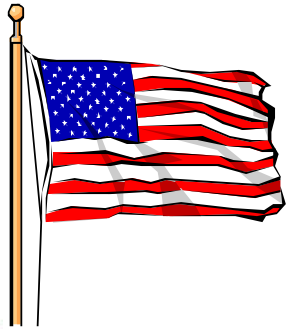


Sparks

W9OG



It's Spring forward time again. Don't forget to set the clocks up one hour
Unless of course you live in the [Royal Observatory](#) in [Greenwich](#), [London](#),

Monthly Newsletter of the Tri-State Amateur Radio Society March 2015-Issue No. 3

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

Well, our clocks have sprung forward, the days are getting longer, and it looks like we made it through another southern Indiana winter. As the weather starts getting warming, our hearts turn to antenna projects! What do you have planned this year? I have a few things I want to get done, changes to make, but my trusty dipole remains my mainstay. Remember, antennas do not have to be expensive or overly complicated. If you are thinking about getting an antenna up and aren't sure what to do next, or you

need some help, don't hesitate to ask a fellow ham or club member. That is a main purpose of the club- to help each other gain knowledge and enjoyment from this great hobby. So ask for help! I want the club this year to do much more for our members, especially the newly licensed or those trying some facet of our hobby for the first time. Look for ways we can help each other. We will be discussing new activities coming up - opportunities for us to get together and have fun and show off this hobby. Any ideas? Lets hear them!

Personally, I believe those with low power HT's and mobiles will find contacts are free of noise and very clear audio, however it will require some investment on your part to buy the gear that will work with this new repeater. In any event we give the new technology a chance to catch on and have those who will use it.

No users and regardless of how good a machine we have if you have no one on the other end that will reply to your call, or want to contact you then you have functionally useless gear. I hope this is not the scenario, but again, time will tell if this area shows any interest in this new mode.

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



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

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

The rise and fall of Radio Shack

As a young man growing up in a rapidly changing world I have seen Radio Shack rise and fall. Early in my exploration of the fascinating field of electronics I would get two major (at least to me) catalogs and read them cover to cover. Heath Kit was one and Allied Radio was the other with those beautiful Knight Kit projects. My dad gave me the Knight Kit 10 in 1 electronics lab kit and I was off on a great adventure of exploration.

knight-kit
HOBBYIST KITS

BUILD CIRCUITS LIKE THESE ...

AM RADIO. Tune in your favorite local stations

CODE OSCILLATOR. Learn to send and receive code

explore the magic world of electronics

An Electronic Marvel! Special Plug-In Leads and Number-Coded Jacks. You Go from One Exciting Circuit to Another in Minutes. You Can Actually Build 10 Practical Fun-Filled Projects—One After Another

EXPERIMENT WITH THE WONDER OF TRANSISTORS
Let transistors—the space-age marvel—go to work for you in these 10 thrilling, educational electronic projects!

Price Includes:
ONLY \$14.95
Less Battery

PHOTOCELL Solar Type HEADPHONES

practical, fun-filled, educational projects

Exciting 10-Circuit Transistor Lab Kit

I had more fun with that than a kid should be allowed to have. Next big project was the Knight Kit C100 walkie talkie. I saved money from cutting lawns (at a quarter a lawn with a push mower) to buy my very own.



They were three transistors - crystal control on CB channel 7 and the regenerative receiver would receive according to how you held your hand around the radio. Other boys in the Scout troop got one and we had a ball with them. As for the advertised quarter mile range, we found you could probably throw them further than they could communicate but they were a blast.

I first learned about Radio Shack as a catalog where you could order parts for your projects. It was great for Ham Radio experimenters that may not have had access to an electronics store nearby.

Later we discovered that Radio Shack had bought out Allied Radio. I always figured it would be the other way around. Then Radio Shack started changing. The component parts we so depended on started shrinking in inventory. They took them off the display wall and put them in drawers with no apparent logical order. The sales clerks would often have no idea what you were talking about if you ask for a 5K liner taper potentiometer and most often than not, you would have to go to the drawer and show them. They were more interested in selling you a cell phone than anything else. After awhile the Radio Shack Store looked like just another K-Mart cell phone store.

A history of bad marketing decisions finally let to their demise.

However:

All is not lost.

