

SPARKS

Monthly Newsletter of the Tri-State Amateur Radio Society

Serving the Tri-State for over 70 years

July 2020 - Issue No. 7



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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Complimentary issues of the SPARKS Newsletter are available to amateur radio clubs on a newsletter exchange by e-mailing your request to sparks@w9og.net.

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

Presidents Corner

I cannot believe July is here already! But it seems like forever since our club was together in person. The Zoom meetings are working great, but I deeply miss the interaction and camaraderie of meeting together and discussing ham radio, bragging about exotic contacts, spinning tall tales of mighty antennas and smokin' stations. Hopefully, we will have the opportunity to get together again very soon. In the meantime, I hope you are joining us on the Zoom sessions during regular meeting times. Watch your email for Zoom meeting connection info, and if you don't get it in email and want to join our club meetings please drop an email to info@w9og.net!!

I had a low-key Independence Day this year. I got to spend some time in the ham shack getting on the air with some fine ham radio friends, and I chased the 13 Colony stations also. That is always a lot of fun. Yet on Sunday evening July 5 the GB13COL station has eluded my lackluster antenna. Hopefully, I can get him in the log yet this year. I also spent some time praying for our country. There is so much turmoil and unrest in many places in the U.S. right now, and I pray it will settle down and we can get back on a positive track. God bless America!

Did you know that TARS has a new repeater? The TARS-NE repeater went on the air on Friday 7/3. It has real good coverage across the area- check it out on 145.250MHz. It is a Yaesu Fusion repeater, in digital only mode. Have you tried Yaesu Fusion C4FM, ands Wires-X? You should. Yaesu has fusion capable handhelds and mobiles and some of the models are attractively priced. Yaesu Fusion and Wires-X can open the world to you from your HT or mobile. Our club will soon add another Wires-X node at the Red Cross for users to take advantage of. In addition to the new TARS-NE repeater we also have the 147.150 in midtown Evansville, the 146.835 repeater located west of Evansville, and the 147.33MHz repeater in Burnt Prairie IL. These Yaesu Fusion repeaters are there for you to use and enjoy.

In addition to the Yaesu Fusion repeaters of course we have the 146.790MHz, or the '679', all-analog system which is working much better of late due to some much needed maintenance work by Dave WB9YIG. This is our main emergency communications system for District 10 Emergency Management.

So enjoy the repeaters- that is what they are for. We need to use them to make sure they are functional if/when they are needed in a disaster. Also, if you are interested in learning more about the repeaters and being on the team that helps maintain them please let send an email to info@w9og.net. It is a great way to give back to your club and the community.

John, N9oL

Securing PowerPole connectors

By Dan Romanchik, KB6NU

In preparation for this year's Field Day, I made a bunch of cables with PowerPole connectors to connect the solar panel, charge controller and batteries that I used. If you're not familiar with PowerPoles, you might want to [check out this YouTube video](#). They're really great connectors, and have become the DC connector of choice for many hams.



When I make up PowerPole cables, I normally don't bother trying to secure the two halves together, especially if you're using some decently heavy gauge wire. They fit together pretty tightly, and don't come apart easily. Even so, I think securing them together is a good idea. You can buy a little roll pin to insert between the red and black housings that is supposed to prevent them from coming apart, but many folks complain that the pin has a tendency to fall out. This not only defeats the purpose, but could also damage your equipment.

Securing them is the right thing to do, though, and I recently came across some great suggestions on how to do this in the daily digest that I receive from the [Elecraft-KX mailing list](#). Here are the best tips from the thread, [Securing Anderson Power Poles](#):

