

Monthly Newsletter of the Tri-State Amateur Radio Society Serving the Tri-State for over 70 years

December 2021 - Issue No. 12



The SPARKS Newsletter is published monthly by the Tri-State Amateur Radio Society as a source of information about Club activities, and general news items of interest to the Amateur Radio community.

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E-mail subscriptions are provided to all regular TARS members.

News contributions and letters/emails to the editor are always welcome. TARS regular membership is open to all licensed Amateur Radio operators for \$25.00 a year. An Associate membership is also available to those who are interested in Amateur Radio but do not currently hold a license. Associate membership is \$25.00 a year. Student memberships are also available for \$12.50 a year.

Membership information is available at www.w9og.net

The Tri-State Amateur Radio Society meets the second Thursday of each month at the Red Cross, 29 Stockwell Rd, Evansville IN, at **7:00 p.m.**Family and visitors are always welcome to attend.

For more information, please contact one of the TARS officers listed in this newsletter or email info@w9og.net.

Presidents Corner

Well, what a year it has been!! And now we are entering my favorite time of year, celebrating Christmas with family and friends, and looking forward to an even better new year ahead. I hope all of you are doing well and staying safe and healthy in these trying times of 2020 and 2021. I am hopeful that the human race has by the grace of God turned the corner on this horrible pandemic and things can start to get back to normal finally.

At our November meeting we held our annual elections. I want to say a HUGE thank you to the board members and officers that are leaving their position — each had served for multiple years and each has had a very positive impact to our club's success. I sincerely say Thank You. And to the folks who were elected to a board or officer role for the first time- thank you for stepping up and supporting our club. I am grateful to all who ran for office, and if you happened to not get elected this time, I encourage you to stay involved, come to the board meetings any way, and be ready next year to get on the ballet!

I have served as TARS president for a number of years now, and this coming year will be my last as President. I will stay involved but I think it is time for new leadership and new perspectives, and I need to take a little break. So, there will be a need for someone to go on next year's ballot for the President position- it could be you.

This month at the December TARS meeting, we plan to meet in person at the WEMA facility on Evansville's west side for some show and tell of portable setups, enjoy some refreshments, and see a presentation. Come join us for this informal last get together of 2021. I am looking forward to it.

As we close out 2021, I will again say what a great year we have had as a club. We have enjoyed some fantastic operating events this past summer, and held a very successful hamfest. And have been able to break away from the confines of Zoom and actually meet together a few times. I pray that continues, and that you and your family have a wonderful blessed Christmas and New Year.

TARS will turn 75 years old in February 2022 and that is something worth celebrating! I say we celebrate all year and make 2022 one of our best ever!!

John, N9oL

73!



Amazon Smile

To set up your Amazon Smile account to donate to TARS with every Amazon purchase you make, click our unique link: https://smile.amazon.com/ch/35-6042852.

Now when making an Amazon purchase from your browser

online, login via Smile.amazon.com

[this is important as it's only via smile we will receive a donation] then make your purchases as usual and TARS will get a donation. If you use your mobile app, just turn on AmazonSmile and it will connect you automatically.

Turn on AmazonSmile in your mobile app.

Open the app and find 'Settings' in the main menu (\equiv). Tap on 'AmazonSmile' and follow the on-screen instructions to turn on AmazonSmile on your phone.

IT IS THAT EASY!

Officer Elections

Congratulations to the elected officers for 2022.

Thanks to all that stepped up and ran for an office.

With Scott moving into the Vice President spot there will be a special election to fill his remaining term on the board.

2022 Club Officers - Board members

President John VanVorst N9OL
Vice President Scott Hibbs KD4SIR
Treasurer Tom Hilgeman KD9PFH
Secretary Chris Lantaff KE9YK

Board of Directors

Mike Townsend W9KXP (2021-2022)

Charlie Martin WB8LDV (2021-2022)

OPEN (2022)

Herb Alvey KB9MZH (2022-2023)

Jerry McIntosh WB9ONU (2022-2023)

Dave Sandine KC9UVG (2022-2023)

December TARS Meeting 12/9/21 7pm

The meeting will be held at the West side EMA Training Center (WEMA) 1430 Harmony Way.

