# CQ CHATTER

**SEPTEMBER 2017** **VOLUME B17 • ISSUE 7**

## WOOD COUNTY AMATEUR RADIO CLUB

| | | |
|---|---|---|
| President | N1RB | Bob Boughton |
| Vice President | KD8VWU | Doug Perez |
| Secretary | WB8NQW | Bob Willman |
| Treasurer | KD8NJW | Jim Barnhouse |
| Board Member | KE8CVA | Terry Halliwill |

http://wcarc.bgsu.edu

# Minutes

## *WCARC Meeting*

**August 14, 2017**

**Bob-N1RB, presiding**

**Present:** Doug-KD8VWU, Terry-KE8CVA, Jim-KD8NJW, Ruth-KC8EKT, Phil-W8PSK, Rex-KC8PFP, Steve-K8AN, Bob-WB8NQW, Hoot-WB8VUL, Stan-K8LL, Eric-WD8LEI

**Meeting called to order:** at 7:30 with Pledge of Allegiance.

**Minutes:** from the June meeting as printed in CQ Chatter were approved by a motion made by Terry KE8CVA and I missed who seconded it.

**Treasurer:** The Treasurer's report was approved by a motion made by Hoot WB8VUL and seconded by Doug KD8VWU.

**Old Business:**

- Bob, N1RB, announced that WCARC is now registered with the state of Ohio as a non-profit organization. There was a $99.00 initial fee and a $20.00 annual renewal fee. The registration documents were passed around. Bob decided to not pursue liability insurance at this time.

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# Foxhunt Planned

The next WCARC fox hunt is planned to follow the breakfast meeting on Saturday, September 9th (please note the change from the normal meeting schedule on account of Labor Day weekend). The purpose of a foxhunt is to hone the participants' radio direction finding skills. The fox typically locates his den in an out-of-the-way place and commences transmissions every few minutes at reduced power. The fox will also usually provide clues to his location for the hounds to solve.

As before, the fox will announce that he is ready on 147.18 MHz and then switch to a simplex frequency that he will designate. Eric, WD8LEI, will be the fox for this hunt, so get your direction finding gear ready! ■

## Net Check Ins

***Aug 1 Traffic: 0***

***K8OVO (NCS)***
***WB8NQW***
***KD8NJW***
***WD8LEI***
***KA8VNG***
***KD8RNO***
***KG8FH***
***W8PSK***
***KE8CVA***
***N1RB***
***KD8VWU***
***KE8CUZ/M***
***NM8W***
***KD8NJZ***
***WD8JWJ (15)***

***Aug 8 Traffic: 0***

***KD8VWU (NCS)***
***KD8RNO***
***KA8VNG***
***KC8EKT***
***KD8NJW***
***WB8NQW***
***N1RB***
***W8PSK***
***N8VNT***
***KE8CVA***
***KC8NKC***
***WD8JWJ***
***KC8BUI/M***
***KE8CUZ (14)***

# Brain Teasers

**1.** What type of electrical component consists of two or more conductive surfaces separated by an insulator?

**a.)** resistor

**b.)** capacitor

**c.)** inductor

**d.)** diode

**2.** What is the voltage across a 10 ohm resistor if a current of 2 amps flows through it?

**a.)** 8 V

**b.)** 0.2 V

**c.)** 12 V

**d.)** 20 V

**3.** What statement best describes a relay?

**a.)** a switch controlled by an electromagnet

**b.)** a current controlled amplifier

**c.)** an optical sensor

**d.)** a pass transistor

# September Contests

The contest lineup for the month of September is given below. Please note that the WARC bands (60, 30, 17 and 12 m) are never open to contesting.

