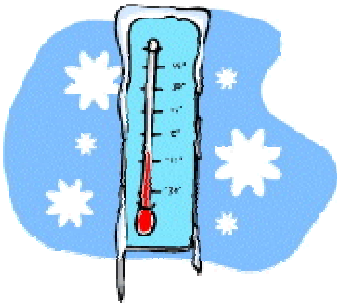
Sparks

W9OG





Good weather to stay inside and do some
Rag chewing on the radio.

Monthly Newsletter of the Tri-State Amateur Radio Society
February 2015-Issue No. 2

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

John C VanVorst Manager of Systems
Infrastructure
Vectren Corporation
812-491-4100 office
812-305-4100 cell
73s. DE N9oL.

N9OL

One Man's Opinion

By the time you read this the best dx expedition I have seen in a long time will have concluded. In case you are not aware of what is happening on the ham bands there is a major DX Expedition that took place for two weeks on Navassa Island. Now this island counts as a separate entity on the DXCC award and has been activated just a few times over the last several decades.

Navassa is protected by the National Wild life and Forestry Service, you do not just land and start operating, it must be cleared by the government and a limited stay. About the only thing on the island is 162 foot lighthouse, it was taken out of service many years ago. The light keepers house next to it is minus the roof and the remaining structure slowly decays over time.

The expedition started on the 2nd of February 2015 and has run constantly since that time, they are on just about every band 160-10 with a good signal. Now if you are still scratching your head as to where this island is located it is out in the middle of no where in the Caribbean, it is close to Cuba and the Dominican Republic.

However, what makes this one so rare is activation can only take place every ten years, or so since the government will not let you on the island at other times. In terms of needed entities this one is at the top of the list and you can imagine the pile ups have been huge! The normal prefix for Navassa is KP1, bet you have not heard that one at all.

In case you are not a DXer but just want to look at the web site search K1N it was a well planned, well thought of operation. I suppose it just took Yankee know how and ingenuity to pull this off for two weeks.

Yet, we do have our number of whiners complaining as to why they work CW when they should be on phone, or vice versa. We have those who complain about the bands, or frequencies used, and of course those that cannot get to them due to license class restrictions.

In running a major expedition you need not only radios, amps, antennas, but cots for sleeping, food, showers, toilet facilities of some sort, generators, batteries, a truck load of supplies for each man, or woman on the expedition.

We have those who whine about sending in a contribution if you worked them, I have no problem with that at all.

Personally, this operation rates a ten, super CW ops, great phone ops. the crew went there to operate and not sit under a tree and dream the day away plus lose all propagation. Some past expeditions I have to wonder about since they did little operating, yet called their operation an expedition.

K1N will be active though out the week of the 8th and will shut down on the 15th or close to it, my guess is they will top 100,000 contacts around the world. Six of them belong to me, I needed this one 20/10 and a cw contact. For fun I worked them on 17 meters, I may try to rig something for 30, but really doubt it since I do not work that band much. I had worked this island on the last expedition but only on phone. Love the cw contacts as you know.

If you have not heard them on some band, you need to fix your radio, jump in call and get a contact, phone, CW, RTTY you will not have another chance for at least ten years. By working them you got one of the rarest entities in the world and it is not that far away from the mainland.

All that is required is to push the mic button, or hit the cw keyer, it could not be simpler, go for it.

Do not let this one get by you, work them!
As always my friends this is "One Man's Opinion"
Bill, K4LRX

From the Desk of Dave Julian WB9YIG

** This just in today: Our repeater has been shipped.

Folks:
Time to brush up on digital communications. Just got an e-mail that our application for the Yaesu DR-1X repeater has been accepted. There is apparently a backlog of requests so it may be a couple of months before we get the new toy. My thought is to set the new repeater up as a demonstration and give a dog & pony at a club meeting before we go on the air.
Meanwhile, here are some common questions about the digital mode equipment that you might have:

1. Will digital have longer range than analog?

   Generally the digital range will be somewhat less than analog. In the digital world you are working will an "all or nothing" mode, trading signal quality for range.

2. Will digital signals behave like analog as far as propagation? (ducting, skip, scatter etc.)

   I don't really know what sort of propagation characteristics to expect. Any sort of reflection or refraction can have profound effects on the phase and strength of the received signal. High speed data is rather picky on such things so we will have to see what happens.

3. Will a digital radio work with analog equipment (current repeaters and our current analog radios)?

   The DR-1X repeater has several different modes of operation that can be programmed. My plan is to have it automatically select the transmit mode (analog or digital) based on the received signal type.

   a. You are on a digital radio, I am on an analog radio, can we talk?

