

# SPARKS

Monthly Newsletter of the Tri-State Amateur Radio Society

**Serving the Tri-State for 70 years**



November 2017- Issue No. 11

TARS Website: <http://www.w9og.net> Club repeaters: 146.79 and 147.15

Say "Hello" at the weekly Tri-State Emergency Net, 8:00pm Wednesdays on 146.79

Please feel to submit articles or suggestions to

Editor: [SPARKS@w9og.net](mailto:SPARKS@w9og.net)



## **President's Corner:**

The time has come for New Officers and Board Members.

In the Nov SPARKS you will find a Ballot sheet. Please turn it in at the Nov Club Meeting with your choices for the New Officers and Board Members. There is an Open Invitation for all new Officers and Board Members to attend the Dec Board Meeting so they can get an idea of what goes on in running TARS.

At this time I would like to thank the Officers and Board Members who helped me in making Decisions for TARS and the feedback we had from the Membership as well.

Please show your support for them as you did for me, Thank you.

At our Nov Meeting we will be having Glen Kissel from USI talking about their Cube Satellite.

There will also be an Order Form to fill out for Club T-Shirts with Your Call and TARS Logo. We will need to know your size and how many T-Shirts you want. The cost per T-Shirt is \$15.00 each.

This is being coordinated by Steve and Al.

Dec Meeting is still needing a Topic. Anyone have an idea they would like to see? Please let us know.

Jan Meeting is the Annual Auction, Li' Ed W9 will be supervising again.

Also in Jan we will be having Winter Field Day at Wesselman Park Jan 23/24.

Feb Meeting will be at the Log Inn for Christmas Dinner and Awards night.

Chris N9JCA TARS President 73

"I am always doing that which I CANNOT do, in order that I may LEARN how to do it."

## One man's opinion

I read with great interest an article published by K7DYY in QST on a full legal limit solid state AM transmitter, the bands covered in this project were 160 and 80 meters, or 80 and 40 meters.



This did catch my eye and I had a few moments of nostalgia of years gone by with sixty years as a licensed ham operator. I cut my teeth on AM, if you can imagine the ham bands filled with signals of Amplitude Modulation, if you had two stations with in close proximity of each other you would have a screaming heterodyne in your ears, just imagine something like Sweepstakes, a cacophony of noise.

In my days of AM there were no transceivers, you had a separate transmitter and receiver, and everything was large and heavy. Let's take for example the Johnson Viking 2, I had one it gave an output of 100 watts.

Now this transmitter was made by E.F. Johnson who was a close competitor to Collins and they were considered to be the top of the line. What made these old rigs so heavy? For one the chassis was built like a tank, I firmly believe you could have dropped the Viking 2 from a tall building and it would have little damage.

However, the chassis weight coupled with a power transformer, a modulation transformer, and separate filament transformer for the finals, large tuning capacitors and inductors made a hefty beast. Normally the weight came to around 75 pounds, Johnson produced another model that I also had and that was the Viking Valiant, an 85 pound monster. KW amps were even heavier, larger components were needed such as power transformer and

modulation transformers, this all added a large amount of weight. When an op said he was using the big rig, he was not kidding. The question I ask is why would you in this modern day of technology advancement take a step backwards to those days of yesterday? Now those of you who know me, perhaps are wondering why I would make this statement. I have been a CW operator for the most part and only do about ten percent of my contacts on SSB. My deep seated reason is I like it, this is my niche in ham radio and as I have stated I will quit working the mode when they pry my paddles out of my cold dead hand.

Those fellows who run AM are dedicated, normally they gather around one frequency on 160, 80 or 40 meters and discuss their gear, modifications on their vintage transmitters, or receivers. Some have achieved a well-rounded audio response and the fidelity is superb, nice highs, and deep bass response. In fact, over the years I had forgotten how good AM can sound until I listened in on some the gatherings. The group of AM ops stay on one frequency, they do not venture all over the band causing havoc when an AM station would clash with someone using SSB. That is very positive, they do not run contests, and no these are a select group of Ops who found their niche in ham radio.

The solid state unit designed and sold by K7DYY is indeed a step in the right direction, yes it does reinvent the wheel, and does eliminate two problems, one no more vintage boat anchors. Secondly, by eliminating vintage rigs, hence tubes are eliminated an expensive venture to replace these days. With K7DYY's unit you cannot exceed the legal AM limit of 375 Watts, you cannot over modulate, or over drive the unit. Plus you have modern technology built in to a mode of yesteryear, now that is progress! For those of you newcomers who have never heard an AM station on the ham bands, you may

be very surprised, it only takes a push of a button on your transceiver to do so, the one in the mode column marked AM.

