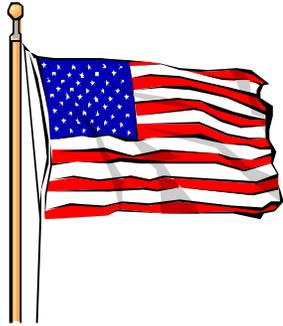


Sparks

W9OG



This is where we will be holding Field Day again this year
Think about this photo when we are there this month.

Monthly Newsletter of the Tri-State Amateur Radio Society
June 2015-Issue No. 6

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: ftg2pointer@gmail.com



Presidents Corner



N9OL



Apologies:

My hard drive crashed and my backup program would not restore my computer. I had to rebuild the mailing list. If you know of anyone not receiving Sparks, let me know the name and email address so I can add it to the list.

Bp

One Man's Opinion

If you read the editorial of Dave Sumner, K1ZZ CEO ARRL May 2015 QST I think this was long overdue by the ARRL. Just in case you have not read the article it was titled "Toothless Tiger" and refers to the FCC enforcement, or lack of it.

In the past quite a few poor examples of operating have resulted on the bands, intentional Interference, jamming repeaters, profanity, harassment of other hams. Take for example the episodes on 14.313 kHz and 3.843 kHz poor examples of how radio amateurs should behave themselves.

Now, the ARRL for years has sponsored the OO program, but it has been very discouraging to most of those in the OO program to spend their time monitoring, recording and shipping tapes, or CD's at their expense to the league and then have nothing done. The first step in reporting a problem, the chain of command is the league and the next step is the FCC. However, the person who manages the OO program at the league determines if your case merits forwarding to the FCC.

The proper procedure for any monitoring is to send an OO notice first, but wait this puts you at risk with the person you are sending the notice to and they may retaliate against you. Ok, so we ask that we be unknown and send in recordings, we document the times, dates, bands used and record the offender. So what happens? Nothing in the way of enforcement, fines or even a stern warning letter. The FCC looks the other way in regard to foul mouthed individuals on the ham bands and for the most part this is not enforced.

If the situation goes on for an extended period of time, we might persuade the FCC to at least send a warning letter. Ok you say you have read about hams being fined for offenses, the FCC sends them an NAL. Another fact, the FCC has no means to collect fines, they might be able to withhold your income tax refund and get it that way? We all know that collection, or conviction can take years for any results and in the same time period the offender continues to get away with his antics.

Thing is, a major offender can continue to operate bringing havoc to the ham bands, causing more problems, agitating other people, interfere with repeaters, nets, DXers and they can continue to do this until the FCC takes action. This may be a long time in waiting, results as we have seen are not instantly, it can take months, years, or even decades.

In the most recent upgrading of the FCC monitoring system and read this carefully, we have seen the number of Field agents drop from 63 to 33 and the number of Field offices drop from 24 to 8. Did you read that right? Another so called improvement is a "Tiger Team" of Field agents based in Columbia, Maryland available for deployment as needed then move on once the problem is solved.

This might work for prolonged cases, but Jammers and those creating intentional interference are not stupid, they will create their havoc on an irregular basis. It may take years to track them down and even if we do, well nothing may be done about the problem. We are advised to ignore jammers by commenting on their activities we encourage them to continue. Does this work, not really!

I am sure that all amateur complaints will be put on the bottom of the pile as far as enforcement is concerned. In the past the ARRL OO program would suggest you send the OO notice, of course if you had the person dead to rights, ARRL would let you dangle in the breeze. They did not want to risk any retaliation from other Amateurs if you sent in tapes or CD's on certain days of the week, it was the wrong day, or the tape used was not the right brand. Another dodge and hedge and it indeed was frustrating to the OO monitoring system. Some even resigned their positions since all they received were shuck and jive and more double talk.

Apparently, Dave Sumner has become frustrated as well with all the double talk the league has gotten in the last few years. Plus the fact that the double talk is passed on to the OO monitoring system and those complaining about problematic issues. Personally, I do not see things getting any better as to enforcement.