| | | |
|---|---|---|
| **Sep 2-3** | *0000 to 2359 Z* | 80 m to10 m |
| **All Asian DX 'test** | | **SSB** |
| **Sep 2-3** | *1300 to 0400 Z* | 160 m to 10 m |
| **Colorado QSO Party** | | **all modes** |
| **Sep 3-4** | *1800 to 0300 Z* | 160 m to 10 m |
| **Tennessee QSO Party** | | **all modes** |
| **Sep 9-10** | *0000 to 2359 Z* | 80 m to 10 m |
| **WAE(urope) DX 'test** | | **SSB** |
| **Sep 9** | *1400 to 2200 Z* | 80 m to 10 m |
| **Ohio State Parks on the Air** | | **phone** |
| **Sep 16-17** | *1400 to 0200 Z* | 160 m to 10 m |
| **Iowa QSO Party** | | **all modes** |
| **Sep 16-17** | *1200 to 1200 Z* | 160 m to 10 m |
| **All Africa Int'l DX 'test** | | **all modes** |
| **Sep 16-17** | *1600 to 2000 Z* | 80 m to 10 m |
| **New Jersey QSO Party** | | **all modes** |
| **Sep 16-17** | *1200 to 0300 Z* | 160 m to 10 m |
| **New Hampshire QSO Party** | | **all modes** |
| **Sep 16-17** | *1600 to 2359 Z* | 160 m to 10 m |
| **Washington Salmon Run (QSO P)** | | **all modes** |
| **Sep 23-24** | *0000 to 2359 Z* | 80 m to 6 m |
| **CQ WW DX 'test** | | **RTTY** |
| **Sep 23-24** | *1200 to 1200 Z* | 160 m to 10 m |
| **Maine QSO Party** | | **all modes** |

*minutes---from p. 1*

- We operated Field Day as a 5A station and accumulated 3600 points. A proclamation was presented by the Wood County Commissioners proclaiming Amateur Radio Day. Several operators stayed through the night and enjoyed a breakfast on Sunday morning.

- On August 07 all antennas and masts were removed from the FabLab site.

**New Business:**

- The September breakfast will not be held on September 02, but rather on September 09 at the Big Boy at Poe and N. Main St. A fox hunt will follow the breakfast. Eric, WD8LEI, will be the fox. Hounds will check-in using the K8TIH repeater and then the hunt will QSY to a simplex frequency.

- The new net protocol for the Tuesday net was explained. In order to reduce the number of stations doubling, check-ins will be requested in groups determined by the first letter of your call suffix which is the first letter after the number. For example, the first call for check-ins may be for stations with first letter suffixes A through I. After those stations have been recognized, then stations whose call suffixes begin with J through R will be recognized, and so on.

- Eric, WD8LEI, gave a short report about ARES activities. There is now amateur band capability accessible from a console in the Sheriff's communications center programmed to access most repeaters in counties adjacent to Wood County. The 2 meter repeater antenna has not been replaced. An ARES meeting should be scheduled soon.

- Rex Klopfenstein, KC8PFP, presented a program about his experiments with seismographs and the methods used to detect and analyze earthquakes. He showed a seismograph sensor that he built and uses with Raspberry-Pi hardware and software to measure and record seismic activity.

**Adjournment:** Bob N1RB invited a motion to adjourn. Bob WB8NQW and Terry KE8CVA obliged.

Respectfully submitted:
Bob WB8NQW

# *Inexpensive Tone Control for the Shack*

***by Bruce Hammond, AA8HS***

Everyone's ability to hear high and low frequencies is somewhat different, and this ability changes as we become older. Our hearing affects our understanding of the words spoken by other people, particularly on the radio, where there may be distortion, hiss, hum, or digital artifacts. Some of this problem is addressed in HF rigs with DSP or a software controlled equalizer function. External DSP devices or audio equalizers can also be helpful, but these can be expensive, particular the higher end

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## WCARC Weekly Net

**Tuesdays at 2100 all year**

**147.18 MHz 67 Hz PL**

## Net Control Roster

| | |
|---|---|
| *Aug 29* | *K8OVO* |
| *Sep 5* | *WB8NQW* |
| *Sep 12* | *N1RB* |
| *Sep 19* | *KD8VWU* |
| *Sep 26* | *KD8NJW* |
| *Oct 3* | *NM8W* |
| *Oct 10* | *K8OVO* |

