

# Monthly Newsletter of the Tri-State Amateur Radio Society Serving the Tri-State for 72 years



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

News contributions and letters/emails to the editor are always welcome.

TARS regular membership is open to all licensed Amateur Radio operators at \$25.00 a year. 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 <a href="https://www.w9og.net">www.w9og.net</a>

## 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 call or email one of the TARS officers listed in this newsletter.

### **President's Corner:**

Digital modes- they are all the craze any more. HF digital mode FT8 is wildly popular today, among a myriad of other HF modes like PSK31, JT65, SSTV, etc. etc. Digital voice modes on VHF and UHF- Yaesu Fusion, Icom D-Star, DMR and others- are also gaining tons of popularity and prompting amateurs everywhere to experiment with Voice Over IP (VOIP) technology, bridging it between different modes and services as well as combining digital and analog using the internet and RF links.

Icom D-Star was an early player in the VHF-UHF digital ham radio game. It was very different and intriguing, however the equipment was expensive. It has never caught on except in a few populated areas. I think the cost of the equipment was a huge barrier for the ham community, and most hams- though interested in where D-Star is going- are not willing to take the plunge.

Yaesu Fusion is very different. Yaesu applied digital radio in a way that hams could afford the equipment and experiment with it without completely abandoning the old ways of how repeaters functioned. We have several good Yaesu Fusion repeaters here in the tri-state and many hams enjoy using digital for the superior quality and ability to connect to wires-x rooms anywhere in the world. Or at a very reasonable price many have set up private nodes in their homes that allow communication throughout the world via the internet.

Although the cost to get on DMR (Motorola's proprietary Digital Mobile Radio technology) has decreased in the past 5 years, it remains by far the most complex to use and to understand. A DMR radio for the most part must be programmed with a computer and software, creating a code plug with the software that is copied into the radio. Much different from Yaesu Fusion, the ham using DMR must have some understanding of how the system works, both their own radio and code plug as well as the repeater they are accessing. Things like color code, time slots, talk groups- a ham needs to learn how DMR works in order to use it properly. Remember DMR, or Digital Mobile Radio, was not designed for hams but rather it was designed for commercial radio use in very controlled radio networks.

I am still learning and have just scratched the surface. There are many more digital radio technologies that I haven't mentioned. There are so many new and exciting things going on in ham radio today, in a hobby that many people I talk to thinks died out long ago! New hams have the same opportunity for experimentation and discovery as us old guys did when we were starting out.

Plan to be at the March meeting of TARS- we will see a presentation and discussion on digital radio and digital hotspots, and how many hams in the tristate are utilizing digital VOIP to talk to the world on VHF and UHF. Come with questions, come with ideas! March 14, 2019 7PM at the Evansville Red Cross. See you there!

John N90L

### **Beyond the Baofeng**

Chris Lantaff, KE9YK

### Logging and the QSL.

## What is a log and why keep one?

All hams used to be required to keep a station log detailing their station operations and contacts. Although the FCC eliminated that requirement in 1983 a station log is still good operating practice. An accurate log gives you a way to verify contacts, acknowledge received QSL cards and is like a personal record of people and places you have talked to. It can show whether or not your station was active during complaints of RF interference. Years later it could be nice to review your contacts and also analyze how your station performed using different antennas, configurations and equipment.

Paper log books and log sheets are available from the ARRL and printable templates are available online that you can use with a 3 ring binder.

Computer logging. Quite a number of computer logging programs are available and after trying several over the years I settled on ACLog with N3FJP suite. The price for the simplicity of the software can't be beat, in my opinion but make sure to try a number of available programs and select the best to suit your needs.

Here is a recent FACEBOOK post from John N9OL.

John C Van Vorst shared a <u>link</u> to the group: <u>TriState Amateur Radio Society</u>, <u>Evansville Indiana</u>.