This new reorganization of the FCC requires time to get things in order, but as in the past do not expect miracles, or instant results. It just will not happen no matter how good the picture is painted, or the promises made, the rules have to be enforced and the FCC is not doing it in an effective manner.

As always my friends this is “One Man’s Opinion” Bill, K4LRX



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From the desk of Ron Hanes KC9OUT

TARS receives an Award

Doreen Everett (AE5QM) newly elected chair of the Indiana Radio Club Council gave a short presentation on her group which was originally founded in 1947. They have semi-annual meetings in April and October.

They recently held a workshop in Indianapolis for the purpose of sharing ideas between clubs. They hope to host one workshop per year. Their newsletter, the Bison is generally published on a monthly basis. They sponsor several different amateur related awards.

They sponsor the Indiana Club Competition Plaque annually in the Indiana QSO Party, the Indiana Technical Excellence Award, the Indiana Amateur of the Year Award, and the Outstanding Club Award. More information can be found on their website at <http://inrcc.org>. She then presented a plaque for **Outstanding Club Award** to TARS as a result of its activities related to the ARISS contact and event.

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Upcoming Events -- Plan Ahead Things to look forward to:

Field Day 2015

It will be here sooner than you think. We still need a few more volunteers to help out. The #2 SSB station still needs a captain. We need a safety observer to ensure everything is safe for operators and visitors.

We will begin setting up antennas on Friday evening after 18:00 hrs. Saturday morning we will set up the rest of the equipment.

Come out and support your club. We will again be using the log cabin and bard at USI for the event.

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It came to me:

Peter and Gordon were a popular singing duo in my time. They produced several top hits. One of my favorites was “Sounds of Silence” written by Paul Simon. I often wondered where he got the idea for the song. Recently it came to me.

Paul Simon must have been a member of a club or organization at one time. He probably noticed that when the club president ask for volunteers to help run for office or help the club with a project, a deafening silence fell upon the group. Everyone was happy when someone else was doing all the work but fell silent when ask to help. Don’t just be an observer; participation keeps the club alive and active. “Let someone else do it” has brought down many a club or organization.

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Birthdays

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Presentations and demonstrations

Be thinking about topics for our meeting presentations. Let us know what you want to see or do as a club.

Built something new?
Have a neat item to share? Working on a project? Bring it to the meeting; we would love to see it.



We have several openings for demonstrations or lectures if you care to give one. It doesn't have to be technical or long winded, just something of general interest

Trivia Time.

It must be a man thing. No amount of power is enough. **MUST HAVE MORE POWER!**

In the old CB radio days we were limited to 5 watts input power. A rare percentage even knew what that meant but were obsessed with outdoing everyone else. One could “screwdriver” his radio and increase the output power from 3.5 watts to 4 watts and you would have thought he deserved a medal. Of course everyone told him he was “peggin the needle” even if they did not notice any difference. Often such “screwdrilvering” lead to distorted audio, overdriving the final or off frequency operation.

So what is this **power** thing all about? (without getting too darn technical)

