prizes

2 Rooms of Special Interest Forums All Day Saturday

Talk-in Radio Frequency 146.880 (-)

Tables: \$30 Regular, \$50 Premium, \$33 Electricity
Drive Directly to Your Table for Setup

November

19 & 20

2022

SAT 9 AM to 4 PM SUN 9 AM to 2 PM

Admission: \$8 Sat &
Sun
\$4 Sun only
Children under 12 free
(with adult)

Allen County
War Memorial Coliseum
4000 Parnell Ave
Fort Wayne, IN
73,000 sq. ft. all indoors
(Coliseum Parking \$8 per
vehicle)

Get the latest information at

www.fortwaynehamfest.com www.facebook.com/FTWAYNEHAMFEST/ Contact (260) 579-2196, PO Box 10342, Fort Wayne, IN 46851 Special Advertising Section to HamNews



50th Fort Wayne Hamfest!

Attention Hams and Non-Hams

If you didn't know or forgot, the 2022 Fort Wayne Hamfest is a month and half away!

We are working on making this year great and need your help in spreading the word about our hamfest. Like with many events, volunteers make an event great and this hamfest is no different. If you can volunteer for any amount of time, please contact us and we will get you on the list.

There will be many awesome forums on Saturday, with ARRL representatives, people who are making this hobby great and even Riley Hollingsworth (K4ZDH) will be attending with a forum on Resurrecting Vintage Equipment with Carl Luetzelschwab (K9LA).

Again, mark your calendars for Nov 19th (9am to 4 pm) & 20th (9am to 2pm) and get your shopping list together for those must have items. If you're one that might have too much, don't forget that we have

tables available for selling to make room for the new items that you just can't live without.

If you are looking to become a new ham or upgrade your exciting license, we will have testing on Saturday for 9am to 12pm. Here is the link to preregister and to make sure that you have all your documents in order before you arrive:

https://hamstudy.org/

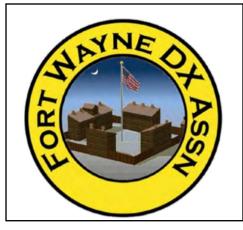
sessions/6305841de34cc55fa05616aa/1
Head over to the 2022 Fort Wayne Hamfest webpage for all your information needs and contacts:

http://www.acarts.com/hfmain.htm

We look forward to seeing you at the 2022 Fort Wayne Hamfest and Computer Expo

Fred Gengnagel, KC9EZP

Hamfest Chairman



The 69th W9DXCC Convention

By Carl Luetzelschwab, K9LA

My wife Vicky AE9YL and I attended this year's W9DXCC Convention in Naperville, IL (a suburb of Chicago) on the third weekend of September. It was dedicated to Jim O'Connell, W9WU, who was the emcee for over half of the conventions. He became an SK earlier in the year. Jim was a lawyer, and he helped hams navigate through local ordinances governing "antenna support structures." Jim also served on the ARRL's DX Advisory Committee (DXAC) for over 20 years.

The convention began on Friday with DXU (DX University) and CTU (Contest University). Ed, N9PE, organized DXU and Craig, K9CT, organized CTU. There were six presentations in each track, and many interesting topics were discussed.

Vicky's favorite presentation was by Michael, AA6DY. He talked about the balloon launches by the Northern Illinois Bottlecap Balloon Brigade (visit https://nibbb.org/ for more information). Their latest balloon was launched on September 3, and as of September 25, it has circumnavigated the world and is on its second lap. The balloon is

small and lightweight, using hydrogen. It transmits QRP on 20m using WSPR with a halfwave thin wire hanging down.

My favorite presentation was a DXpedition Q&A with Craig, K9CT, and Glen, W0GJ. They both have been on some really difficul DXpeditions, and they had many interesting comments about issues that you'd not normally hear about.

Throughout the day on Saturday, card checking was done by N9AU, WD9DZV, W0GJ, AE9YL and K9LA. AE9YL checked two VUCC applications (she's an Awards Manager) and the rest of us checked sixteen DXCC

applications. Card checking is still an important aspect of DX conventions, but, of course, nowadays we don't see as many applications as we saw before LoTW.