For computer logging I am an ACLog zealot. N3FJP wrote and sells ACLog for a reasonable price and he is extremely responsive to user questions and support issues. It is awesome. Check it out at n3fjp.com

Also, when portable I absolutely love HamLog. It is very inexpensive and available in the app stores. I log portable in my phone with this app that does so much more than log. You must check it out too.

TARS has both paper logs and N3FJP computer logging software in the Red Cross radio room. TARS also uses N3FJP logging software for Field Day and other contests.

One advantage of software logging is the ability to interface with Logbook Of The World, LOTW and e-qsl with just a few keystrokes.

### QSL's, confirmation of contact, and the final courtesy.

Ham radio has long been known for QSL cards.

Sometime back in the early 1900's when radio broadcasting was first becoming popular, people would send reception reports to radio stations hoping to get a letter reply verifying that they had heard the station. Many radio owners were proud of just how many distant stations they could receive and the radio stations were glad to see just how far there transmissions could be heard. This carried over into the shortwave listening (SWL) community, amateur and even later to the Citizens Band radio craze of the 70's. After a century of use it can still be one of the fun parts of the hobby, although it seems that with the advent of things like LOTW, eQSL and QRZ Logbook, the QSL card is waning. I am actually surprised by the poor confirmation response even on LOTW. I guess I am old school but a lot of stations used to request qsl's.

I haven't yet set up eQSL to show confirmed contacts because I was most interested in ARRL awards but I am giving some thought to letting eQSL contacts show as confirmed in my log also.

QSL cards can be anything from simple to elaborate and there are many QSL printers listed online.

Later I will discuss using the ARRL QSL service for sending and receiving DX QSL cards.





### **McCutchan Award**

Congratulations to **Raymond Edge W9KHP** the McCutchan award winner for the year 2018. Raymond has been very active since getting his license, not only within TARS but also Warrick Co ARES/RACES and the Alcoa radio club. Raymond was the energy and visionary stepping up as the first chairman of TARS new annual HAMTOBER Fest.

The McCutchan Award reads:

The strength and progress of Amateur Radio is vested in the hearts and minds of dedicated Amateur Radio Operators who voluntarily give of their time and knowledge. John McCutchan, a dedicated Amateur Radio Operator was a leader in this respect and is honored by his friend Ellis Carson, who promoted and sponsored this award. By your dedication and your contributions you have given inspiration and leadership to others, and have brought honor and dignity to your club and Amateur Radio.

### **Club Code Key Contest**

This contest is a **just for fun** event and will have certificates awarded for various categories.

Judging will happen in the time between the meeting program and the business meeting.

A code oscillator will be set up to check the operation of the keys.

The fun is starting in **March** with **STRAIGHT KEY** competition.

### The rules are very simple.

- You must have built the key YOURSELF.
- It may be a KIT or Homebrewed.
- It must WORK.

The schedule is.

March - Straight Key

May - Paddle Key

July - Bug or Cootie Key

September - MacGyver Key

\*MacGyver key is taking any object and using the parts to turn it into a key with a minimum of tools.

E.g. - an old toaster, ink pen or junk drawer hoard. I am sure you can come up with some piece of junk laying around, use your imagination.

Even if you don't work CW, this can be a fun contest just to get everyone up and doing something. Perhaps we could even get a CW learning net on the air and put them to use.

## BRAG RAG POTA Awards

Congratulations to John N9OL and Raymond W9KHP for their Platinum Hunter POTA awards.



Congratulations to Cory KD9MHB and Chris KE9YK on their ARISS SSTV reception report confirmations.





ARISS SSTV receptions by Cory KD9MBH using his cell phone over the radio speaker.





ARISS SSTV receptions from Chris KE9YK using MSSTV software with the computer microphone near the radio speaker. I had over 20 receptions in total over the 2 weekends. There were many reports of weak signals from the ISS for the first weekend and they were able to extend the event for a second weekend.







