

# CQ Chatter

**FEBRUARY 2021**

**VOLUME B20 •ISSUE 12**

## **WOOD COUNTY AMATEUR RADIO CLUB**

<b>President</b>	<b>KG8FH/W8PSK</b>	<b>Jeff Halsey/Loren Phillips</b>
<b>Vice President</b>	<b>KE8CVA</b>	<b>Terry Halliwill</b>
<b>Secretary</b>	<b>N1RB</b>	<b>Bob Boughton</b>
<b>Treasurer</b>	<b>KD8NJW</b>	<b>Jim Barnhouse</b>
<b>Board Member</b>	<b>WB8NQW</b>	<b>Bob Willman</b>

### **Minutes**

#### ***WCARC Meeting***

**January 11, 2021**

**Bob-WB8NQW, presiding**

**Present:** N1RB-Bob, WE8TOM-Tom, WD8JWJ-Bill, WB8NQW- Bob, KE8QGV-Roger, KC8PFP-Rex, KE8CVA-Terry, KD8NJW-Jim, W8ALM-Allen, KG8FH-Jeff

**Meeting called to order:** at 7:30 with Pledge of Allegiance (Woodland Mall).

**Minutes:** of December business meeting as published in January CQ Chatter were approved (CVA/FH).

**Treasurer Report:** The Treasurer reported on the existing balance in the

bank account and remarked that 2021 dues are payable at present.

#### **Old Business:**

- Election: Bob announced the slate of Officers who are standing for election:

President: W8PSK/KG8FH-Phil/Jeff

Vice President: KE8CVA-Terry

Secretary: N1RB-Bob

Treasurer: KD8NJW-Jim

Board Member: WB8NQW-Bob

- Motion to approve slate was made (ALM/FH) and unanimously approved.
- Motion to approve by acclamation was made (RB/JWJ) and unanimously

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## Net Check Ins

Jan 5

Traffic: 0

N1RB (NCS)

KE8CVA

KC8EKT

K8DLF

KG8FH

WD8JWJ

WD8LEI

WB8NQW

KD8NJW

KA8VNG

KD8RNO

N8VNT

K8JU

K8BBK

WE8TOM

K8DAL (16)

Jan 12

Traffic: 0

KD8NJW (NCS)

KE8CVA

KC8EKT

KG8FH

K8DLF

WD8JWJ

WD8LEI

WB8NQW

KA8VNG

KD8RNO

N8VNT

K8BBK

N1RB

KB8QEW

WE8TOM

WD8ICP (16)

## BRAIN TEASERS

1. Which of the following is equal to 500 milliwatts ?
  - a.) 0.02 W
  - b.) 0.5 W
  - c.) 5 W
  - d.) 50 W
2. In which type of circuit is current the same through all components ?
  - a.) series
  - b.) parallel
  - c.) resonant
  - d.) branch
3. How much power is being used in a circuit when the applied voltage is 13.8 VDC and the current is 10 A?
  - a.) 138 W
  - b.) 0.7 W
  - c.) 23.8 W
  - d.) 3.8 W

# February Contests

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

<b>Feb 6</b>	<i>1400 to 2359 Z</i>	160 m to 10 m
<b>Minnesota QSO Party</b>		<b>all modes</b>
<b>Feb 6-7</b>	<i>0000 to 2359 Z</i>	160 m to 10 m
<b>Vermont QSO Party</b>		<b>all modes</b>
<b>Feb 6-7</b>	<i>0001 to 2359 Z</i>	10 m
<b>10-10 Int'l Winter 'test</b>		<b>SSB</b>
<b>Feb 6-7</b>	<i>1600 to 2359 Z</i>	160 m to 10 m
<b>British Columbia QSO Party</b>		<b>all modes</b>
<b>Feb 8-12</b>	<i>1300 to 2359 Z</i>	80 m to 10 m
<b>ARRL School Club Roundup</b>		<b>CW/SSB</b>
<b>Feb 13-14</b>	<i>0000 to 2359 Z</i>	80 m to 10 m
<b>CQ WW RTTY WPX 'test</b>		<b>Digital</b>
<b>Feb 13-14</b>	<i>1200 to 1200 Z</i>	160 m to 10 m
<b>PACC (Netherlands) 'test</b>		<b>CW/SSB</b>
<b>Feb 13-15</b>	<i>1400 to 0200 Z</i>	160 m to 10 m
<b>YLRL YL-OM 'test</b>		<b>all modes</b>
<b>Feb 13-14</b>	<i>2300 to 2300 Z</i>	160 m to 20 m
<b>AWA AM QSO Party</b>		<b>AM</b>
<b>Feb 20-21</b>	<i>0000 to 2359 Z</i>	160 m to 10 m
<b>ARRL Int'l DX 'test</b>		<b>CW</b>