Saturday's programs included a preview of the upcoming Crozet DXpedition, a preview of the upcoming Bouvet DXpedition, a presentation about RFI (radio frequency interference) by Ed, W1RFI (Lab Manager at HQ), working the CQ WW DX contests from all 40 CQ zones by Dick, N6AA (he did a similar presentation in-person to the FWDXA in May 2019), my usual yearly dose of propagation stuff focusing on

an update on Cycle 25 and 6m F2 propagation possibilities and an ARRL Forum to discuss and answer questions about a variety of topics. The Saturday evening banquet featured Tim, K3LR. He gave an interesting and thoughtful discussion of the future of DXpeditioning.

Attendance wasn't as high as in pre-covid days, but it's getting better. To play it safe, no hospitality suites were offered (usually hosted by the Northern Illinois DX Association and the Greater Milwaukee DX Association). There was already talk about the 70th W9DXCC Convention, and I'm sure many are looking forward to it.





Serial Number Decoding: Rig Sleuthing

Welcome to fall! As I write this month's "Tuning Up" column, I can see the trees in the backyard just starting to shimmer in their fall finery. The season of red, yellow, and gold vistas is just about here.

For this month's article, I thought it would be interesting to investigate if any information exists on how to determine the manufacturing dates for radios produced by Yaesu. Perhaps not unsurprisingly, there actually exist multiple websites that specifically address this topic. Since these are internet websites, the veracity of this information is not necessarily guaranteed. Still, if this process is relatively accurate, it could prove a fun pastime in reading serial numbers off of radios and determining their date of manufacturer.

Yaesu's Numbering Practice

Multiple hits from Google revealed multiple websites that give explanations for Yaesu's serial numbering system. To briefly summarize the process, here is an example serial number (taken from your author's Yaesu FT-450d transceiver).

4L990017

Let's break this down. According to the process detailed online, the serial number breaks into four separate segments: the first number "4"; the first letter "L"; the next two numbers "99"; finally, the last four numbers "0017". The first number is the last digit of the year the radio was manufac-



The author's Yaesu FT-450d serial number, located on the underside of the transceiver.

tured. Considering that the Yaesu FT-450d was produced starting in 2011, this means that this radio was produced in 2014. The first letter means that this radio was produced in the month of October (L is the 12th number of the alphabet, but if you subtract 2, you get 10 or the month of October. This process is detailed on the web). The next two numbers are the lot number of the transceiver. In my case, this is lot #99. The final four numbers is the what number of rig produced in that lot. In my case, this means my radio was the 17th radio produced in lot 99.

However, like any neat "trick", there is a catch to this process – radios produced for more than 10 years. Here's a real world example – the Yaesu FT-8900r. The 8900r, which is a quad-band transceiver (10m, 6m, 2m, and 70 cm, fm-only) was produced from approximately 2002 to 2019. Yaesu never changed the 8900r's features/ abilities, meaning that the 8900r has remained just that – the 8900r – for close to 20 years.

The issue here is that in the aforementioned process of "reading" Yaesu serial numbers, there is only one number at the start of the serial number, and that serial number only includes the last digit of the year the rig was produced. What happens if we have two FT-8900r transceivers, both of which have serial numbers starting with the number 6? Does this mean that the transceiver was produced in 2016, or was it 2006?

To the best of my knowledge, there is no easy way to determine the difference between years separated by a decade for the 8900r. The idea of possibly using the lot number might be considered, except that the "lot number" is not clearly defined from a temporal stand point. Does a lot number of "1" correspond to the beginning of that model's production run, or does it refer to only the number of lots produced that year of that radio? I can't imagine there being 99 lots of FT-450d's being made in one year alone, but I could be wrong in my assumption.

In any case, the best indicator for when your model was produced is if the date of original purchase can be determined. For example, if one purchased an ft-8900r in 2016, and the serial number for that radio begins with the number "6", it's a pretty safe bet that the radio was produced in 2016, not 2006.