- Rudy K8SWD: You can thermally bond the red and black housings with a soldering iron like you are making little welds on both sides. Permanent (mostly) but it works better than the roll pins. Just clean the tip really good before soldering!
- Dave KOCD: [Anderson] also make connectors that are thermally bonded together in pairs. They do NOT come apart.
- Don W3FPR: I use a drop of Super Glue on the junction of the plastic pieces. Warning – that glue grabs quickly, so slide the 2 pieces only enough to start the assembly, then apply the drop of glue and quickly finish sliding them together. I have never had ones prepared like that come apart, and I don't use roll pins. I will say one more thing – use only the genuine APPs. I have seen some knockoffs that do not mate well.
- Greg KC9NRO: Take a hot soldering iron. Wipe the tip with sponge. Run the tip down both side of APP bonding the black and red sides together. Clean soldering iron tip

and apply some solder to tip. That's how I roll. Never comes apart

- Mike AI4NS: PVC cement will soften the plastic enough to bond them together. You can also get plastic welding rods, such as [Dainty Plastic Welding Rods](#). Chuck a rod in a Dremel and weld them together. I have made plastic boxes and panels using this method.
- Jack WD4E: Snip the cotton end off a Q-tip, cutting at an angle. Insert into hole made for roll pin, cut off excess, save remainder of Q-tip for next requirement.
- Troy K4JDA: 2.5mm screws work well, stay in, and are easily removable.

I posted these suggestions to [my blog](#) and got a few more great suggestions:

- Tom KB8UUZ: Fat tooth picks also work great. Jam it in, break it off.
- Bruce NONHP: I use MEK (Methyl Ethyl Ketone) replacement to clean my circuit boards after soldering. A single drop of MEK on the junction between the two halves of the PowerPole shell will fuse them. It can be broken with a sharp tap but not accidentally. It will set and dry in seconds and should be applied after the shell pieces are put together.

I think these are all great suggestions. I think that I'm going to try the cotton swab method. While reading them, another thought occurred to me. I haven't tried this yet, but I'm thinking a little drop of hot glue on the roll-pin hole might work, too.

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Dan Romanchik, KB6NU, is the author of the KB6NU amateur radio blog (KB6NU.Com), the "No Nonsense" amateur radio license study guides (KB6NU.Com/study-guides/), and often appears on the ICQPodcast (icqpodcast.com). When he's not thinking up new ways to keep his PowerPoles together, he likes to teach ham radio classes and operate CW on the HF bands.

Researchers Use 200 Years of Sunspot Observations to Create "Sun Clock"

ARRL Letter for July 2, 2020

Researchers in the UK and the US have developed a new "sun clock" that quantifies extreme space weather and pinpoints distinct on/off times of high solar activity and space weather. The sun clock will assist in planning to protect space and ground-based infrastructure that is sensitive to space weather. The [study](#), "Quantifying the solar cycle modulation of extreme space weather," was published in *Geophysical Research Letters*. It explains that the sun clock uses the daily sunspot number record available since 1818 to map solar activity over 18 solar cycles to a standardized 11-year cycle or "clock."

"Extreme space weather events can significantly impact systems such as satellites, communications systems, power distribution, and aviation," a Warwick University [news release](#) said, noting that these events are driven by solar activity. "By devising a new, regular 'sun

clock', researchers have found that the switch on-and-off of periods of high solar activity is quite sharp."

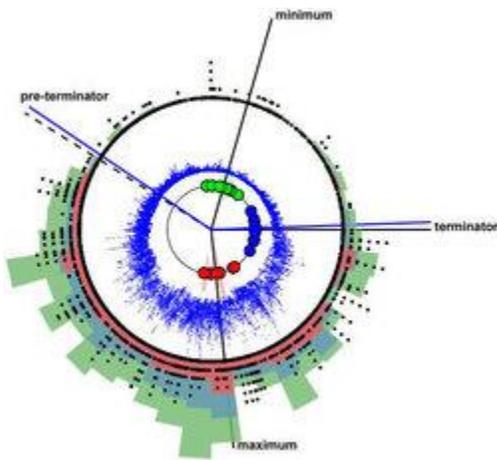
The researchers' analysis shows that while extreme events can happen at any time, they are much less likely to occur during quiet intervals. The sun clock is aimed at helping scientists to determine more precisely when the risk for solar storms is highest and to plan the impact of space weather on space infrastructure. This gains importance as Solar Cycle 25 is imminent.