      With the automatic selection mode the answer would be no. The digital signal would be re-transmitted as digital and the analog signal would be re-transmitted as analog.

   b. Will a digital repeater still work with my analog radios?

      Yes, with analog to analog it would behave just like the usual repeater you are accustomed to using.

   c. Can you upgrade your analog radio to digital?

      The repeater uses the Yaesu System Fusion protocol for digital transmission. Unlike the Icom D-Star the Yaesu system uses an open source Codec. I am not aware of any after market converters but I would expect some creative hams will figure out how to do it.

4. Will a digital radio require different antennas?

   With exception of the radio itself all other components should work just fine.

5. Other areas have shown little interest in digital. Do you think it will eventually catch on in ham radio?

   I think it's really a matter of application. The digital radios have the capacity to integrate computer data into the signal as well as voice. I think this will be the more important advantage of digital over pure analog. Personally I think digital will have an important place but won't replace all analog use. Analog has some weak signal advantages.

6. What radios will work with the new digital repeater we are getting?

   Right now only the Yaesu System Fusion radios will work for the digital mode. Other vendors may come up with compatible digital radios. It is not compatible with the Icom D-Star units. Any analog radio should work in analog mode. At this time the 75/15 repeater is open and does not require tone access. We will be activating a CTCSS tone for access as part of the Indiana Repeater Council band plan so your analog radio will need that.

7. And finally: I am on my analog 2 meter radio. You are on your Yaesu Digital radio. We are on simplex 146.520. Can we talk?

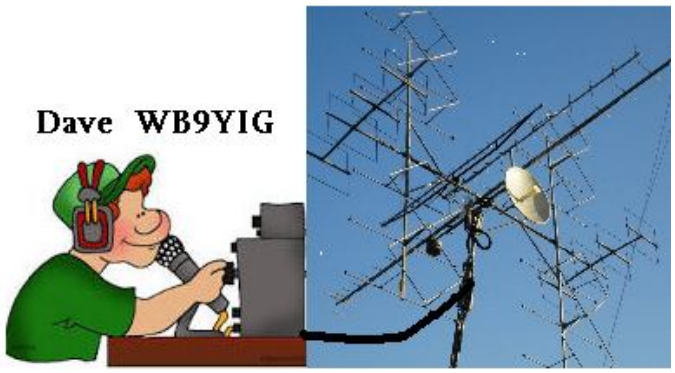
   Yes, but the Yaesu would have to be set in analog mode. You would not be able to

communicate with the Yaesu in digital mode and your rig in analog. You would only hear a rushing sound that would break your squelch. I'm not sure what the digital radio would do since it would not detect a valid digital signal. It might not even break the squelch. Will be an interesting check as part of the learning curve.

There is a backlog on shipping the repeaters and it will likely be a couple of months till we receive ours. When we do receive it we will set it up for a club meeting and see what it can do.

Hope this answers some questions. For further information check out Yaesu System Fusion on the web.

Thanks//Dave WB9YIG



73//Dave WB9YIG

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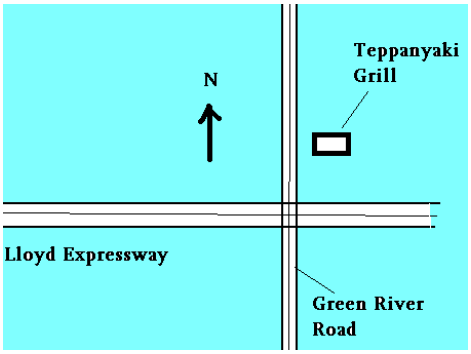
Upcoming Events -- Plan Ahead
Things to look forward to:

TARS annual dinner (formally Christmas dinner) (it's a long story)

Come join us for our annual dinner. This year we will be hosted by the **Teppanyaki Grill.** They have a huge buffet, grill and sushi selection. You won't go away hungry.
When: February 12th Thursday
Where: Teppanyaki Grill 201 N. Green River Rd.
Time: Starting at 18:00 hours (6:00 PM)
Cost: $6.00 per person. The club picks up the balance for club members and family.



April 4th,
5th annual April Fools Fest 2015
Noble Illinois
Details included with this issue of SPARKS as a pdf. File attachment.

Good day Radio Operators,

The WHERE Amateur Radio Club would like to invite you to our 5th annual hamfest, to be held on Saturday April 4th from 8am-Noon.

All the details are on the attached flier. Please feel free to contact me with any questions!

As an added request, even if you are not able to attend, please consider spreading the word in your neck of the woods by announcing our Event on your club websites, newsletters, repeaters, and nets!