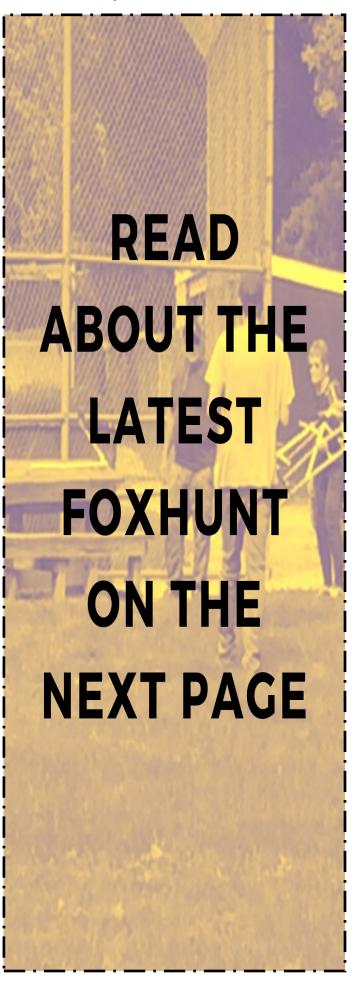


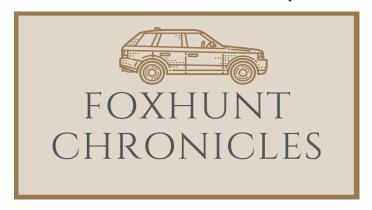
The author's Yaesu FT-8900r serial number, also located on the underside of the transceiver.

If more information becomes available on reading Yaesu's serial number, I will be sure to share that info here in this column. Next month, we'll look at serial numbers for Icom and Kenwood.

Until next time, 73!

de Tim ac 9ez





September 2022

The September Fox Hunt is different from most of them, mainly due to the calendar! Usually, we do a Fox Hunt on the first Sunday of the month, but for September, that is Labor Day weekend. The following Sunday is always the Findlay Hamfest, so once again we push to the following weekend. September 18th was our day to hunt, and this time the Fox was Charles, KC9MUT, who found a little used spot in a frequently used location, the softball diamonds at Foster Park in Fort Wayne, (@41.03822, -85.15617).

At the start point (the 20/30 Surplus parking lot next to Carrington Field off Coliseum) was the team of Linda, Steve, and Alex who were ready to go. Joining them as a shortened team for the first time was Carole and Al Burke, WB9RUS & WB9SSE respectively. They typically join up with Jim and Anne Pliett, but the Pliett's foxhunting vehicle was down with sour brakes. (One thing you really want to have on these hunts is a good way to stop!) Al's equipment was missing a good 2 meter yagi for distant bearing, so Steve gave him a backup antenna that he had. Al's plan is to make use of a 7 element yagi he has at home with a custom made 'plug' for his sunroof that will allow incar direction finding.

Due to some technical issues with Al's rig, the hunt was delayed by 5 minutes and got underway at 1:35 pm EDT. Both teams had bearings showing SSW from the start point, and the chase was on! After circumnavigating Harvester Park in vain, we realized that the Fox was much further west, although Charles' signals were good and strong. Thus started a slow trek via McMillen Park and west on Pettit Avenue. Toward the end of Pettit, the signals seemed at the south end of Foster Park, but I worried that they may be on the other side of the St. Mary's River.

When we hit Hartman Road, we turned south to the

ball diamonds at the southern most end of Foster Park. Charles' truck was spotted right away, and we deployed our close-in sniffing equipment to try and find the microfox, which was nice and loud at this point in the hunt. It didn't take too long to find that the microfox was held with a magnet taped onto it at the back of a metal electrical junction box that was at the ball diamond! Alex was first to find, followed by W9SAN, then Al and Carole. Wow, a good conclusion to a good hunt! It took just about 1 hour to complete.

The Nardin Team was trying out a new attenuator scheme, and it worked very good, but needed some extra when we got close in, so next time we will add a JFW attenuator in series with the other one. We noticed that Charles' microfox emitted practically no third harmonic so using the third harmonic equipment was not too effective.

The Foxhunt scorecard is as follows:

FOXHUNTER	SEPTEMBER 2022 SCORE	YTD SCORE
WB9RUS	1	4
WB9SSE	1	4
KA9YYI	0	2
К9ОМА	0	2
KC9MUT	1	12
W9SAN	2	8
W9LAN	2	6
ALEX	3	10
KD9TST	0	2
KD9TTK	0	2
KD9TTL	0	2

For the October Hunt, the Nardin team will not be able to attend, so Al and Carole will be the Foxes for that hunt coming up on October 2nd, the first Sunday in the month. Our last hunt of the year will be on November 6th. It is a great way to spend an hour or two on a Sunday afternoon, so why not consider coming out and joining us?

73,

Steve, W9SAN





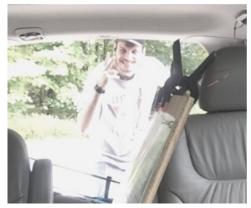






September 2022









Join the final foxhunt of 2022 on Sunday, November 6th!