## NEXT MEETING

***Breakfast Meeting***

**Saturday, Sep. 9th**

**TIME: 9:00 am**

**PLACE:**

**Frisch's North**

**E. Poe Rd.**

**& N.Main St.**

**Bowling Green, OH**

# *September Hamfests*

**Sep 10 Findlay RC. Annual Hamfest**. Hancock County Fairgrounds, Findlay, OH.
**web:** http://www.findlayradioclub.org

**Sep 23 General Motors ARC. Annual Hamfest.** Packard Proving Grounds, Shelby Twp., MI.
**web:** http://www.gmarc.org

**Sep 24 Hamfest Assn. of Cleveland. Annual Hamfest.** Cuyahoga County Fairgrounds, Berea, OH.
**web:** http://hac.org

**Oct 7 Great Lakes ARA. Great Lakes Division Convention.** Michigan International Speedway, Brooklyn, MI.
**web:** http://glhamcon.org

## Net Check Ins

***Aug 15 Traffic: 0***

***KD8NJW (NCS)***
***KC8EKT***
***KE8CVA***
***KG8FH***
***WD8LEI***
***KD8RNO***
***WD8JWJ***
***N1RB***
***KD8VWU***
***WB8NQW (10)***

***Aug 22 Traffic: 0***

***KD8VWU (NCS)***
***KA8VNG***
***KD8RNO***
***KG8FH***
***KC8EKT***
***KD8NJW***
***WB8NQW***
***N1RB***
***WD8JWJ***
***KE8CVA***
***WD8LEI (11)***

***Aug 29 Traffic: 0***

***WB8NQW (NCS)***
***KD8RNO***
***KG8FH***
***KC8EKT***
***KD8NJW***
***N1RB***
***KA8VNG***
***KD8VWU***
***WD8JWJ***
***WD8LEI (10)***

Brain Teaser answers: (T) 1-b, 2-d, 3-a

# *K1JT Has New "Whisper" Mode*

Joe Taylor, K1JT, the inventor of JT-65, JT-9 and other low-power (less than 20 W) digital modes that are useful for communicating even when signals lie below the noise floor, has come up with a new mode, FT-8, in collaboration with Steve Frank, K9AN. The new mode is presented to try to respond to some of the shortcomings of the previous modes, such as a long receive/decode time.

The basic idea behind all of these modes is to encode a very short message, like: **"CQ de N1RB EN81"** in a digital code with a great deal of redundancy. This entails repetition over a fairly long period of time along with the use of Forward Error Correction techniques. For example, in JT-65, the receive/decode time is one minute. This of course means that the transmit time is also nearly a minute, so that a full exchange takes two minutes elapsed time. A typical QSO consists of four or five such exchanges and so occupies about 8 to 10 minutes total if pleasantries are included.

In FT-8 Taylor/Frank have reduced the receive/decode and the transmit times to 15 seconds each. This means that a full QSO could take about one-fourth as long as before. The trade-off is a slightly less robust noise figure. While JT-9 occupies a bandwidth of only 15.6 Hz and is capable of extracting signals that are at -24 dB (below the noise floor---you can't hear the audio), similar figures for FT-8 are 47 Hz bandwidth and -20 dB signal detection factor. Compared with JT-65 (177 Hz bandwidth and -22 dB detection), both of these modes are better. The key advantage of FT-8 is the short turn-around time, which is better by a factor of four.

For more info on FT-8, go to: https://wsjtx.net/home/ft8-mode.html. For more information regarding JT-65 and JT-9, consult the fine series on *Digital Communications in Amateur Radio*, written by Jeff, K8JTK. ■

# September Contests-cont.

| | | |
|---|---|---|
| **Sep 23-24** | *1400 to 2000 Z* | 160 m to10 m |
| **Texas QSO Party** | | **all modes** |
| **Sep 30/Oct 1** | *1200 to 1200 Z* | 80 m to 10 m |
| **UK(Great Br.)/EI(Ire.) DX 'test** | | **phone** |