### You never know who might be listening

After receiving the ARISS SSTV special event transmission, I sent out a transmission just for kicks in case someone else had set up also and might still be listening.

This is what I found in an e-mail the next morning.

Here is pix I received 2/9/2019 @ 0059Z.

We have a digital net on Thursday evenings on Owensboro repeater 145.330 PL103.5 at about 9:45P. It follows the local ARES simplex net on 146.55. We start on the repeater

and the move to a simplex frequency to exchange SSTV pictures usually. This is very informal net with just a few guys. Maybe you could drop by some Thursday.

73 de WBONEX



Just goes to show you never know who might be listening. Chris - KE9YK

### W4RNL is live

Jim

Good news for antenna builders and experimenters. I recently came across a link while researching an antenna and found what appears to be a copy of the old W4RNL site.

### http://www.antentop.org/w4rnl.001/radio.html

L. B. Cebik, W4RNL (SK), ARRL Technical Adviser and antenna authority, was known to many hams for the numerous articles he wrote on antennas and antenna modeling. He had articles published in most of the US ham journals, including QST, QEX, NCJ, CQ, Communications Quarterly, Ham Radio, 73, QRP Quarterly, Radio-Electronics and QRPp. Larry Wolfgang, WR1B, QEX Editor, called Cebik "probably the most widely published and often read author of Amateur Radio antenna articles ever to write on the subject."

Cebik maintained a Web site, www.cebik.com, a virtual treasure trove to anyone interested in antennas. Besides a few notes on the history of radio work and other bits that Cebik called "semi-technical oddities," the collection contains information of interest to radio amateurs and professionals interested in antennas, antenna modeling and related subjects, such as antenna tuners and impedance matching. Cebik said that his notes were

"geared to helping other radio amateurs and antenna enthusiasts discover what I have managed to uncover over the years - and then to go well beyond."

## PROJECTS ALTOID PHONE CHARGER

Mark Thienes KC9TYA

I started with an empty Altoids tin and cut a small hole, big enough for the usb charger to fit in. The one I used was from a usb cigarette lighter car charger that I had disassembled. Since it will be using a 9 volt battery, I purchased a package of two 9v Battery Snaps from Hutch and Son.

I soldered the red + plus wire to the spring which I had shortened. Then I soldered the black - negative wire to the negative contact which was a thin sheet of metal. I had some rubber caps that I put on the 9v battery end to keep it from shorting out while stored. When I tried the charger out it showed my phone was charging when plugged in.

This was a fun project, and I even got to eat candy in the meantime. This is something you could use in case of an Emergency when your phone dies.





### THE MYTH OF VHF LINE-OF-SIGHT

### 8 FEBRUARY 2019 BOB KONR

When we teach our Technician License class, we normally differentiate between HF and VHF propagation by saying that HF often exhibits skywave propagation but VHF is normally line-of-sight. For the beginner to ham radio, this is a reasonable model for understanding the basics of radio propagation. As George E. P. Box said, "All models are wrong, but some are useful."

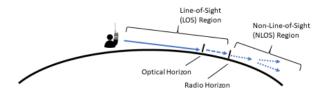
In recent years, I've come to realize the limitations of this model and how it causes radio hams to miss out on what's possible on the VHF and higher bands.

### **Exotic Propagation Modes**

First, let me acknowledge and set aside some of the more exotic propagation modes used on the VHF and higher bands. Sporadic-e propagation allows long distance communication by refracting signals off the e-layer of the ionosphere. This is very common on the 6-meter band and less so on the 2-meter band. I like to think of this as the VHF bands trying to imitate HF. Tropospheric ducting supports long distance VHF communication when ducts form between air masses of different temperatures and humidities. Auroral propagation reflects the radio signal off the auroral ionization that sometimes occurs in the polar regions. Meteor scatter reflects signals off the ionizing trail of meteors entering the earth's atmosphere. Earth-Moon-Earth (EME) operation bounces VHF and UHF signals off the moon to communicate with other locations on earth. These are all interesting and useful propagation mechanisms for VHF and higher but not the focus of this article.