The meeting program will be presented by Dr. Glen Kissel, USI Associate Professor of Engineering, on the UNITE CubeSat, USI's student-built satellite.



It reentered on

October 21, completing its mission measuring plasma in the lower ionosphere and monitoring the drag and temperature of the satellite itself.

For those attending, masks are optional but recommended along with distancing as much as possible. As always, if you have or recently had any covid symptoms, not feeling well or have been in contact with anyone with covid or covid symptoms, PLEASE DO NOT ATTEND.

2022 Winter Field Day

Ok if you are new to the hobby. What is Field Day?

Field Day is a temporary setup of transmitting stations in public or private places to demonstration amateur radio's equipment, knowledge, skills, and the ability to provide a service to the communities and the nation. This happens twice a year. We have a Winter Field Day and a Summer Field Day.

It's time to show that we can operate and use our communication skills in a non-ideal environment. We know how to use our skills and equipment in our homes, but can we do it outside under any type of weather conditions.

So, to make doing field day more interesting a contest theme was added years ago.



Winter FD 2020 - KE9YK

2022 Winter Field Day is less than 80 days. It's time to start planning and preparing. Where do we want to have winter field day, do we want any food, how many stations will be operating, and how long do we want to operate? If you are interested in helping to organize this event let me know my email is WB9ONU@HOTMAIL.COM.

Remember an event is only as good as a result of great planning. Jerry - WB9ONU

More information on Winter Field Day can be found at: https://www.winterfieldday.com/

I joined the ARRL today.

Scott Hibbs KD4SIR

I received my no code tech license (KD4SIR – non vanity) in August 1992 when attending the University of Kentucky. I joined the W4JP university club. That Christmas I received an HTX-202 from Santa and I was VHF active. In July 1994, I passed 5wpm cw for Tech Plus and tried my best to use my new 10 meters privileges on an old cb radio. It was almost 15 years of field days before I upgraded and got on HF. (don't do this – upgrade as quickly as possible – HF is absolutely fantastic)

Like most college students, I was strapped for cash and lacked the extra funds for radios or frivolous things like memberships. Then when I could afford to get a membership in the ARRL, I chose to spend the money on radios or antennas or toys of all sorts.

For years I heard from members about what they didn't like about the ARRL. To add to that, I was already enjoying the benefits of radio, why did I need an organization to protect what I already had? What would membership benefit me? QST magazines are given freely at meetings all the time and I grabbed every used antenna issue I could find. Sure I would have loved a subscription but membership seemed like a high price for a magazine. I ended up subscribing to CQ magazine for several years.

Log Book of the World was yet another turn off for me when it first arrived. As I stated on my QRZ webpage from long ago, LotW is not for me, I won't pay (buy credits) for the information I logged then submitted to the ARRL. It's like paying to prove what I already submitted. At the time when the ARRL membership was \$40 a year, I noted that the WAS award was \$21.25 in credits and \$61.25 with membership. Instead, I got my eQSL WAS award for free. (I did donate to eQSL several times though)

Maybe I'll join when they offer some incentive like the new edition of the ARRL handbook or maybe they will offer a year for free... to my knowledge neither happened. Besides, why pay yearly when I can get a lifetime membership when I do want to join someday? Welcome to Scott at age 52. The current membership is \$46.67 a year (3 year for \$140) and the lifetime membership is \$1225. It's too late. I would need to be a member 27 years before I would break even on a life membership. I'd be

All my reasons not to join have faded away. In a world full of rights being taken away or slowly squeezed from us — and that's all I'll say about politics here — we need more and more protection and/or preparation. Not to mention increasing technology needing bandwidth. The ARRL will protect our hobby. And every organization has it's critics. I've enjoyed QST as much as CQ magazine and both have their place and each are enjoyable. It seems LotW and QRZ online logbooks have become a standard today. My long-term belief about joining with a lifetime membership has expired.