1. A common measure of RF power is
 - a. Volts
 - b. Amps
 - c. Ohms
 - d. Watts
 - e. Gallons

2. The basic formula for electrical power is
 - a. $P=IE$
 - b. $P=EC$
 - c. $P=32ft/sec^2$
 - d. $P=R/I$
3. If we put 100 watts from our transmitter into a 200 ft run of RG8 will we get 100 watts at the antenna?
 - a. Yes, if the SWR is low
 - b. No because of humidity
 - c. Yes if we use a good grade of shielded coax cable
 - d. No because some of it is lost as heat.
 - e. No because the RF has to travel uphill to the antenna and gravity will pull some back.
4. The simplest measure of transmitter RF power is from:
 - a. A sideband signal
 - b. A digital signal
 - c. A CW signal
 - d. An AM carrier modulated at 30%
5. Your watt meter has a switch with two settings. PEP and AVE. what do they mean?
6. Which setting would you use to make sure your power output does not exceed legal limits?
 - a. Average
 - b. PEP
 - c. REF
7. By the way what is the maximum legal output of a ham station according to the FCC?
 - a. 1000 watts average
 - b. 1500 watts average
 - c. 2000 watts average
 - d. 1500 watts PEP
 - e. 2000 watts PEP
8. Another common (but expensive) instrument to measure your transmitter power is
 - a. Hickock distortion analyzer
 - b. FETVOM
 - c. Simpson 260 VOM
 - d. Spectrum analyzer
9. One real world signal we want the minimum amount of power from is
 - a. digital
 - b. Spurious
 - c. Sideband
 - d. FM

10. I know you don't want to talk about this but if you double your power output the ham on the receiving end will see what on his S-meter if your original signal was S-7?
- you would get a S-9 report
 - you would get a S-8 report
 - you would get a half S-unit increase
 - He would see no difference.
11. Sam got his tax refund of about \$1500 and wants to make a substantial difference in his station to get his worked all countries award. That is a lot of DX work. He currently has a 100 watt transceiver feeding a dipole up 40 feet on his tower. What would be his best choice to spend his money on?
- A 600 watt amplifier
 - A full legal limit amplifier
 - The new 200 watt Kenwood TS990
 - The best beam antenna he can afford
 - A case of budwiser.
12. Which setting on your watt meter will give the most accurate power reading on FM?
- PEP
 - AVE
 - Either one will read the same
13. Transmitter output power is measured where
- At the grid of the final amplifier
 - At the point it feeds the antenna
 - At the back of your radio (the antenna jack)
 - At the output of the last amplifier
14. What is the maximum allowable output power for amateur radio stations?
- 50 watts
 - 100 watts
 - 200 watts
 - 1500 watts
15. Good amateur practice dictates we use how much power for communications?
- What ever the radio puts out
 - A minimum of 10 watts
 - Just enough for effective communications
 - Full legal limit
16. Mark put up a 50 ft tower and a new 20 meter beam antenna. From the radio shack to the antenna requires 100 ft of coax. His radio puts out 100 watts. He selects LMR 400 coax. How much power actually reaches the antenna (assuming no SWR loss)?
- 100 watts
 - 95 watts
 - 90 watts
 - 85 watts
17. A dummy load converts RF energy into
- Electrical energy
 - Magnetic energy
 - Cosmic energy
 - Heat energy
 - 5 hour energy
18. If you run maximum power into a dipole, where is the most dangerous part of the antenna?
- The feed point
 - The ends
 - Both
 - Neither if it is a half wave dipole.
19. What does ERP stand for?
- Energy Radiated Polarization
 - Effective Radiated Power
 - Effective Radiated Potential
 - The formula for figuring actual power loss E (peak voltage) times R (resistance of feed line per ft.) = P (actual power delivered to antenna)
20. I just got an S6 signal report. If I double my power twice, what will the ham on the other end see on his S meter?
- S 12
 - S 8
 - S7
 - S6
 - No change



Interested in helping our community?

All ARES/RACES members and any Amateur interested in emergency communications are encouraged to participate

For ARES/RACES announcements you can join the Emergency Comms yahoo group at

http://groups.yahoo.com/group/emergency_comms/join

Contact Chris KE9YK or John WB9EFH for more information on how you can help out.