According to the researchers, no two solar cycles are the same, but using a mathematical technique known as the Hilbert transform, they were able to standardize the solar cycle for the first time. The clock revealed sharp transitions between quiet and active periods of solar activity.

"Once the clock is constructed from sunspot observations, it can be used to order observations of solar activity and space weather," the university said. This includes the occurrence of solar flares and the 10.7-centimeter solar flux that tracks solar coronal activity.

The researchers determined that once past on/off times are obtained from the clock, the occurrence rate of extreme events when the sun is active or quiet can be calculated.

"Scientists spend their lives trying to read the book of nature," lead author and Professor Sandra Chapman of the University of Warwick's Centre for Fusion, Space, and Astrophysics, said. "Sometimes, we create a new way to transform the data, and



Multiple solar cycles are mapped onto a regular solar cycle clock with increasing time reading clockwise. Circles indicate the cycle maxima (red), minima (green), and terminators (blue). The 10.7-centimeter solar flux (blue) and GOES satellite X-, M-, and C-class solar flare occurrence is plotted. Extreme space weather events on Earth seen in the aa geomagnetic index are shown as black dots arranged in concentric circles.

The YO3ICT tracker transmitter onboard the balloon: "I had to build it under a microscope," Medlin said. [Tom Medlin, W5KUB, photo]

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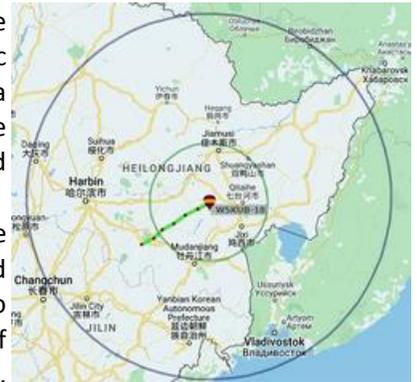
what appeared to be messy and complicated is suddenly beautifully simple."

Balloon Launched by Popular Web Show Host Completes Third Round Trip

ARRL Letter for June 25, 2020

A [balloon](#) launched on May 20 by "Amateur Radio Roundtable" web show host Tom Medlin, W5KUB, and his team has begun its third circumnavigation of Earth. The balloon, at 43,000 - 45,000 feet, completed its second trip around the globe on June 19. It crossed the Atlantic Ocean "in record time" at a speed of about 170 MPH, the balloon website reported this week.

Identified as W5KUB-18, the balloon carries APRS and WSPR amateur radio payloads. By the morning of June 25, it was above China, moving at more than 100 MPH.

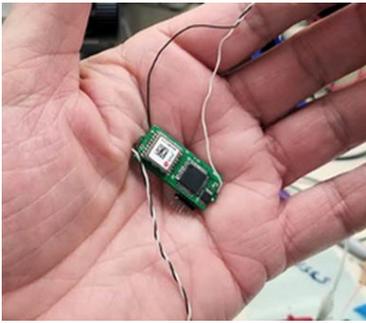


According to the balloon website, the mission and goal are to launch a high-altitude balloon for long-duration and multiple trips around the world. The balloon, an SBS-13, is capable of flying up to 45,000 feet. "It will be filled with hydrogen to obtain higher altitude," the website explains. "It will be solar powered only (no batteries, so it will only transmit during daylight). We will receive tracking every 10 minutes via WSPR on HF [14.0971 MHz]." Tracking transmissions will be turned off over the UK, Yemen, and North Korea due to regulations. The tracking transmitter runs just 10 mW, but it's being heard as far away as 9,000 miles, Medlin told ARRL.

"The entire tracker with GPS and processor is only 2 grams," Medlin said. "That's about the weight of a penny. The entire payload is only 15 grams total." The current effort is the group's ninth attempt to circumnavigate the globe.