### Improved Line-of-Sight Model

### Line-of-Sight Model



Now let's take a look at more "normal" VHF propagation that occurs on a daily basis, starting with the simple line-of-sight propagation model. The usual description of line-of-sight VHF is that the radio waves travel a bit further than the optical horizon (say 15% more). Let's refer to this as the Line-of-Sight (LOS) region where signals are usually direct and strong. What is often overlooked is that beyond the radio horizon, these signals continue to propagate but with reduced signal level. Let's call this the Non-Line-of-Sight (NLOS) region. The key point is that the radio waves do not abruptly stop at the edge of the LOS region...they keep going into the NLOS region but with reduced signal

strength. Now I will admit that this is still a rather simplistic model. Perhaps too simplistic. I'm sure we could use computer modeling to be more descriptive and precise, but this model will be good enough for this article. *All models are wrong, but some are useful.* 

### **WORKING the LOS and NLOS Regions**

Let's apply the model for Summits On The Air (SOTA) VHF activations. If we are only interested in working the LOS region, we won't need much of a radio. Even a handheld transceiver with a rubber duck antenna can probably make contacts in the LOS region. It's still worth upgrading the rubber duck antenna to something that actually radiates to improve our signal (such as a half-wave antenna). We may pick up some radio contacts in the NLOS region as well but our success will be limited.

To improve our results in the NLOS zone, we need to increase our signal strength. We are working on the margin, so every additional dB can make enough difference to go from "no contact" to "in the log." Think about another radio operator sitting in the NLOS zone but not quite able to hear your signal. Your signal is just a bit too weak and is just below the noise floor of the operator's receiver. Now imagine that you improve your signal strength by 3 dB, which is just enough to get above the noise and be a readable signal. You've just gone from "not readable" to "just readable" with only a few dB improvement.

What can we do to improve our signal levels? The first thing to try is improving the antenna, which helps you on both transmit and receive. I already mentioned the need to ditch the rubber duck on your HT. My measurements indicate that a half-wave vertical is about 8 dB better than a typical rubber duck. This is only an estimate...performance of rubber duck antennas vary greatly. A small yagi (3-element Arrow II yagi) can add another 6 dB improvement over the half-wave antenna, which means a yagi has about a 14 dB advantage over a rubber duck.

On the other hand, if you believe that your VHF radio is only Line-of-Sight, then there is no reason to work on increasing its signal level. The radio wave is going to travel to anything within the radio horizon and then it will magically stop. This is the myth that we need to break.

### **More Power**

When doing SOTA activations, I noticed that I was able to hear some stations quite well but they were having trouble hearing me. Now why would this be? Over time, I started to realize these stations were typically home or mobile stations running 40 or 50 watts of output. This created an imbalance between the radiated signal from my 5W handheld and their 50 watts. In decibels, this difference is 10 dB. Within the LOS region, this probably is not going to

matter because signals are strong anyway. But when trying to make more distant radio contracts into the NLOS zone, it definitely makes a difference. So I traded my HT for a mini-mobile transceiver running 25W. See the complete story in Chapter: More Power For VHF SOTA.

### **Weak Signal VHF**

Of course, this is nothing new for serious weak-signal VHF enthusiasts. They operate in the NLOS region all of the time, squeezing out distance QSOs using CW, SSB and the WSJT modes. They generally use large directional antennas, low noise preamps and RF power amplifiers to improve their station's performance. They know that a dB here and a dB there adds up to bigger signals, longer distances and more radio contacts. A well-equipped weak-signal VHF station in "flatland geography" can work over 250 miles on a regular basis...no exotic propagation required.