I won a \$25 gift certificate to the ARRL store (not toward memberships) at the great Hamtober Fest 2021 in Southern Indiana. It led me to join the ARRL after 29 years in the hobby that I love. The ARRL has always benefited me when I wasn't a member, and I'm grateful for that. Maybe you're like me and never saw a need to be a member and that's ok too. I hope my membership benefits you like it has me for the last 29 years. I'm not sure if my not joining was a huge mistake but I should have done it sooner. I'll know in 27 years if not getting that lifetime membership was a mistake too.

73, Scott

TRAINING?

Ken, K9KDJ

Many of us choose to participate in different nets that purport to prepare us for possible emergencies. Most of those voice nets consist of identifying ourselves with our calls, our names, and our locations, or, in the case of Winlink, in the leisure of our houses and with all the time we need combined with an alert to what the exercise will require, we follow the directions of the simulation and create a message. With 10 or 15 check-ins, the voice net control stations roger in each station, and the whole thing lasts for 10-15 minutes, and with Winlink, hundreds send in individual messages, people consolidate those, and we all proclaim success. Do we really believe this prepares us for an emergency event that would require our participation? Frankly, I doubt it.

Now, I know this subject may touch on our sacred cows—our "emergency" nets, but I also believe that sacred cows make the best hamburgers! It seems to me, therefore, if we are serious about preparing ourselves for some real emergency, our training should emulate the sorts of trials we would face during such emergencies. Let's face it, once an area would decide to ask amateur operators to activate, we would already face a situation probably like nothing any of us ever saw, and facing a critical need will demand that we respond with a plan and a professionalism (being amateur radio operators does not preclude us performing in professional ways) that allow us to fulfill the demands, the needs, and the confidence placed in us.

So, what do I suggest? I suggest that we create scenarios on frequent basis that we spring on our emergency groups to test our skills. Would this cause us to adjust our plans when we do this? Indeed, but wouldn't real crises interrupt our plans? Would this sort of training cause initial chaos? Indeed, but wouldn't real crises cause initial chaos? The old saying is, "Train as you will fight", and that applies to us as we should train as we will perform.

If we embrace this call for a shift in what we call preparing, it means that we would see a cataclysmic change in the ways we train. Frankly, I believe what we currently do would leave us scrambling to know where to start, where to go, and what to do. That does not represent a great recipe for success. If we embrace this call for change, it means devoting time to prepare—to train. If there's interest, let Chris, KE9YK, know, and I will contribute ways we can initiate more focused training. If the preference is to

continue in our current ways, there's no need to waste the space!
© Regardless, here's to hoping we can meet the needs that will surely come our way.

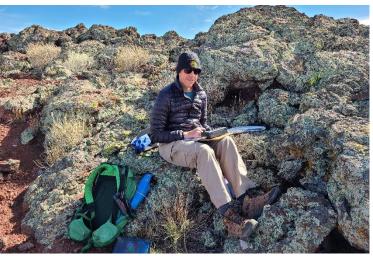
[Editors Note] While this is a good idea and would be a step in getting local amateurs involved in participating and planning for an emergency situation. The best way to prepare is joining your local ARES/RACES organization. Both Vanderburgh and Warrick Counties have such organizations and work with the local EMA's and others to assist when needed.

WA2USA SOTA Expeditions

Here are a few photos from my trip to AZ earlier in November. Both pictures were taken while KR7RK Keith and I were doing a joint activation on O'Neill Crater W7A/CS-066. O'Neill Crater is located 8 miles east of Flagstaff Arizona, a target rich area for SOTA Activators.