Medlin says the balloon project has broadened his horizons. "You have to do a lot of specific engineering and measurements down to the 0.1 gram to fly one," he told ARRL. "You also become a weatherman, watching all the NOAA websites, winds at different altitudes, storms, etc. Storms will bring you down," Medlin said. With the float altitude set at 44,000 feet, he expects to be able to fly above most storms. "You also become very well-versed in geography as it flies," he added.

Medlin's livestreamed "[Amateur Radio Roundtable](#)" goes live on Tuesdays at 9 PM Eastern Time and accepts calls from viewers. He has operated a live cam at Dayton Hamvention® for several years. Read [more](#).



The YO3ICT tracker transmitter onboard the balloon:
"I had to build it under a microscope," Medlin said.
[Tom Medlin, W5KUB, photo]

On the Bands

IARU HF World Championship

The second full weekend of July, beginning 1200 UTC Saturday and ending 1159 UTC Sunday (July 11-12, 2020). Both Single and Multi-operator stations may operate the entire 24-hour period.

Objective: To support amateur self-training in radio communications including improving amateur operating skills, conducting technical investigations, and intercommunicating with other amateurs around the world, especially IARU member society headquarters stations, using the 160, 80, 40, 20, 15 and 10-meter bands.

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.

We are currently running the net on Mon-Wed-Fri night at 8pm due to the Covid-19 Lockdown. This net will run till the end of July and will be reevaluated at that time.

Net Operator schedule

July

1	KB9YWQ
8	WB9KQF
15	KE9YK
24	KC9TYA
29	KC9UVG

August

5	N9QVQ
12	KB9YWQ
19	WB9KQF
26	KC9TYA

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](#).



The SKYWARN Spotter classes for spring have all been completed but the NWS is currently offering MiniCourses.

You can check out the current listing at this link:

<https://www.weather.gov/pah/NWSMiniCourses>

VE Testing

2020 schedule

ATTENTION!!!

Since it will be some time before we are able to resume testing at the Red Cross facility, we are currently working on finalizing a location for the July 25th testing.

Check the TARS website www.w9og.net for info coming soon.



Apr-25, May-30, Jun-27, Jul 25,

Aug 29, Sep 26, Dec 5

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.

Details can be found at: <http://w9og.net/ve-testing>

For more info contact: [John VanVorst N9OL](#) c: 812.305.4100



Reminder the current Extra class (Element 4) Question Pool is valid until **June 30, 2020**. After that date you will need to update your study material.

Vanderburgh Co. ARES/RACES

All Vanderburgh Co ARES/RACES in person meetings are canceled until this COVID-19 emergency has passed. Thursday 7/16 we will hold a ZOOM meeting. Watch your email for details. If you would like to participate

Contact: Chris KE9YK

IN82RACES@gmail.com

812.453.1972

or

Len N9QVQ len.n9qvq@gmail.com

Vanderburgh Co ARES EC

812-963-0027



HAMFEST Calendar

QSO Today Virtual Ham Expo Set for August

QSO Today podcast host Eric Guth, 4Z1UG/WA6IGR, has announced that the first [QSO Today Virtual Ham Expo](#) will take place Saturday and Sunday, August 8 - 9. Attendance is free to all, [registration](#) is open, and there are early bird prizes for registering now. Built on a live, virtual reality platform used by



Fortune 500 companies and major universities, the ARRL-sanctioned hamfest will feature a lineup of well-known speakers. Guth and his team, including George Zafiropoulos, KJ6VU, have assembled more than 50 of the best ham radio mentors in multiple tracks to address this conference from the virtual Expo's auditorium.

Presenters will include Ward Silver, N0AX, on grounding and bonding; Glenn Johnson, W0GJ, on DXpeditions, and John Portune, W6NBC, on building slot antennas for antenna-restricted locations. Demonstrations of new amateur radio gear will be presented, and attendees can speak with exhibitors via video/audio or chat, as well as interact with others online.