The hamfest will be held at the former West Richland High School on IL-250 in Noble, IL. Noble is located along US-50 between Flora and Olney, IL

Thank You,
Steven Hamilton KC9GMX

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Results are IN
HF LADDER EVENT

Thanks to ALL who gave their time to participate in the HF-Ladder Contest

HF-Ladder Scores for October 2014

KJ4DVR	Jimmy	23216	SSB
N9JCA	Chris	14160	Digital
KC9FSQ	Tom	13440	SSB
N9OL	Jon	12596	CW
WB9ZFN	Tom	8860	SSB

HF-Ladder Scores for Nov 2014

N9OL Jon	21264	CW
KC9SFQ Tom	17616	SSB
KJ4DVR Jimmy	11756	SSB

HF-Ladder Scores for Dec 2014

KJ4DVR Jimmy	31142	SSB
N9QVQ Len	30672	DIGITAL
KC9SFQ Tom	27952	SSB

HF-Ladder Scores Jan 2015

KJ4DVR Jimmy	18140	SSB
KC9SFQ Tom	8880	SSB

Winner for HF-Ladder KJ4DVR Jimmy 84254

N9JCA Chris

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Annual TARS Auction

Hosted by Auctioneer Extraordinar Little Ed K9HVI.

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In spite of a very hard crowd to work, Little Ed wound up selling $337 worth of stuff (a few miscellaneous dollars came from people who grabbed scanners and what not after the auction) . The club had $210.35 net income after paying sellers for their share of the proceeds.

Len N9QVQ

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Birthdays

February Birthdays

KB9YWQ Don Land	**10th**
K0RL Ron Lily	**9th**
KC9GNM Keith MaCurdy	**10th**
KC9SFQ William Payne	**18th**
KB9KVX Larry Rudolph	**2nd**
WD9GXI Jerry Washburne	**9th**

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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 is time to get back to some basics. We tend to take things for granted from time to time and never really appreciate things that make our hobby work. Let's take some time to review a very basic tool that many of us take for granted and never really understand. The lowly Dipole antenna; simple to use, simple to build and always reliable and often taken for granted.

1. What is another name for a dipole antenna?
    a. Bi-lateral emitter
    b. Single phase bi-directional antenna
    c. A doublet antenna
    d. Bird perch
2. The most common dipole is the
    a. Quarter wave
    b. Half wave
    c. Full wave
    d. Combination
3. The height above ground has the greatest impact on:
    a. Power output
    b. Take off angle
    c. SWR
    d. Aircraft
    e. Input impedance
4. What is the "optimum" height of a dipole antenna above ground?
    a. Quarter wave length
    b. Half wave length
    c. Full wavelength
    d. There is no such thing
5. Larry is not interested in chasing DX but wants to check into stateside nets and local rag chews. His best height for his dipole might be:
    a. Half wave length
    b. 0.4 to 0.3 wavelength
    c. 0.75 wavelength
6. Chris is more interested in a dipole that can contact stations within 500 miles of his station for emergency work. His antenna might work best if it is
    a. 8 to 10 ft above ground
    b. 2 to 4 feet above ground
    c. Directly on the ground
    d. Half wave length above ground
7. The normal feed point impedance of a standard half wave dipole half wave length above ground is
    a. 30-60 ohms
    b. 75 ohms
    c. 400 ohms
    d. Exactly 50 ohms
8. Several wires in parallel used to make a dipole has what effect?
    a. Lower take off angle
    b. More directional
    c. Keeps ice from forming
    d. Increases the bandwidth
    e. Can handle more power.
9. Dipole antennas can be hung or mounted as:
    a. Vertical
    b. Horizontal
    c. Inverted V
    d. Loop
    e. All the above
10. The ideal angle for an inverted V antenna is
    a. 30 degrees
    b. 45 degrees
    c. 55 degrees
    d. 90 degrees
11. The current is greatest in a half wave dipole at:
    a. The feed point
    b. The ends
    c. 1/8 wavelength either side of the feed point
    d. Current is constant along the length
12. A folded dipole will often need a _____ for proper operation:
    a. SO-239 connector
    b. N type connector
    c. Balun
    d. Ground radial system
    e. Lightning arrestor
13. A resistor terminated folded dipole will
    a. Maximize radiated power
    b. Keep SWR down to a manageable level
    c. Significantly lower radiation angle for better DX
    d. Allow the antenna to work on multiple bands.
14. A half wave dipole used as an inverted V antenna can be dangerous. Why? (think about it before you check the answer)