To be quite honest, if I had some large amount of extra money I might be tempted to buy one of these units and join the group, it sure would bring back some memories.

As always My friends, this is "One Man's Opinion" Bill, K4LRX

## Eat'n Before the Meet'n

November 9<sup>th</sup> Eating Before the Meeting will be at [Mission BBQ](#) 1503 North Green River Road Evansville, [\[MAP\]](#) at Morgan Ave. before the regular TARS club meeting.

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



## Meeting Presentations

Thanks to those who participated in the Go Box/Kit presentation in October. Mark KC9TYA showed off his awesome Go Kit, complete with VHF/UHF radio, HF radio, adapters for digital modes all in a really great case. Len N9QVQ showed off a few of his black boxes, including an automatic power shutoff for a mobile rig and a

device that prevents damage to a rig in the event that the positive and negative battery connections are reversed. Also, Terry WB9KQF produced a very comprehensive Go Kit list of not only radio equipment but also included personal items and other emergency gear.

In November, Glen Kissel, professor at USI, will discuss the CubeSat that the University is in the process of creating. I'm thinking that the conditions in space and limitations on size will make for an interesting meeting.

For December, we will have a presentation from Dennis WA2USA when on his SOTA activations; he experienced a hit from several solar flares.

January will be our annual auction.

February will be our dinner and a meeting at the Log Inn.

[Dave Sandine](#) KC9UVG

## Club Shirts

We will be ordering the club t-shirts beginning at the November meeting and ending at the December meeting. Shirt style will be a regular T-shirt (no collar), dark blue in color and will have the club logo, the member's name and call sign. Sizes will be Small thru 3XL, cost will be **\$15.00** each regardless of size. To simplify the bookkeeping, **all shirts will be pre-paid**. We will have a signup sheet at the meeting and after filling in your information, please make your check out to Southwest Graphics.

## Club Equipment Inventory List

A couple of months ago, our insurance representative met with the club to discuss our policy. As a result of that meeting, we are putting together an inventory list of the club radios and equipment. While the older members might remember a list from long ago, we have not been able to locate it. Chris N9JCA has volunteered to take on the task of locating and identifying club equipment. Recently, we cleared out the Westside storage area and those items were found were stored at the WEMA

building. If you have any club equipment or know of its whereabouts, please let Chris know so we can document it. This will be a daunting task, but if we ever need to file a claim, we will need to show that it was in our possession in the first place.

## **ARES/RACES NEWS**

In an emergency would you know what to do? If communications are out where would you tune? Have you had any training in assisting with EMA, Red Cross or Salvation Army? The way to learn is by joining and participating in your local ARES/RACES group.

The next Vanderburgh county ARES/RACES meeting November 15th, 7:00 pm at the VC West side EMA Training Center (WEMA)  
[1430 Harmony Way.](#)

Anyone interested in emergency communication in Vanderburgh County is invited.

Chris Lantaff KE9YK

Vanderburgh Co RACES Officer

[in82races@gmail.com](mailto:in82races@gmail.com) c: 812.453.1972



## **2017 IN SET-Vanderburgh County**

The Evansville/Vanderburgh County ARES-RACES group conducted a Simulated Emergency Test on Saturday September 30. The object was to have stations initially check in on the 19/79 repeater then make contact with WEMA station on 146.52 simplex. Mark KC9TYA manned the initial check-in and Dave WB9YIG was at the WEMA station. Mark reported 6 stations checked in along with a check-in from Nashville on Winlink. The WEMA station had 4 stations check in from the initial contact. We also made contact with Warrick County and made 3 additional simplex contacts with folks from Gateway Hospital, Boonville and Lynnville. Mark reported the results to the Indiana Traffic Net at the conclusion of the test.

Dave Julian WB9YIG

## **Warrick Co. ARES/RACES**

We are pleased to announce Chris Owen, KC9CLO has been appointed as an ARRL Public Information Officer (PIO) for Warrick Co. ARES/RACES. Over the past year Chris has been instrumental in coordinating publicity for several activities. We are thrilled that Chris has accepted this appointment and look forward to the positive impact he will have for Warrick ARES/RACES and the amateur radio hobby.