Chris KE9YK

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Trivia Answers: for this month

1. d. watts, but some refer to running maximum allowable power as “running a full gallon here”
2. a. $P=IE$ or power = Amps times volts
example: 100 volts X 2 amps = 200 watts
3. d. because of several factors the coax will turn some of out power into heat loss.
4. c. A simple continuous wave (CW) signal allows us to measure carrier power.
5. PP stands for Peak to Peak power and AVE stands for average power.
6. a. PEP stands for peak envelope power it shows maximum power at the peaks of the signal. Your AVE or average setting may show much lower power output but your peaks may be exceeding legal values.
7. d. 1500 watts peak envelope power.
8. the spectrum analyzer gives many measurements, one of which is a very accurate and visual measurement of your power. It also lets you see distortion, noise, hums and other problems with your signal.
9. b. spurious signals are unwanted signals from many factors including poor transmitter design, overdriving the amplifier, excessive bandwidth etc. Most modern

radios have this well under control until hams start “tweaking” things beyond design limits. (you hear that wide banders?)

10. It will only rise half an S-unit. Surprised? If you were running 100 watts and the other ham gave you an S-7 reading, you would have to double your power twice (100 to 200 and 200 to 400 watts) to get an S-8 from the other station.
11. d. dollar for dollar any money spent on a better antenna is the best deal. The amplifier will increase your signal to the other stations but the beam will not only increase your signal but also your received signal. Don’t be an alligator, all mouth and no ears. Getting into Japan with an S9+10 signal and having to say “repeat your last” over an over again only clutters up the bands.
12. c. either one will read the same because the FM carrier remains the same peak to peak and average. Only the frequency changes, not the wave amplitude.
13. at the output of the last amplifier whether internal or external. So if you have a 100 watt radio driving a 500 watt amplifier your output power is 500 watts, not just the 100 watts of your radio itself.
14. Ah-ha! Caught you sleeping didn’t I? Actually all are correct answers. (Under certain conditions) see footnote **
15. c. just enough power to effectively communicate. You don’t need to run 1500 watts for every QSO. The QRO group thinks they should run maximum legal limit (and then some) all the time even when they are giving each other S-9 + 20 db signals. Give the rest of the planet a break and use just enough power to get the job done. If the other station is giving you an S-4 but you are perfectly readable then you still don’t need that extra 1000 watts.
16. c. about 90 watts. Made you look up a loss calculator didn’t I? Good hams do not always have to memorize a lot of information; just know where to find it when they need it. In this case I used this one http://www.qsl.net/co8tw/Coax_Calculator.htm

17. d heat energy. Many of my home made field day antennas turned out to act like dummy loads.
18. c. both can be dangerous. The feed point is the place of maximum voltage. Since many of us hang the dipole from a metal pole or tower we must be careful not to let the feed point connection get too close to the metal or it could arc across. The ends are the point of maximum current and can cause some nasty burns to anyone who comes in contact or if proper insulators are not used. I forgot to mention anywhere along the coax can get very hot with high SWR.
19. b. Effective Radiated Power. The power sent out into the air from your antenna. This figure is a sum of all gains and losses from your transmitter to your antenna output. For example: Your transmitter puts out 100 watts. The loss in the coax is -2db, your beam antenna has a gain of 6db. Your effective radiated power is $6-3 = 3$ db gain. This would *look like* you were putting out 150 watts to the ham on the receiving end.
20. c. S7 Remember when you double your power it is a 3db increase. It takes a 6 db increase per S-unit increase. Putting your 100 watts into an antenna that offers 6 db forward gain will also increase your signal to the other end by one S unit, but you get the added benefit that it also increases your received signal a lot.

Footnotes:

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Technician licensees are limited to 200 watts PEP in 10 meter allocation between 28.0-28.5MHz.

In Technician sub-bands on 80, 40, 15 meters, all are limited to 200 watts PEP

All amateurs are limited to 200 watts PEP on the 30meter band

All amateurs are limited to 50 watts PEP on 219-220MHz segment of 1.25 meter band.

Beacon stations are limited to 100 watts PEP

Stations operating in the 70 cm band near certain military installations may be limited to 50 watts PEP or less.

Other restrictions exist for novice class licensees and for stations operating on the 60 meter band.

Learn more:

<http://tymkrs.tumblr.com/post/10770399393/ham-radio-power-limits>

http://en.wikipedia.org/wiki/Effective_radiated_power

Eat'n Before the Meet'n

Everyone is welcome to join us.