15. As far as matching to your transmitter, which is more forgiving?
    a. Half wave dipole fed with 50 ohm coax
    b. Half wave dipole fed with RG 59 coax
    c. Half wave dipole fed with 450 ohm ladder line.
    d. Half wave dipole fed with 50 ohm coax and a 4:1 balun.
16. Karen has a half wave dipole for 20 meters but her small yard is only 90 ft long. Have any suggestions?
    a. Fold the ends back on themselves
    b. Drop the ends at right angles
    c. Cut the excess off the ends
    d. Insert loading coils in the antenna
17. Jim wants to construct a 40 meter dipole. He has a spool of number 14 insulated copper wire. Must he strip the insulation from the wire before making the antenna?
    a. NO
    b. YES
18. For a permanent (not portable) dipole the best wire to use is:
    a. Copper wire
    b. Aluminum wire
    c. Steel electric fence wire
    d. Hard drawn copperweld
19. After putting up his 75 meter dipole Sam measured 4:1 SWR on his meter. Checking it with his analyzer it shows resonant at 4.250 Mhz. Should he have to
    a. Shorten the length
    b. Make the antenna longer
    c. Use his tuner and don't worry about it
    d. Use it as is.
20. In Evansville (EM67) what would be an ideal direction to set up a 20 meter dipole to make a lot of European contacts?
    a. Ends facing N/S
    b. Ends facing E/W
    c. Ends facing NW / SE
    d. Ends facing NE / SW

Vanderburgh Co. ARES/RACES

The next Vanderburgh county ARES/RACES meeting is February 19th, 7:00 pm at the west side VC EMA Training Center 1430 Harmony Way.

Anyone interested in emergency communications in Vanderburgh Co. is invited.
We had a good workday Jan 10th but still have work to do.

Len N9QVQ has a packet bbs up and running on 145.01 @ 1200 baud. If you have packet capability give it a try. N9QVQ-1

Reminder to mark your calender for Fri March 27th. 12:30 pm. EMA will be holding a large exercise and we **need your participation**.

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

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

Trivia Answers: for this month

1. c. the doublet antenna
2. b. the half wave dipole has a quarter wave length on each side.
3. b. the lower the antenna the greater the take off angle.
4. b. a half wave length is usually the ideal situation.
5. b. slightly lower than half wave length will also reduce distant signals and QRM.
6. a. A NVIS (near vertical incident antenna) produces a high level of radiation that can bounce off the ionosphere and come down very close to the transmitter (300 to 500 miles). The exact height varies with many variables but this is a good estimate.
7. a. about 30-60 ohms depending on several variables.
8. d. it increases the bandwidth.
9. all the above. Yes it can be circular, as in the 6 meter loop antenna or the magnetic loop type.
10. b. 45 degrees is optimum. Less than 30 degrees and it is just another dipole
11. a. current is maximum at the feed point
12. c. A BALUN Folded dipoles have an impedance of about 300 ohms. A 4:1 balun will match it to your 50 ohm transmission line, or you can feed it with 300 ohm twin lead (TV antenna wire).
13. b. and d. The resistor terminated dipole can help keep the SWR down and allow use of the antenna on a wider variety of frequencies however the compromise is loss of radiated power (less than a regular dipole)
14. Voltage is greatest at the ends of a dipole antenna. If a person comes into contact with it electrical shock and RF burns can occur. Keep in mind also near field radiation can cause health problems. Remember: If there are kids around, there is a high probability they will find a way to come in contact with your antenna.
15. c. the dipole fed with 450 ohm ladder line presents very little loss from SWR especially on longer runs (a good tuner helps)
16. b or d will work. Dropping the ends at right angles will diminish performance slightly but it will still be a good antenna as long as kids can't reach them. Loading coils allow a much shorter antenna and work well.
17. NO at HF frequencies the insulation makes very little difference in performance however the soft copper will stretch over time.
18. d. Hard drawn copperweld does not stretch as much as other choices and can stay up for years.
19. b the antenna needs to be a bit longer. He could use it as is with a tuner or not but a lot of power will be lost to heat either in the tuner or the transmission line.
20. d. with the ends facing NE / SW the antenna is directional toward the North East (and South West) The ideal antenna direction to Europe from Evansville is 030 degrees

Learn more at:
http://en.wikipedia.org/wiki/Dipole_antenna

http://www.qsl.net/aa3rl/ant2.html

http://www.w0ipl.net/ECom/NVIS/nvis.htm

Eat'n Before the Meet'n

Everyone is welcome to join us.

There will be no eating before the meeting as the meeting will be the annual TARS dinner at the Tampanyaki Grill. See you there.

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

Chris KE9YK

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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

Feb.	4	KE9YK
	11	KC9TYA
	18	WB9KQF
	25	KC9YIL
Mar.	4	N9QVQ
	11	KC9TYA
	18	KE9YK
	25	WB9KQF

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 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.
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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.
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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 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

2013 Club Officers and Board members

2014 Club Officers and Board members

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