**DON'T FORGET!**

**10 meter Net meets Sunday@ 2030 on 28.335 MHz**

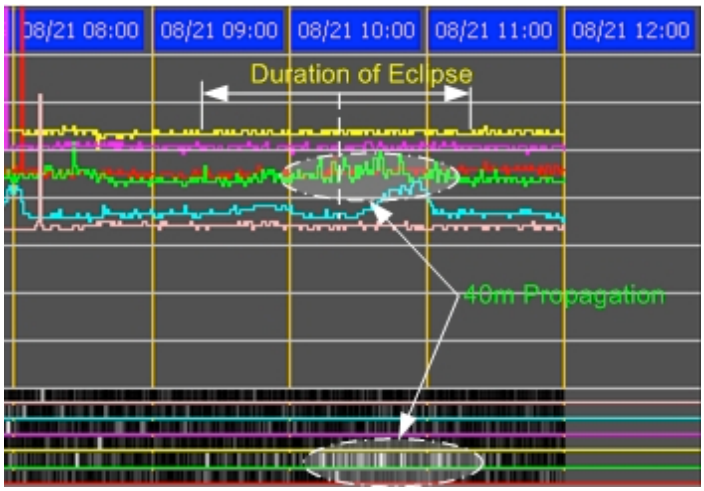
**Fusion (C4FM) Net meets Thursday @1930 on 442.125+**

## *Small Propagation Change Measured During Eclipse*

***from QRZ News***

We have completed the first analysis of the solar eclipse measurements. We came to the conclusion that the effect of the interruption of the solar radiation on a 100km (70mi) wide strip has a minimal overall effect on propagation. The notion that there will be overreaching AM stations because of the fact that there is a small strip of the ionosphere missing is highly exaggerated.

The Solar Eclipse RF-Seismograph exclusively showed that propagation changes but not to the extent that folk tales report. Nevertheless it was a great exercise and it is good to see that all amateurs where using their radios to make contacts.




According to HamSci, the highest number of contacts were logged during

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***tone---from p.4***

units. A simple, inexpensive tone control solution can be found in a completed kit board based upon the LM1036 chip, and available for less than ten dollars on EBAY and other sources. This stereo circuit has been described elsewhere on the Net and includes controls that produce a severe cut or boost in the treble and bass regions. This item has been particularly helpful in reducing hiss from analog transmissions and enabling me to understand a particular person's voice.

On the circuit board, you can avoid using an AC supply or 15 volt DC supply by using a 13.8 regulated DC supply to the plus and minus terminals. Connect the headphone output from your radio to one of the RCA jack inputs using a suitable adapter. The audio output leads on the LM1036 circuit board should then be connected to a suitable audio amplifier and speakers or headphones; good computer speakers may also work. I have three of these units and I find that it gives me real time control of the audio from a variety of radios and its well worth the investment.

One of kits is found here:

http://www.ebay.com/itm/New-LM1036-Luxurious-Volume-Control-Completed-Tested-Tone-Board-1000UF-25V-Pro-/311357564637?hash=item487e5b66dd:g:sY8AAOSweW5VUGOy

and an inexpensive audio amp here:

http://www.ebay.com/itm/DIY-TDA2030A-Audio-Amplifier-Board-Kit-Mono-Power-18W-DC-9V-24V-/172743320406?epid=12004276972&hash=item28384de356:g:vw4AAOSwTf9ZS6ZW

Good luck! ■

***propagation---from p.7***

the day of the eclipse, and the data collected will keep Universities, their staff and students busy for some time. During the eclipse we made measurements at three locations, but two of them did not show any changes in the way propagation behaves. At the third station, at an elevation of 900m, the 40m band came up but that is not any different than regular 40m behavior. The recording station run by Joe Joncas - WA7MHB – was located at the center of the band of totality and there was no noticeable difference. The high solar activity also may have been a factor in the measurements not yielding the results we expected. The high solar activity increased the absorption layer for low bands. The small band of darkness could not compensate for the thicker D-Layer.

We want to thank everybody who was involved to record these measurements. The RF-Seismograph will continue to run and record abnormalities affecting the ionosphere.

All the best;

The MDSR Team

Alex Schwarz, Guy Roels, Joe Joncas, and all the people who made the MDSR possible

# *A Hamming Vacation*

**NM8W and family on vacation in Charleston, SC, toured the USS Yorktown museum ship**

**Craig and harmonics in ship's hamshack-WA4USN**

**Eban, KD8NJZ, at the mike--altogether the Magrums racked up 8 QSOs on 20 and 40m**

**Craig, NM8W, at the operating position.**

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