Special Halloween 2022 Advertisement to HamNews

The Zombie Shuffle

Hey CW ops . . . here's a fun event. Friday night, October 28th from 4pm to midnight, the 25th annual Zombie Shuffle will take place. This is a qrp (5 watt) event: use a keyer or bug or straight key at a slow speed. You can work the same station on different bands PLUS you can work a station again on the same band 2 hours after you worked him before. There's a lot of activity and listen for stations calling, "CW BOO" or call, "CQ BOO" your self. The exchange is quite simple: RST – STATE – Zombie Number or your Area Code - NAME. You can request a lifetime Zombie Number by following the link on the Zombie Shuffle webpage:

http://zianet.com/qrp/ZOMBIE/pg.htm

(or email Jan – N0QT (at) zianet.com) You will also find a down-loadable score sheet along with all of the rules and info regarding the shuffle. If you don't want to use your real name, make up a theme-related name. Here are some names I worked last year: Chucky, Jason, Igor, Fester, Pugsley, Boris, Elvira, Lazarus, and Ghoul. Scoring is simple: add up the zombie numbers/area codes

on each band, then add all of the band totals together for a huge score! A typical qso could be:

CQ BOO de W9HT k

N8KR

N8KR 599 IN 260 Josh

QSL Josh 599 IN 1582 Booger

TU 73 de W9HT

Silly? Stupid? Fun!!! Visit the webpage, email Jan for a Zombie number (or use your area code), and join in the fun . . . and remember it's qrp, so dial the power down.



AMSAT Outlines Tracking for Artemis I Moon Mission using "Welcome" Beacons

When NASA's Artemis I rocket launches for its mission to the moon this month, you'll be able to track it using 70-centimeter beacons known as Outstanding MOon exploration TEchnologies demonstrated by NAno Semi-Hard Impactors (OMOTENASHIS).

Omotenashi is Japanese for welcome or hospitality, and it describes the 70-centimeter beacons as small spacecraft and semi-hard landers of the 6U CubeSat format which will demonstrate low-cost technology to land and explore the lunar surface. OMOTENASHI will be one of 10 CubeSats to be carried with the Artemis I mission.

Brian Wilkins, KO4AQF, says that with the Artemis Real-time Orbit Website (AROW), anyone with internet access can pinpoint where Orion is and track its distance from the Earth, its distance from the moon, the mission duration, and more. AROW is available-on NASA's website and Twitter account. AROW visualizes data collected by sensors on Orion that are sent to the Johnson Space Center's Mission Control Center in Houston during its flight. It will provide periodic real-time data beginning about 1 minute after liftoff through the separation of the Space Launch System (SLS) rocket's Interim Cryogenic Propulsion Stage, approximately 2 hours into flight.

Once Orion is flying on its own, AROW will provide constant real-time information. On the web, users can follow AROW to see where Orion is in relation to the Earth and the moon, and follow Orion's path during the mission. Users can view key mission milestones and characteristics on the moon, including information about landing sites from the Apollo program. Also available for download will be an ephemeris, which provides trajectory data from the flight.

AROW will also provide a set of Orion's state vectors -- data that describes precisely where Orion is in space and how it moves -- for inclusion in these tweets once Orion is flying on its own. These vectors can be used for data lovers, artists, and creatives to make their own tracking app, data visualization, or anything else they envision. For more information, read https://www.nasa.gov/feature/track-nasa-s-artemis-i-mission-in-real-time/.

AMSAT member Joe Fitzgerald, KM1P, adds a second online tool, called Horizons. The JPL Horizons online solar system data and computation service provides access to key solar system data and flexible production of highly accurate locations for solar system objects such as asteroids, planetary satellites, planets, the Sun, and select spacecraft. Horizons is provided by the Solar System Dynamics Group of the Jet Propulsion Laboratory.

Fitzgerald says to use "OMOTENASHI" as the Target Body. You can find information and the online app at https://ssd.jpl.nasa.gov/horizons.

-- Thanks to Brian Wilkins, KO4AQF; Joe Fitzgerald, KM1P; NASA; JPL Horizons, and AM-SAT.

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RADIO SPORT for October



8-9 OCT

Nevada QSO Party 0300Z, Oct 8 to 2100Z, Oct 9

SKCC Weekend Sprintathon 1200Z, Oct 8 to 2400Z, Oct 8-9 OCT

23 OCT North American SSB Sprint Contest 0000Z-0400Z, Oct 23

CQ Worldwide DX Contest, SSB 0000Z, Oct 29 to 2359Z, Oct 30 29-30 OCT

This information comes from the WA7BNM Contest Calendar at contestcalendar.com and is gratefully acknowledged. It is deemed accurate as of the time of publication.