I did six activations while visiting my daughters living in Flagstaff. I highly recommend this area to anyone interested in SOTA, visiting the Grand Canyon, going to Lowell Observatory or seeing the Meteor Crater near Winslow.





[Editor note] More information on Summits on the Air can be found online at: https://www.sota.org.uk/

SOTA has been carefully designed to make participation possible for all Radio Amateurs and Shortwave Listeners - this is not just for mountaineers! There are awards for activators (those who ascend to the summits) and chasers (who either operate from home, a local hilltop or are even Activators on other summits).

ShakeOut 2021

- A Win with Winlink DYFI Reports to USGS

The ARES Letter for November 17, 2021

The <u>United States Geological Survey</u> (USGS) received 774 Winlink <u>Did You Feel It</u> (DYFI) reports with information and coordinates for plotting on a map. Significantly, 73% of the reports were sent via RF, with the remaining 27% sent via internet or mesh networks. USGS was impressed with the responses from all over the US, Puerto Rico, Canada, Mexico and Australia

Special thanks were conveyed to all ARES and other emergency communications groups that made <u>Winlink DYFI</u> part of their exercises for <u>ShakeOut 2021</u>, which was held on October 21. For example, the EmComm Training Organization (ETO) made Winlink DYFI part of its Winlink Thursday exercises -- 348 Winlink DYFI reports were submitted by participants. <u>ETO plotted the response</u> by its participants on a DYFI map.

In another example, southern California (SoCal ARES) groups, ARES LAX, San Diego ARES, Ventura ARES/ACS, Eastern Kern County **ARES** and CREBC (Tijuana) organized activation/deployment exercises that combined passing local agency traffic with sending Winlink DYFI and other out-of-area traffic. Moreover, these groups tested their direct collaboration in disasters and coordination on a state level with Jim Price, KO6GM, in Sacramento (the state capital) acting as a central outof-area contact for all groups. Many other groups from all over North America and the Pacific organized meaningful exercises around ShakeOut.

Lessons Learned

For DYFI reports, the USGS reminded participants that *street* address means house number, street name, city and state (and zip code, if possible). Approximately 30 entries could not be plotted because they were missing city and state entries. Changes to the Winlink DYFI platform have since been made for clarification.

Decimal degree longitude in North America is a negative number. For example, the White House is located at 38.8977, -77.0365. A few stations sent positive longitudes, which located them in Tibet. For stations that provided US street addresses in addition to the incorrect longitudes, the USGS used the street address. The USGS encourages all groups to regularly conduct Winlink DYFI exercises to train with, test, and have fun with DYFI.

In the SoCal ARES ShakeOut exercise, digital HF circuits became quickly saturated as several large groups responded to the same event. The HF traffic jam eventually dissolved, but messages took longer to transfer than necessary. Improving coordination and

local-gateway-to-out-of-area-gateway techniques may provide higher throughput in the future.

Training with local and regional partners proved to be extremely valuable. Moving traffic on local, regional, state and national levels requires training, practice and coordination, if it is to succeed. Going forward, local exercises and ShakeOut 2022, the upcoming Haywired Scenario and Cascadia Rising exercises will provide additional opportunities for large scale traffic handling by amateur radio groups, which will include Winlink DYFI. -- Oliver Dully, K6OLI, District Emergency Coordinator, ARES LAX Northeast District

Ten Tips for New Contesters and Those with Modest Stations

The ARRL Letter for November 12, 2021

Former ARRL Headquarters employee turned ham radio retailer John "Bee" Bartscherer, N1GNV, considers himself a casual contester with a 100 W transceiver and a wire antenna. As the fall and winter contest season begins, he shared 10 operating tips for new contesters and those with modest stations.



Contesting at W9SN.