Now you might think that FM behaves differently, because of the *threshold effect*. When FM signals get weak, they fade into the noise quickly...a rather steep cliff compared to SSB which fades linearly. FM has poor weak-signal performance AND it fades quickly with decreasing signal strength. This is why it is not the favored modulation for serious VHF work. But the same principle applies: if we can boost our signal strength by a few dB, it can make the difference between making the radio contact or not. So VHF is not limited to line-of-sight propagation...the signals go much further. But they do tend to be weak in signal strength so we need to optimize everything under our control to maximize our range.

73, Bob KONR

## **March meeting Program**

The March meeting program will be by Mike KC9BUH discussing digital radio. Mike has briefly discussed his mmdvm Pi-Star setup before and will have a more detailed presentation this time.

Here is a recent interesting blog post on the Pi STAR hotspot from down under.

http://blog.marxy.org/2019/02/pi-star-hotspot-getting-started.html



## Are You UP to a Challenge

Do You have what it takes to be TOP BULB?
This is it: the ultimate challenge in ham radio....

Announcing the 2019 Lightbulb QSO contest, March 9th 20:00 UTC through March 10th 20:00 UTC.

5 categories of competition...
HOUSEHOLD
COMMERCIAL/INDUSTRIAL
HOMEBREW
DUMMY LOAD
FREESTYLE



Objective: to build and use an antenna

constructed with a lightbulb as the main radiating element and make as many CW, Phone, and Digital QSOs as possible in a 24 hour period. Complete rules, details, and information on constructing and using a lightbulb as an antenna can be found at:

https://hamsignal.com/blog/the-lightbulb-qso-party

## New Plan Aligns ARES with the Needs of Served Agencies

The ARRL Letter for February 21, 2019

The new <u>ARES Plan</u> adopted by the ARRL Board of Directors at its Annual Meeting in January represents an effort to provide ARES with a clearly defined mission, goals, and

objectives; specific training requirements, and a system for consistent reporting and record-keeping. The Board's Public Service Enhancement Working Group (PSEWG) spent more than 3 years crafting the ARES Plan which, ARRL officials believe, provides a much-needed update of the program's role



in public service and emergency preparedness in the 21st century. Concerns focused on bringing ARES into alignment with the National Incident Management System (NIMS) and Incident Command System (ICS), and creating more consistent and standardized ARES training requirements.

READ MORE

## Vanderburgh Co. ARES/RACES

The next Vanderburgh county ARES/RACES meeting March 21st, 7:00 pm at the Vand Co. West Side EMA Training Center (WEMA) 1430 Harmony Way.

RACES

Anyone interested in emergency communication in Vanderburgh County is invited.

The new ARES Connect volunteer management system is being activated in Indiana and provides many valuable features that will truly enhance the experience of emergency communication volunteers. Features include: a robust event management feature that allows for events, register users, log hours; and a more automated reporting system based on user input. It can generate reports based on the events users register and log hours for; enhanced roster management capabilities; and embedded communications tools that will allow email and text messages to volunteers.

### All ARES members should register at:

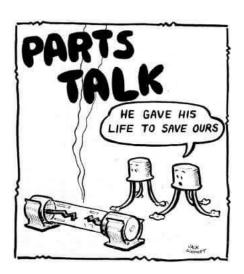
http://vhub.at/aresconnect-in

On March 2<sup>nd</sup> we held a workday at WEMA with N9QVQ, WB9YIG, KC9TYA and KE9YK showing up to set up 2 new computers for outpost packet messenger, networked into the BPQ system located in our radio room at WEMA. FLDigi was also installed but has not yet been tested.

The I-Gate receiver coax was replaced, re-routed and the I-Gate PI computer was mounted.

We were also able to get the computers networked to the printer in the radio room.