One of our own; Achmed the Dead Terrorist has come to the rescue:

He sent me a note by secret courier to explain: He said:

Achmed is the new Mr. Radio Shack! As you know, Radio Shack is going out of business. They were ordered to liquidate their store inventory of items. Well, Achmed walked in Friday, Monday, and Tuesday and purchased the store inventory. I now own the inventory at North and East side. I did not buy the cell phone crap but all the parts drawers, wall stuff, cables, connectors, fuses, etc., etc., and filled my car to the ceiling several times. Monday each store took over 1 1/2 hours just to ring up the paperwork. The receipt on one transaction was 33 1/2 feet long and we had fun looking at the paperwork. The roll of paper was ran from back to front of the store 2 times! Tuesday the manager and I spent 2 hours ringing up the stuff. Yes, a few years ago I worked for Radio Shack and made below minimum wage. Now today, I own them and kicked the snotty boss out!

I had to step up to the plate and preserve the parts for the Hams and myself, and not allow Radio Shack just liquidate all our good as gold memories and fun stuff!

Read More about Radio Shack here
<http://radioshackcorporation.com/company/history.php>

<http://www.businessinsider.com/why-radioshack-is-closing-stores-2014-3>

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Birthdays

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Presentations and demonstrations

Thursday's meeting will be very interesting. Dave Julian will give a presentation on the new digital repeater system to be installed in place of the old 147.150 machine. Don't miss it!!!

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.

Just to keep you on your toes, lets look at another device so necessary (to some of us) that we often take for granted



1. Early microphones used current passing through what medium?
 - a. Salt granules
 - b. Carbon granules
 - c. Iron filings
 - d. Sodium crystals
2. Crystal microphones need about ___ volts across them to work properly
 - a. 0 volts
 - b. 6 volts
 - c. 10 volts
 - d. 12 volts
3. Crystal microphones have:
 - a. Low impedance
 - b. High impedance
 - c. Zero impedance
 - d. 12 volts
4. a moving coil microphone is just like a ____ only in reverse.
5. The studio quality ribbon microphone is
 - a. Unidirectional
 - b. Bidirectional
 - c. Omni directional
 - d. Non-directional
6. A condenser microphone is much like a
 - a. battery
 - b. Capacitor
 - c. Inductor
 - d. Moonshne still
7. A sensitive rf condenser microphone uses a low noise ____ in its construction.
 - a. Amplifier
 - b. Oscillator
 - c. Transistor
 - d. Vacuum tube
8. The electret condenser microphone is
 - a. Expensive to make and hardly used except specific applications
 - b. Hardly used in amateur radio products
 - c. Used only in expensive microphones where a high degree of fidelity is required.
 - d. None of the above is true
9. An ideal desk microphone type for your ham radio station would be
 - a. Cardioid
 - b. Omnidirectional
 - c. Bidirectional
 - d. Parabolic
10. If you need to run a microphone cable a long distance, which type microphone would be best suited?
 - a. Low Z
 - b. High Z
 - c. Crystal
 - d. No Z
11. Which type microphone is most likely to be damaged by dropping it?
 - a. Dynamic
 - b. Carbon
 - c. Crystal
 - d. Magnetic

- e. Electret condenser
12. A common impedance for LowZ microphones found in many ham radios is
- 50 ohms
 - 100 ohms
 - 600 ohms
 - 1200 ohms
 - 50k ohms
13. In the early days we would try to increase the audio from our microphones by:
- Adding a battery
 - Putting a capacitor across the element
 - Putting a resistor across the element
 - Removing the baffles and protective cloth
 - Putting a paper cone in front of the microphone.
14. A simple noise canceling microphone works by:
- Placing extra baffles in front of the element to eliminate noise
 - Putting sound deadening material in back of the element
 - Picks up sound from both the front and back of the element
 - Turning down the volume
15. Best practice when using a microphone is to:
- Speak directly into the microphone
 - Speak less than 2 inches from the microphone
 - Speak loudly into the microphone
 - Speak across the microphone in a normal voice
16. A common toy with transceivers is the use of a ___ circuit that keys the transmitter when you speak (or any other noise in the shack).
- VOR
 - VOX
 - VOT
 - QRZ
17. As the carbon microphone started losing sensitivity a common way to revitalize it was:
- Keep it in a freezer a few hours
 - Hold it over boiling water a few minutes in the steam
 - Bang it on the table a few times
 - Replace the carbon granuals
18. Harry wants to use a vintage desk microphone (because it looks classy on the desk) with his new Yaesu transceiver. The desk microphone was used by his father with a classic tube type transmitter. Besides getting the right type microphone plug for the Yaesu what else must he consider? (Make a short list of possible things to consider before looking at the answer)
19. Heilsound® microphones are available with interchangeable cartridges. This allows you to:
- Change the sound quality for different modes (AM – SSB - FM)
 - Customize the frequency response for different applications (DX – local contacts)
 - Use the same microphone for different radios
 - All the above
20. Your mobile radio's microphone cord has become worn and the wires are coming out of the insulation. Knowing those fine wires are difficult if not impossible to solder do you throw the microphone away or send it back to the factory?