The June Eating Before the Meeting will be at Schlotzsky's Deli 301 North Green River Road., before the regular TARS club meeting June 11th. Drop by for food, socializing, "story tell'n" and whatever else comes to mind. Join the group at 5:30, check in on 146.79 if you need directions or just bored on your drive in.



Chris KE9YK

If you have any suggestions on where you would like for us to meet, contact Chris (KE9YK@arrl.net).

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Vanderburgh Co. ARES/RACES

The next Vanderburgh county ARES/RACES meeting is June 18th, 7:00 pm at the west side VC EMA Training Center [1430 Harmony Way](#).

Anyone interested in emergency communications in Vanderburgh Co. is invited

Chris Lantaff KE9YK
Vanderburgh Co RACES Officer
(ke9yk @ arrl. Net) 626-0069

the radar data is telling them and find out what they may be missing.

If you are interested in being a control operator contact Chris KE9YK@arrl.net 626-0069. Next time there is a weather event check in on the TARS 146.79 repeater and see what is going on.

Many thanks to our award winning Net Control operators.



You provide a valuable service to the club and the community. We often fail to thank you enough for your service. Keep up the good work.

On the Wednesday night net you can hear the latest club information, calendar of upcoming events, topics of general interest and good old-fashioned rag chewing.

If you would like to help run the net please Help is always appreciated and it is fun.

Net controls: Please forward a list of your check-ins to KE9YK@arrl.net thanks.

*** ***** **

Disclaimer:

Of course there is no such thing as coax developing a memory. This is the April Fools edition. What did you expect????

VE Test information



Test dates:

1/31/2015	7/25/2015
2/28/2015	8/29/2015
3 none	9/26/2015
4/25/2015	10 none
5/30/2015	11/28/2015
6/27/2015	12/26/2015

All ARRL examination sessions will be 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

Tri-State Emergency Net

Please take a few minutes at **8:00 p.m. Wednesday** evenings on 146.79 and get updated on the latest information.

On the Tri-State Emergency net you can hear the latest club information, calendar of upcoming events, topics of general interest and good old-fashioned rag chewing.

Remember to monitor the weather net on 146.79 anytime there is a severe weather watch issued from the Paducah NWS for Vanderburgh or surrounding counties. Once a warning or severe weather is reported we will go into a SKYWARN net and relay weather reports to the NWS in Paducah.

Net Operator schedule

June	3	WB9KQF
	10	KC9YIL
	17	N9QVQ
	24	KE9YK
July	1	KC9TYA
	8	WB9KQF
	15	KC9YIL
	22	N9QVQ
	29	KC9TYA
August	5	KE9YK
	12	WB9KQF
	19	KC9YIL
	26	N9QVQ

Net operators WANTED

TARS is in need of volunteers for net control operators. While we could use a couple more for the regular Wed night nets we desperately need volunteers for Skywarn/Weather nets. We have not recently had consistent weather nets I am working to change that. Weather nets are not only good for local hams to find out what coming their way but the National Weather Service depends on Hams via Skywarn to be their eyes and ears to confirm what

Lloyd Expressway. Sessions start promptly at 9:00 AM, Evansville time.

Those candidates wishing to earn their first Amateur Radio License, or upgrade their present valid license, need to bring the following:

1. Their original signed and valid FCC Amateur Radio License.
2. Any previously earned CSCE.
3. One copy of the license *and* CSCE.
4. Two forms of Identification, one bearing a recent photograph.
5. The current ARRL testing fee of \$15.00.

You “**must**” have your Social Security number or EIN with you

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

2015 Club Officers and Board members

2014 Club Officers and Board members

Board of Directors

President: John Vanvorst jcvanvorst@wowway.com
812-305-4100 cell

Vice Pres: Steven Wilzbacher KC9SAW
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Sparks editor Bob Pointer N9XAW