		Area N	Nets (update	d as of 10/	1/22)
Daily			Tuesday		,
8:00 AM	3.535	Daily (QIN) Indiana Section CW net	7:30 PM	147.150+	21 Repeater Group Net (97.4 PL)
8:30 AM	3.912	Daily Indiana Traf- fic Net	8:00 PM	50.580 USB	FWRC 6-Meter SSB Net
6:00 PM	3.910	Daily Indiana Traf- fic Net	9:00 PM	146.940-	Allen Co. ARES Training Net (141.3 PL)
6:30 PM	146.880-	IMO (alternate is 146.760)	Wednesday		
7:00 PM	147.015+	Tri State Two Me- ter Net	7:00 PM	146.760-	FWRC YL Net
8:00 PM	3.535	Daily (QIN) Indiana Section CW net	8:00 PM	145.270-	Whitley Co. ARES (141.3 PL)
Week- days			8:00 PM	50.580 FM	FWRC 6-Meter FM Net
9:00 AM	3.820	Little Red Barn Net	9:00 PM	146.940-	Help and Swap Net (141.3 PL)
Sunday 8:00 PM	444.550+	Whitley Co. ARC Sunday Night Net (141.3 PL)	Thursday 8:00 PM	D-STAR	Indiana D-STAR net (Note 3)
8:30 PM	146.910-	"No-Name" Net also on EchoLink Node number 519521	8:00 PM	50.580	AM 6-Meter AM Net
9:00 PM	145.53 simplex	Northeast Indiana Packet Net 1200 baud (Note 2)	8:30 PM	145.510 simplex	Allen County ARES Digital Operations Team Training Net (Note 4)
Monday			Saturday		
8:00 PM	224.780-	Fort Wayne 224 Net	8:00 PM	146.685-	Huntington ARES(141.3 PL)

1. All times local time. Any changes or corrections should be submitted to the newsletter editor at drjoshlong (at) gmail.com.

3. Reflector REF024B.

		Area R	epeaters (u	pdated as o	f 10/1/22)		
Frequency	Offset	Tone/ Notes	Callsign	Frequency	Offset	Tone/ Notes	Callsign
53.3300	-1 MHz		W9FEZ	442.6375	+5 MHz	MDR CC1	N9MTF
145.330	-0.6 MHz		W9FEZ	442.99375	+5 MHz	D-Star W9TE-B	W9TE
146.880	-0.6 MHz		W9INX	443.100	+5 MHz	DMR CC1	K9MMQ
147.255	+0.6 MHz		W9INX	443.275	+5 MHz	P25 NAC # 293	K9MMQ
146.760	-0.6 MHz	141.3	W9TE	444.250	+5 MHz	141.3	W9AVW
146.910	-0.6 MHz		W9TE	444.800	+5 MHz		W9FEZ
146.940	-0.6 MHz	141.3	W9TE	444.8750	+5 MHz	141.3	W9TE
		FM/					
		C4FM					
224.780	-1.6 MHz		W9FEZ				

^{2.} NEIPN is direct accessible via any BPQ Chat Node (or through Node hopping etc.) via other packet frequencies in this area and other areas through other nodes (it is locally direct accessible on 145.53 in NC & NE Indiana/NW Ohio and SE Michigan using KA9LCF-11, KC9VYU-11, N9LCF-11,N9PXO-11, K9BIF-11) Most BPQ Nodes use an SSID of -11.

^{4.} Net starts using BPSK-31 and switches to BPSK-250 after roll call to pass traffic etc. NBEMS suite of software (FLDIGI, FLMSG, and FLAMP) is preferred.

5. Indiana HF Traffic Nets Web Site: http://www.inarrl.org/index.php/public-service/indiana-nts

	FWRC Membership Application	
Name:	_ Call Sign:	
License Class:	_ Odii Olgii	
Street address:	City:	
State: 7IP:	Phone #-()	
Email address:	City: Phone #:() ARRL Member?	
(ARRL membership helps the club maintain AR	RL affiliation)	
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Fort Wayne Radio Club dues:		
Regular membership	\$25.00 / year	
Family membership ¹	\$35.00 / year	
Student membership ²	\$5.00 / year	
Associate membership ³	\$20.00 / year	
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P.O. Box 15127		
Fort Wayne, IN 46885-5127		
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K-12 or full time student.		
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