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. b carbon granuals. Many hams used the mouthpiece from a telephone handset for a microphone.
2. a. the crystal microphone generates its own voltage by the ability of a crystal to generate electricity when a mechanical force is applied, called the piezoelectric effect
3. b. High impedance. They produce excellent sound but are highly susceptible to noise and movement.
4. a typical speaker with a moving coil on a magnet, only in this case the sound pressure moves the coil in the magnetic field, which produces electric current.
5. b. bi-directional. It picks up better from the front and back but not the sides
6. b. capacitor.
7. b. a low noise oscillator whose frequency can be changed by sound waves.
8. d. none is true. The Electret condenser microphone is one of the most used types in electronics today. Highly reliable and durable it is used in everything from cell phones to studio recording microphones. It is estimated an annual production of over one billion units.
9. a. The cardioid patern microphone picks up sound from one direction and has low sensitivity in other directions and additionally is best for speech frequencies.
10. a. Low Z (impedance) microphones use a balanced line and do not pick up noise as bad as a high Z microphone. With high Z microphone systems you can actually hear the cord being dragged across a floor.
11. c. the crystal may be fragile and dropping it may fracture it. Although it has excellent sound quality it is not the best choice for mobile operations.
12. c. 600 ohms
13. d and e A common practice to increase the sound of inexpensive microphones was to remove the cloth and baffles in front of the microphone element. Of course this let in dirt and moisture from your breath onto the element. And a few of us even tried putting a paper cone (like a megaphone) in front of the element. We called it a poor man's amplifier.
14. c. by picking up sound from the back and front the ambient background noise cancels out a little allowing the speakers voice to be heard better.(in simple terms). Noise canceling microphones are good for mobile operation or in high noise level environments.
15. d. Speak across the microphone at a normal voice level from 2 to 4 inches from it. And no, yelling louder at it does not increase your distance you can talk.
16. b. VOX or voice operated transmit or voice operated relay. The annoying tool that makes you say a lot of Ahhhhhhh, Sooooo, and-uhhhh to keep the transmitter keyed between actual words.
17. c. believe it or not, banging it on the table a few times loosened the carbon granules and often improved the sound a little. This trick did not work so well by banging the whole radio on the table a few times.
18. Some problems he must consider to use the vintage microphone might be:
 - The wiring may be different. The older radio probably used relay switching whereas the newer radios use electronic switching
 - The older tube type transmitters required a high Z microphone whereas the newer radios mainly use microphones around 600 ohm impedance – he may need a matching transformer or matching pre-amp.
 - The older transmitter may have employed a carbon microphone in which case it will not work at all with the Yaesu without an additional pre-amp circuit for the carbon element. Or he could keep the original case and substitute a new type element inside it. Old radio parts and new radios are not always plug and play.
19. d. all the above.
20. Many of the modern mobile radios have microphones with field-replicable cords. It is as easy as unplugging the cord from inside

the microphone and plugging in a new cord. Sometimes you may find, however, that the replacement cord is almost as much as a new microphone.

Eat'n Before the Meet'n

The March Eating Before the Meeting will be at **Fazoli's** Eastland Place 899 N Green River Rd before the regular TARS club meeting March 12th. 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.

Everyone is welcome to join us.



Chris KE9YK

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

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

Mar.	4	N9QVQ
	11	KC9TYA
	18	KE9YK
	25	WB9KQF
April	1	KC9YIL
	8	N9QVQ
	15	KE9YK
	22	KC9TYA
	29	WB9KQF
May	6	KC9YIL
	13	N9QVQ
	20	KC9TYA
	27	KE9YK

Vanderburgh Co. ARES/RACES

The next Vanderburgh county ARES/RACES meeting is March 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

Reminder to mark your calendar for Fri March 27th. 12:30 pm. EMA will be holding a large exercise and we **need your participation**. *If you are planning to participate please contact me so we can make staffing plans.*

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

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.

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.