Warrick ARES/RACES meets at 6:30 pm, the 2nd Monday of each month. Meetings are held at the EMA facilities on the 3rd floor of the old courthouse in Boonville and is open to anyone interested. We hold a net on the 147.075, Boonville repeater, Tuesday evenings at 7:30. We invite everyone to check into the net. More information is available on the net or by e-mailing [K9SRC@ARRL.net](mailto:K9SRC@ARRL.net).

## **2017 IN SET-Warrick County**

Warrick County had a successful 2017 SET and accomplished all the stated goals in the exercise. We had the cooperation of Gateway Hospital and transmitted from their EOC confirming the operational status of their VHF/UHF radio and antenna system as well as simulating traffic from our served agencies QTH's, using mobile and portable radios.

The lessons learned during this exercise include re-enforcing the need to transmit traffic slow enough to be copied. The need to plan for a net control operator between the time of activation and manning the EOC. Also, as a way to streamline flow in the EOC, we discussed numbering the 213 message forms and transferring that number to the traffic/activities log ICS 214, rather than repeat a description. This would also give us a master list of all traffic.

***This exercise, as others re-emphasizes the need for more Hams to become involved in emergency communications as the served agency's requirements may have multiple sites needing communications, easily exceeding our***

capabilities. As the recent disasters in the US and Caribbean have shown us, Amateur Radio E-Comm is still very much needed.

73

[Rick Williams](#), KT9B  
Warrick County EC, Deputy RO

## 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

November

1	KC9UVG
8	N9QVQ
15	KC9TYA
22	KB9YWQ
29	WB9KQF

December

6	KC9UVG
13	N9QVQ
20	WB9KQF
27	KB9YWQ

## The New MULTIVALVE

From the  
*New York Herald Tribune*

—The New MULTIVALVE may well revolutionize the manufacture and use of Radio Apparatus.

Dec. 19, 1926



PRICE  
\$6<sup>50</sup>



Gives  
Power, Distance  
Quality, Clarity  
of Tone, Maximum  
Volume, Distant  
Reception All on the  
Loud Speaker

*An  
Outstanding  
Radio  
Achievement*

ONE MULTIVALVE—Many tube performance

## NWS PAH

### Winter Weather Workshop

EVANSVILLE, IN November 14 2017

You are invited to our annual Winter Weather Workshops to be held at several locations in our region.

All workshops are at 9 AM - Noon:

**November 14 - Evansville, IN (American Red Cross, 29 N Stockwell Rd)**

We have a variety of exciting topics which will feature some of our local TV meteorologists, tornado climatology, updates on weather services and of course our staple Winter Weather Outlook!

Registration and all details are at

<http://www.weather.gov/pah/winterworkshop2017> (be sure to click "Submit" at the very bottom of screen)

Hope to see you there!

--

Rick Shanklin

Warning Coordination Meteorologist, NWS Paducah, KY

[ricky.shanklin@noaa.gov](mailto:ricky.shanklin@noaa.gov)

<http://twitter.com/NWSPaducah>

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Become a Weather-Ready Nation Ambassador!

See <http://ow.ly/yqVJa>



## VE Testing



### Test dates: 2017

1/28	2/25	3/25
4/29	5/27	<b>6-none</b>
7/29	8/26	9/30
10/28	<b>11-none</b>	12/30

## NO VE TESTING THIS MONTH!

All TARS ARRL examination sessions are held at the Evansville Chapter of the American Red Cross. The ARC is located at 29 S. Stockwell Road, at the intersection of Stockwell Road and Lloyd Expressway. Sessions start promptly at **9:00 AM**, Evansville time. For more info contact:

[John VanVorst N9OL](mailto:John.VanVorst@N9OL) c: 812.305.4100



## Save the Dates

**Winter Field Day** will be on **January 27<sup>th</sup>** and we plan to be at Wesselman's Park, same place as last year.



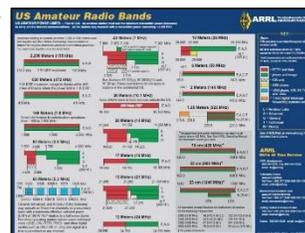
## TARS Banquet February 8th 6:00 pm, Log Inn



Watch SPARKS for more information.

## Revised ARRL Frequency Chart Now Available

An updated ARRL frequency chart is [now available](#) for printing and downloading. The chart has been updated to include our new bands at 2,200 and 630 meters.



The new chart is available as PDFs in these formats: 8.5 × 11 grayscale; 8.5 × 11 black and white; 8.5 × 11 color, and 11 × 17 color.