"This platform simulates a full convention experience, with an exhibit hall and exhibit booths staffed by live attendants, speaker auditorium, lobby, and lounges," the announcement said. Guth, an ARRL member, decided to go forward with the virtual event after many in-person ham radio conventions were canceled because of the COVID-19 pandemic. ARRL will be among the exhibitors filling the virtual exhibit hall.

Attendees will be able to share ideas and network with each other via the virtual platform. Following the 48-hour live event, audio/video from presentations and resources published by exhibitors will remain available to registrants on demand for 30 days.

More covid cancellations....

The 2020 Vette City Hamfest / ARRL KY State Convention October 3rd in Bowling Green KY has been canceled.

Also

Central Kentucky ARRL Hamfest 08/08/2020

Lexington Is officially CANCELLED!

August 8 – Angola Hamfest

Gateway Community Church – Angola, IN

August 15 - East Central Indiana Hamfest

Randolph County Fairgrounds - Winchester, IN

TARS Hamfest

Plans are still a go for Hamtober Fest 2020



John N9OL is the chairman this year and will be soon looking for commitments to help with this club event.

October 17 – Hamtober Fest

Lynnville, IN

<http://hamtoberfest.com/>

November 7, 2020 - Hoosier Hills Hamfest

NOTE DATE CHANGE

Lawrence County 4H Fairgrounds - Bedford, IN

just off of US-50, west of SR-37

<http://www.w9qvq.org/hamfest>

ARRL Central Division Convention

November 14 - 15, 2020 – Ft Wayne Hamfest & Computer Expo

Allen Co War Memorial Coliseum

Ft. Wayne, IN

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

November 28 - Wabash Valley ARA Turkey Fest

Clay Co. Fairgrounds - Brazil, IN

www.w9uuu.org

Search the ARRL hamfest calendar for upcoming hamfests :

<http://www.arrl.org/hamfests/search>

July Birthdays!!!

Ted Ackerson	KD9NUC	23rd
Robert L. Futrell	AF9F	26th
John Henderson	KB9QXO	17th
Connie Martin	KD9KJG	2nd
John McCormick	N9XXK	7th



Secretary Report

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

Dave Sandine KC9UVG

Treasurer Report

Budget:

May 2020 (prepared 6/1/20)

Opening Balance: \$4,445.99

Receipts:

Memberships \$12.50

Total Receipts --->> \$12.50

Expenditures:

None \$0.00

Total Expenditures--->> \$0.00

Ending Balance \$4,458.49

RED CROSS funds \$1,283.82

Funds Available to TARS \$3,174.67

Jeff Holt AA9WJ

TARS Treasurer

Looking Ahead

2020

13 Colonies Special Event

(July 1, 2020-1300 UTC to July 8, 2020-0400 UTC)

National Night Out first Tuesday of August

International Lighthouse and Lightship Weekend (ILLW) third full weekend of August

TARS PICNIC Sep 12

Route 66 Special Event September

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

TARS 3rd annual Hamtober Fest Oct 17th 2020

SKYWARN Recognition Day, Saturday, December 5th, 2020

2021

Straight Key Night Jan

TARS AUCTION January

ARRL Kids Day Jan

Winter Field Day January

TARS Banquet

INQP 2021

MUSEUM SHIPS WEEKEND June

ARRL Kids Day June

Field Day June

Total Solar Eclipse North America April 8, 2024

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



2020 Club Officers - Board members

President [John VanVorst N9OL](#)

Vice President [Max Wilkinson KD9ABT](#)

Treasurer [Jeff Holt AA9WJ](#)

Secretary [Dave Sandine KC9UVG](#)

Board of Directors

[Rick Jackson K9EXY](#) (2019-2020)

[Dennis Martin WA2USA](#) (2019-2020)

[Mike Townsend W9KXP](#) (2019-2020)

[Herb Alvey KB9MZH](#) (2020-2021)

[Don Land KB9YWQ](#) (2020-2021)

[Chris Matthews N9JCA](#) (2020-2021)

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Chris Lantaff KE9YK

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