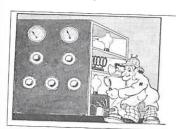
- 1. **Read the contest rules**. Know which bands are in play, your entry category, and the contest exchange.
- 2. **Use a logging program**. Quite a few options are out there. Bee's personal choice is <u>N1MM Logger+</u>. It's free, has an amazing array of features, and it's updated regularly. Most current logging software will interface with just about any modern HF radio.
- 3. More operating time means more contacts. Get rid of any distractions, such as texting, TV, and email, and concentrate on making contacts. However, Bee does suggest taking breaks. For 5 minutes each hour, get up, stretch, hydrate, and get some fresh air.
- 4. **Set achievable goals**. If you're not an experienced contester with a well-equipped station (yet), it's not likely that you'll win a contest. Instead of trying to win, aim to beat your score from last year's contest, try to work DXCC in a weekend, or try to outscore fellow club members.

- 5. **Study propagation forecasts**. Get a sense of what bands are likely to be open to areas you want to work and when. This will help you come up with a basic operating strategy. Band openings can occur at any time, so if you're operating in a category that allows it, keep an eye on the DX cluster to find out when a DX station is on the air.
- Don't waste time in pileups. Early on in a contest, don't
 waste a lot of time trying to break the pileup. Try a call or
 two, but if you don't succeed, move on and try again
 later.
- 7. **Work multipliers**. Most contests include multipliers in their scoring system, which can help to boost your score. Typically, you multiply your contact points by the number of multipliers (Sections, states, DXCC entities, grid squares) to determine your total score.
- R. Know your radio's knobs. Familiarize yourself with your radio's front-panel controls, as well as any functions that may be hidden in a menu. Just about every radio has an attenuator, preamplifier, RF gain control, noise blanker, and, frequently, noise reduction. Most will also include an IF shift or passband tuning. Try turning off the preamplifier and turning on some attenuation. This may seem counterintuitive, but if a station sounds loud, chances are you're also loud to them. Reducing RF gain can also knock down strong, close-in interference, so you can hear (and contact) weaker stations that may be drowned out by stronger ones.
- Use standard phonetics. Cute phonetics might be okay to use on your local repeater, but in a contest, other stations will be listening for standard phonetics. Even though phonetics can vary, it's important to be consistent.
- 10. Listen before calling. Make sure you correctly copy the other station's call sign and exchange, which you can enter in your log while waiting in line (this is especially valuable during the ARRL November Sweepstakes, where the exchange is more than a simple signal report). Listen to the other operator's pattern (saying "QRZ?" after each contact, for example). Make sure you're transmitting when the other station is listening.
 - -- Adapted from The ARRL Contest Update



Brag Rag Mitch K9PNP

Congratulations to Mitch on having a seven page article published in Electric Radio Magazine on his "Junk Box Receiver".



Homebrew Showcase

The JBR-11 A Homebrew HF Receiver

The *Homebrew Showcase* is a column intended for builders to share their projects in ER. We would like to encourage readers to send in photos and descriptions of their projects!

By C.L. "Mitch" Mitchell, K9PNP Princeton, IN rsq14adam1@hotmail.com

Background

In early 2011 I was looking over my equipment stock, which is mostly boatanchors, and wondering what to do next. Following up on this consisted of looking over many old references from the later 1940s through the mid '60s. I found many articles on construction of rigs and noticed that there were many great receivers homebrewed over this time. This got me to thinking that maybe it was time to build a superheterodyne receiver.

Looking over the junk box, which is a goodly portion of the basement, further enhanced this thought. So, I decided to try to build one out of on-hand parts. I realized that I might have to purchase a small part here and there if I could not make do with those I had, but wanted to keep this to an absolute minimum. Thus was born the idea of the "Junk Box Receiver, Model 2011 (JBR-11)."