*[Editor Note: I have attached the 8.5x11 color pdf to the November SPARKS e-mail.]*

## November Birthdays

Jeffrey Holt	AA9WJ	30th
Jean Kissel	K9JKL	9th
Dick Meikle	W9XQ	22nd
Robert A Oberst Jr.	K8RAO	23rd
Martin Rockett	KD9HBQ	25th
Gerald Schoenbachler	KC9NOY	7th
Willie Wilson	WD9FHA	29th

★ HAPPY ★  
BIRTHDAY!

## Reminiscing and more

When Amateur Radio was young, you either had to build your equipment or save enough to purchase a transmitter or receiver. Many hams started out with a home built low power transmitter and receiver using only one or two vacuum tubes. Books and magazines had many construction articles and many hams (myself included) would salvage parts from old discarded television receivers.

The advent of kits (Allied Radio, Heathkit, Eico, Knight Kit, etc.) enabled hams to build their own equipment with confidence. Many a ham started out with these units.

As technology progressed, radios became more elaborate and complicated. Some hams still built their own equipment but more and more store bought equipment was appearing on the air. Collins, Drake, Hallicrafters and more became more popular if one could afford them.

The advent of solid state devices really made ham radios take off. What used to occupy an entire desk of transmitter, receiver, tuner, amplifier, and more was replaced by a single transceiver. Progress made each new model more complicated, compact and full of more and more features. The days of building or fixing your own equipment has sadly gone by the wayside.

There is, however, one area where anyone who solder, cut an aluminum pipe or screw things together can still build and experiment.

Antenna making is a fun way to save money and a good way to learn. New and older hams alike can save money by making an antenna. For just a few cents of wire for example, a two meter antenna can be built that works great. The ARRL and other publications contain hundreds of "how to" articles to build and operate everything from simple verticals to beam antennas.

If interested, the club does have a supply of aluminum tubing that you can obtain to build your own antenna. Danny Garvin WB9RIM built a beautiful 6 meter beam with some of it.

Manufactured antennas like this can be very expensive.

If you need any aluminum, contact one of the board members and let them know what you have in mind.

Bob Pointer N9XAW

## SSTV Goes Very High Profile

From: The ARRL Letter for October 26, 2017

In late September, University of Alaska-Fairbanks researcher Chris Fallen, KL3WX, was attempting to produce an RF-induced airglow -- or artificial aurora -- using the High Frequency Active Auroral Research Program ([HAARP](#)) facility near Gakona, Alaska, to warm up the atmosphere. Clouds hampered his experiment, but Fallen alerted his Twitter followers that he also had embedded a few Slow-Scan Television (SSTV) frames in the powerful HAARP signal, which



were copied in British Columbia and in Colorado.

"The SSTV images, aside from being a fun way to engage hams in some of the ionosphere-heating science performed at HAARP, will be useful for understanding radio propagation from Arctic or high-latitude sources," Fallen told ARRL.

HAARP consists of multiple transmitters feeding 180 phased-arrays and is capable of producing 3.6 MW (that's megawatts) of RF. HAARP's signal is essentially aimed straight up.

The assistant professor at the UAF's Geophysical Institute transmitted two UAF logos, a photo of his cat -- appearing as a giant feline next to the HAARP antenna field, and -- most unusual -- a QR code granting the recipient 0.001 Bitcoin. The SSTV images were not the best, and you

almost need to use your imagination to make out the cat.

His transmissions were on three discrete frequencies in the 2.8 MHz range. Fallen used different frequencies and antenna phase settings to determine if those factors would affect the airglow.

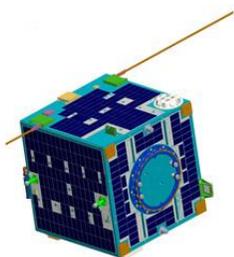


"I used Scottie-1 encoding for the images, because it is widely used in North America and the ~120-second duration fit nicely into the airglow experiment," Fallen said. "The antenna was directed toward the HAARP magnetic zenith, which, at ~75° elevation, is nearly vertical but has often been found by previous scientists to maximize artificial airglow."

Fallen told ARRL he still has some HAARP time left from his September campaign, although he's not certain what he'll use it for. His next opportunity to experiment further won't be until early next spring. HAARP conducts just two experimental campaigns a year, due to staff and funding constraints. Read [more](#).