Chris Lantaff KE9YK
Vanderburgh Co RACES Officer
in82races@gmail.com c: 812.453.1972



## **Warrick County ARES/RACES**

### Winter Field Day...

Winter field day was a joint event with the Ohio Valley Amateur Radio Club. The event was located at the Alcoa Clubhouse. The Auxcom trailer was set up and utilized during the contest. The trailer was manned and tested for operation and capabilities. The new Generators operated perfectly and the HF radio equipment brought into the trailer by individuals connected as a plug and use units. The use of the trailer as it is currently can be used as a deployable unit. Its functionality improves with each use.

### Monthly Meeting...

Standard Operating Guidelines: The majority of the February meeting was spent reviewing the Standard Operating Guidelines for the Warrick County Aries/Races Group. During the review several items were identified as needing to be updated and added. During the review several sidebar discussions took place concerning deployment, Net Control, who initiates activation, how it is communicated, and the use of Spontaneous Unaffiliated Volunteers. Discussions also included the use of multiple forms, where to find them and the importance of a good paper trail. Steve Connaughton Has made the revisions to the documentation and distributed it to the members of the Warrick County Aries/Races Group via email. If you have not received it contact Steve (sconnaug@gmail.com) or myself (KC9CLO@gmail.com) to get a copy.

Auxcom Trailer: Several items still need to be completed on the Auxcom trailer. Most of the work will involve wire terminations and non-critical jobs to make the trailer more functional. The exterior of the trailer needs to be buffed and new decals put in place. The solar panel for the trailer needs to be mounted and wired into the trailer. Some of the work will need to be completed during warmer weather. A lot of the smaller items such as wire terminations can be done any time. If anyone wants to work on the trailer contact Steve (sconnaug@gmail.com) to make arrangements to get into the trailer.

Chris L Owen (KC9CLO)
Public Information Officer
Warrick County ARES/RACES group

## **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**

#### March

- 6 KC9UVG
- 13 N9QVQ
- 20 KB9YWQ
- 27 WB9KQF

### **April**

- 3 KC9TYA
- 10 KE9YK
- 17 KC9UVG
- 24 N9QVQ

### Eat'n Before the Meet'n



March 14<sup>th</sup> Eating Before the Meeting will be at Penn Station East Coast Subs, 137 N Burkhardt Rd, in the strip south of WalMart. Their menu features an array of mouth watering Grilled Penn Station submarine sandwiches, fresh-cut fries and hand-squeezed lemonade.

Drop by for food, socializing, "story tell'n" and whatever else comes to mind.

Join the group at 5:30, or whenever you can make it. Check in on 146.79 if you need directions or just bored on your drive in. Everyone is welcome to join us.

If you have any suggestions on where you would like for us to meet,

contact: Herb Alvey KB9MZH c:812.499.3729



The 2019 Thunderstorm/Tornado season is just around the corner, remember to monitor the weather net on the TARS 146.79 repeater anytime there is a severe weather watch/warning issued from the Paducah NWS for Vanderburgh or surrounding counties.

Anytime severe weather is anticipated we try to have a stand-by net up and once a warning or severe weather is reported we go into a SKYWARN net and relay weather reports to the NWS in Paducah.

SKYWARN Spotter training is scheduled for Evansville at 6:00 pm on March 12<sup>th</sup> at the Red Cross. You must register online to attend.

### 2019 NWS SKYWARN Spotter Training

March 5, 2019: Owensboro, KY (Daviess County)

March 7, 2019: NWS PADUCAH WEBINAR

March 7, 2019: DuQuoin, IL (Perry County)

March 11, 2019: Charleston, MO (Mississippi County)

March 12, 2019: Evansville, IN (Vanderburgh County)

March 12, 2019: West City, IL (Franklin County)

March 13, 2019: Petersburg, IN (Pike County)

March 20, 2019: Dexter, MO (Stoddard County)

March 21, 2019: Elkton, KY (Todd County)

March 21, 2019: Portageville, MO (New Madrid County)

March 26, 2019: Bremen, KY (Muhlenberg County)

Registration **must** be completed on-line to attend training. <a href="https://www.weather.gov/pah/spottertraining">https://www.weather.gov/pah/spottertraining</a>

## **March Birthdays**

**Rob Furguson** KD9KLI 4th **Keith Hemenway** KB9WAC 6th Dan Kelley N9WJ 24th Jav King WB9ICL 26th **Robert Pointer** N9XAW 2nd Jenny Washburne KC9NPA **10th** 

If your birthday isn't listed please make sure we have it on file by filling out the membership application when renewing. This also helps to make sure we have your current contact information.