Electric Radio #388

Design

Let's face it; there are only so many ways to build an oscillator, mixer, amplifier, etc. Looking at the stock on hand, I had a 250 kHz IF deck/module from a military AN/ARC-38A that I had purchased mainly because of the Collins filters it contained. This was the version modified by RCA to add USB, about 1961 contract date. Considering the lowest frequency IF transformers I had were 455 kHz, this appeared to be the way to go. Add to that the fact that this makes one of the harder parts of the construction simpler and alignment much simpler. I used an old homebrewed power supply which only required adding a 150 volt regulated output to its 250 volt normal HV output.

I put a few schematics on paper and dug out the calculator (the slide rule being too fuzzy in the brain now) to make the tuned circuits work with my variable capacitors, most of which were originally in AM broadcast receivers. Since I didn't have a chassis to use initially, the RF deck which originally consisted of

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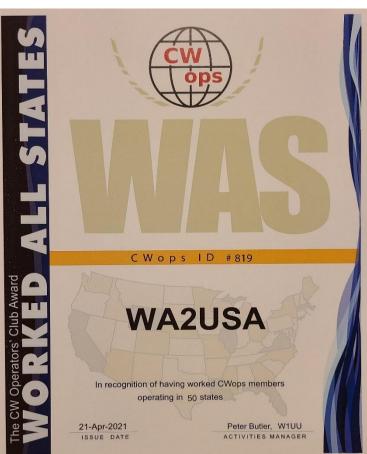
Dennis WA2USA

One is a certificate of membership into the FOC club. It is made up of CW ops with a limited number of members to 500, currently with approximately 250 from the USA. Unsolicited sponsorship by a minimum of five members with a minimum of two QSOs on two separate bands is required, one sponsor has to be from England. Members have to show proof of band activity to keep their membership. The club originated in England in 1938. For anyone interested in becoming a member, see the following link. https://g4foc.org/

WA2USA certificate WAS award for working a CWOp in each of the 50 states. The club membership requirements are different from the FOC group, however many FOC members also belong to this club as well. See the following link for more information. https://cwops.org/

Both clubs encourage members to make friends on the bands and to promote and enjoy Morse code. Both clubs are great motivational tools to enhance one's competency in Morse code.





Do you have something you would like to submit for the Brag Rag? Send your QSLs, special event certificates, awards, interesting photos, projects etc. to sparks@w9og.net to have them included in your newsletter.



December Birthdays!!!

Herb Alvey	KB9MZH	12th
Brian Esche	WB9QVR	1st
Gene R. Flick	KC9SYL	25th
Greg Galka	N7GT	4th
Thomas Hilgeman	KD9PFH	1st
Chris Politano	KC9HWQ	20th
John Van Vorst	N9OL	9th
Rodney Witherspoon	KD9NCP	10th

VE Testing

The last VE testing session for 2021 will be Dec 18th.

Watch for announcement of the dates for 2022!

The Tri-State Amateur Radio Society VE Team is currently holding all VE test sessions at the Vanderburgh Co. EMA west side training facility, <u>1440 Harmony Way in Evansville</u>. This is the building behind the old school building. Look for the tower and antennas and enter the side door by the tower.

You will need to know your FRN number. If you have a license currently you have an FRN number. If you do not yet have a license you can register with the FCC and obtain an FRN number. Go to www.fcc.gov/register.

If you need help or have questions, please let me know at n9ol@arrl.net.

Examinations will start promptly at 9:00 AM Central time.

We have no pre-registration, and examinations are administered on a walk-in basis. Details can be found at: http://w9og.net/ve-testing

For more info contact: John VanVorst N9OL c: 812.305.4100

Tri-State Emergency Net

8:00 p.m. Wednesday nights on 146.79 pl 88.5

If you haven't checked into the Tri-State Emergency Net, please take a few minutes at 8:00 p.m. Wednesday evenings on 146.79 and get updated on what is happening, the latest club information, calendar of upcoming events, topics of general interest and from time-to-time good old-fashioned rag chewing.