## Chinese Amateur Radio Satellite Transponders Activated:

From: The ARRL Letter for October 26, 2017



The Amateur Radio linear (SSB/CW) inverting transponders on the CAS-4A and CAS-4B satellites were activated on October 18. CAMSAT's Amateur Radio payloads

piggybacked on the optical remote-sensing micro-satellites OVS-1A (CAS-4A) and OVS-1B

(CAS-4B), launched on June 15. CAS-4A (call sign BJ1SK) has a CW telemetry beacon on 145.855 MHz, and 4.8 kB GMSK telemetry on 145.835 MHz. The uplink is 435.220 MHz, the downlink is 145.870 MHz (20 kHz passband). CAS-4B (call sign BJ1SL) has a CW telemetry beacon on 145.910 MHz, and 4.8 kB GMSK telemetry at 145.890 MHz. The uplink is 435.280 MHz, the downlink is 145.925 MHz (20 kHz passband). --  
*Thanks to Southgate Amateur Radio News via AMSAT-UK*

## Secretary Report

October 5, 2017 Board Meeting

Chris n9jca called the meeting to order.

Introductions were given.

The floor was opened for the secretary report.

It was accepted as read.

Next on the floor was the treasurer report.

It too was accepted as read.

Discussion then turned to the election of officers for 2018. The ballot must be in both the October and November Sparks newsletter. Herb said there were enough persons to fill the ballot but more nominees could still be added.

The board was informed that reservations had been made at the log inn for the February 8, 2018 meeting and party. It was again stated that this year's party will have a twelve dollar member portion of the cost.

The Indiana QSO party and field day logs were next on the agenda. The drawing for the winner will be held during the October general meeting. Vice president Dave, kc9uvq called Steve, k4saw, on the telephone about the club tee shirt progress. There was a very good discussion as to the progress of this project. The November meeting will be the last opportunity to purchase one of the personalized shirts.

Discussion was then brought to the topic of the Boy Scouts on the air scheduled for October 21st and 22nd. It was decided that the club needs to talk to Gerald.

Winter field day will be held at Wesselman Park again for 2018. For publicity Max is going to contact Mike Blake from wfie 14 news. Winter field day is Jan 27th and 28th. Summer field day is June 23rd and 24. Inventory of equipment will be a project in the near future. The meeting was adjourned.

Don Land KB9YWQ  
TARS Secretary

## Treasurer Report

Budget (prepared 10/1/2017)

Opening Balance:	\$3,786.67
Receipts:	
VE room rental	\$28.00
Bank stop payment order credit (Yaesu lost first check)	\$500.00
Total Receipts --->>	\$528.00
Expenditures:	
Paid Don Land KB9YWQ for 2 Baofeng HT door prizes	(\$50.00)
Paid Dave Sandine for Slim Jim supplies, July meeting	(\$62.57)
Bank stop payment order fee (Note: Yaesu will reimburse)	(\$27.00)
Yaesu DR-2X Repeater Upgrade (second check)	(\$500.00)
Total Expenditures--->>	(\$639.57)
Ending Balance	\$3,675.10
Red Cross Fund	\$987.07

Jeff Holt AA9WJ  
TARS Treasurer

TARS is an [ARRL](#) affiliated club  
ARRL [Indiana Section](#)  
Section Manager: Brent Walls N9BA  
[bwalls@arrl.org](mailto:bwalls@arrl.org)



### TARS mailing address:

TARS  
P.O. Box 4521  
Evansville, IN 47724

### Don't forget to check out our web page

[www.w9og.net](http://www.w9og.net)

### Facebook Group

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

TARS E-mail: [info@w9og.net](mailto:info@w9og.net)

### 2017 Club Officers and Board members

President [Chris Matthews N9JCA](#) 812.205.6490

Vice President [Dave Sandine KC9UVG](#)

Treasurer [Jeff Holt AA9WJ](#) 812.858.2968

Secretary [Don Land KB9YWQ](#)

#### Board of Directors

[Bob Pointer N9XAW](#) 812.425.2118 (2016-2017)

[Mark Thienes KC9TYA](#) 812.963.6455 (2016-2017)

[Dave Julian WB9YIG](#) (2016-2017)

[Raymond Edge W9KHP](#) (2017-18)

[Rick Jackson K9EXY](#) (2017-18)

[Max Wilkinson KD9ABT](#) (2017-18)

### SPARKS Editor:

Chris Lantaff KE9YK

E-mail: [sparks@w9og.net](mailto:sparks@w9og.net)

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 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: [sparks@w9og.net](mailto:sparks@w9og.net)**