## **VE Testing**

### 2019 Schedule

<del>Jan 26</del>	Feb 23
Mar No TEST	Apr 27
May 25	Jun 29
Jul 27	Aug 31
Sep 28	Oct 26
Nov No TEST	Dec 28

All examinations will be administered at the

American Red Cross, Evansville Chapter, located at 29 S. Stockwell Road, Evansville Indiana 47714. Examinations will start at 9:00 AM Central time.

We have no pre-registration, and examinations are administered on a walk-in basis.

All the details can be found at:

http://w9og.net/ve-testing

For more info contact:

John VanVorst N9OL c: 812.305.4100





TARS Second Annual Hamtober Fest
Saturday October 26th 2019, 7am - Noon
Lynnville Community Center
Watch for more info coming soon.

Contact: hamfest@w9og.net

Web page: www.hamtoberfest.com

## **Secretary Report**

Secretary reports were attached as a separate PDF files.

David Sandine KC9UVG TARS Secretary

## **Treasurer Report**

Budget:

January 2019 (prepared 1/31/2019)

Opening Balance:	\$3,959.33
Receipts:	
Memberships (including extra donations	) \$472.50
Banquet Reservations	\$403.00
Net Income from Auction	\$286.35
Project Donation Bucket	\$85.00
VE Room Rental	\$21.00
ARRL Membership Retained	
Commission for KD9LWC	\$15.00
Total Receipts>>	\$1,282.85
Expenditures:	
Total Expenditures>>	\$0.00
Ending Balance	\$5,242.18
Red Cross Fund	\$1,087.82

Jeff Holt AA9WJ TARS Treasurer

### **Looking Ahead**

2019

Straight Key Night Jan 1 ARRL Kids Day Jan

Winter Field Day January 26/27 TARS Banquet Feb 7 INQP May 4 - 5

MUSEUM SHIPS WEEKEND June

ARRL Kids Day June

Field Day June 22-23

13 Colonies Special Event Jul 1-Jul 8, 1300Z-0400Z
National Night Out Aug 6
International Lighthouse and Lightship Weekend (ILLW)
Third full weekend of August 16-17
Route 66 Special Event September 7-15
Jamboree-on-the-Air Third full weekend in October

### Your input is important.

SKYWARN Recognition Day Dec 7 2019

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 25<sup>th</sup> of the month.

Most any document format is acceptable.

Photos or graphics of your subject are welcome.

Send your article to: <a href="mailto:sparks@w9og.net">sparks@w9og.net</a>

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 <a href="www.w9og.net">www.w9og.net</a> Facebook Group

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

TARS E-mail: info@w9og.net

## 2019 Club Officers - Board members

**President John VanVorst N9OL** 

**Vice President Max Wilkinson KD9ABT** 

Treasurer <u>Jeff Holt AA9WJ</u>

**Secretary** Dave Sandine KC9UVG

**Board of Directors** 

Mark Thienes KC9TYA (2018-2019)

Len Schmitt N9QVQ (2018-2019)

Herb Alvey KB9MZH (2019)

Rick Jackson K9EXY (2019-2020)

Dennis Martin WA2USA (2019-2020)

Mike Townsend W9KXP (2019-2020)

#### SPARKS Editor:

Chris Lantaff KE9YK

E-mail: <a href="mailto:sparks@w9og.net">sparks@w9og.net</a>