Net Operator schedule

	-	
Dec	1	KB9MZH
	8	KC9TYA
	15	KE9YK
	22	KC9UVG
	29	WB9KQF
Jan	5	WB4ZUT
	12	KB9MZH
	19	KB9YWQ
	26	KE9YK

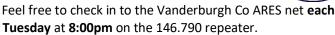
If you would like to be a Net Control Operator for the Wednesday Night Net or learn how to run a SKYWARN net,

Contact: Chris Lantaff KE9YK.

Vanderburgh Co. ARES/RACES

The next Vanderburgh county ARES/RACES meeting Decemberber 16th, 6:00pm on ZOOM.

Anyone interested in emergency communication in Vanderburgh County is invited to participate.



Vanderburgh County Auxcomm

Chris KE9YK IN82RACES@gmail.com Vanderburgh Co RACES Officer 812.453.1972 Hamshack Hotline 12604

Warrick Co ARES/RACES

The Warrick County ARES/RACES group meets on the second Monday of each month. The meeting begins at 6:30pm and generally is completed by 9:00pm. The meetings are held on the third floor of the Court House in the EMA Conference room. Anyone needing additional information concerning meetings or location contact: Chris L. Owen at KC9CLO@gmail.com .

Secretary Report

The secretary reports were attached as separate attachments with this SPARKS mailing.

Dave Sandine KC9UVG

Treasurer Report

Budget:

October 2021 (prepared 11/01/21)

Opening Balance: \$3,454.91

Receipts:

Memberships \$55.00 Hamtoberfest income \$3,031.96

Total Receipts --->> \$3,086.96

Expenditures:

Pd Tom Hilgeman KD9PFH

for Hamtoberfest snacks (\$92.31)

Total Expenditures--->> (\$92.31)

Ending Balance \$6,449.56
Red Cross balance \$1,283.82
Funds Available to TARS \$5,165.74

Jeff Holt AA9WJ TARS Treasurer

Looking Ahead

2022

TARS AUCTION TBD
TARS PICNIC TBD

Straight Key Night January 1 from 0000 UTC through 2359 UTC

ARRL Kids Day Jan First Saturday Winter Field Day January 2022

TARS Banquet Feb

INQP 2022 May

MUSEUM SHIPS WEEKEND June

ARRL Kids Day June Third Saturday

Field Day June 26-27

13 Colonies Special Event

National Night Out first Tuesday of August

International Lighthouse and Lightship Weekend (ILLW) third full

weekend of August

Light Up 2 Meters Night August

Route 66 Special Event September 11-19

Jamboree-on-the-Air third full weekend in October

TARS 4th annual Hamtober Fest 2022

SKYWARN Recognition Day, First Saturday, December

Total Solar Eclipse North America April 8, 2024

Your input is important

Sparks is **YOUR** information source for club activities and local Amateur radio information.

In each issue we ask for submissions from club members. Tell us about your station, projects you have made or are making, anything interesting the TARS membership might be interested in

Submission deadline is the 25th of the month.

Most any document format is acceptable.

Photos or graphics of your subject are welcome.

Send your article to: sparks@w9og.net

TARS is an ARRL affiliated club

ARRL Indiana Section

Section Manager: Jimmy Merry KC9RPX

kc9rpx@arrl.net

TARS mailing address:

TARS

P.O. Box 4521

Evansville, IN 47724

Don't forget to check out our web page www.w9og.net
Facebook Group

https://www.facebook.com/groups/TARSw9og

TARS E-mail: info@w9og.net

2021 Club Officers - Board members

President John VanVorst N9OL

Vice President Dennis Martin WA2USA

Treasurer Jeff Holt AA9WJ

Secretary Dave Sandine KC9UVG

Board of Directors

Herb Alvey KB9MZH (2020-2021)

Don Land KB9YWQ (2020-2021)

Tom Hilgeman KD9PFH (2021)

Mike Townsend W9KXP (2021-2022)

Scott Hibbs KD4SIR (2021-2022)

Charlie Martin WB8LDV (2021-2022)

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