## Net Check Ins

**Jan 19** **Traffic: 0**

**WB8NQW (NCS)**  
**KE8CUZ**  
**WD8LEI**  
**KD8NJW**  
**N1RB**  
**KA8VNG**  
**WE8TOM**  
**KE8CVA**  
**KG8FH**  
**KD8RNO**  
**KC8NKC (11)**

**Jan 26** **Traffic: 0**

**N1RB (NCS)**  
**KC8EKT**  
**WE8TOM**  
**KD8RNO**  
**WD8LEI**  
**KD8NJW**  
**WB8NQW**  
**KE8CVA**  
**K8KTO**  
**K8DLF**  
**KG8FH**  
**WD8ICP**  
**KE8CUZ**  
**KB8YRF (14)**

## *Interested in Digital Modes but Never Took the Plunge?*

Most hams are familiar with modern digital modes (not counting CW or RTTY), through the PSK family of modes, especially PSK 31. The main utility of these modes is that they are simple to implement, and can be easily realized by using the sound card in your computer, or by a fairly inexpensive external unit, such as Tigertronics' Signalink box. At this writing, the PSKs are decades old and have had their ups and downs as far as popularity goes.

About a decade ago, a new type of digital mode was invented, mainly by Joe Taylor, K1JT. Joe is a radio astronomer by trade, and uses sophisticated computer sampling techniques to extract very very weak signals from the inescapable radio background noise in the Universe. He had the bright idea of applying these techniques to amateur radio; at first, to detect EME signals, but then just to see how weak a signal could be detected on the bands. It then occurred to him that this would be an ideal way to check on the propagation on the HF bands.

The first general application he invented was called WSPR (Weak Signal Propagation Reporter), in which individual hams set up weak-signal (5 W or less) beacons on the same HF frequency. There is a two minute transmit period followed by a two minute receive period after which the data is analyzed using weak-signal routines, and decoded to produce a list of the stations heard. The ratio of transmit-to-receive periods can be adjusted so that one can transmit every tenth period, for example. The data exchange includes the call, grid square, and output power. The stations heard are displayed on a map site [WSPRnet.org](http://WSPRnet.org), give you a graphic picture of where

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

## **WCARC Weekly Net**

Tuesdays at 2100 all year

147.18 MHz 67 Hz PL

### **Net Control Roster**

*Feb 2*                      *KG8FH*

*Feb 9*                      *KD8VWU*

*Feb 16*                    *KD8NJW*

*Feb 23*                  *WB8NQW*

*Mar 2*                     *N1RB*

*Mar 9*                    *KG8FH*

## **NEXT MEETING**

### ***Business Meeting***

**Monday**

**February 8**

**TIME: 7:30 PM/7:00 EB**

**PLACE:**

**Woodland Mall Food Ct.**

**1234 N. Main St.**

**Bowling Green, OH**

## ***10 meter Net***

***informal group***

***meets***

***Sunday***

***@ 20:30***

***on 28.335 MHz***

## ***Fusion Net***

***Thursday***

***@ 19:30***

***on 442.125 MHz***

***67 Hz PL on analog***

***Informal net***

*minutes— from p. 1*

approved. The virtual gavel was passed to Jeff (FH).

- Jeff thanked Bob for his years of service as President, and for his dedicated work in other capacities. Jeff briefly outlined some of his goals, like recruiting more young people in to the Club, perhaps through BGSU, but also in other areas.
- Jeff reported on the repeater status, but began by reviewing what is involved to those who may be first time attendees: WCARC operates 3 sets of repeaters, including the VHF/UHF (147.18+ MHz, 444.475+ MHz) pair for regular FM service, the Yaesu Fusion machine (442.125+ MHz) with Wires-X capability, and APRS (144.390 MHz). All of these machines are located in the Offenauer West dorm on the BGSU campus. All repeaters are currently in normal operation, but the most recent innovation was to install a Raspberry Pi controller to handle the APRS function. With this small footprint unit, a desktop computer and a TNC have been replaced. It was installed right after New Years and is currently operating nominally.
- Jeff emphasized that the CW practice net, which meets each Tuesday at 8:00 PM, is open to all. He encouraged anybody who wants to try “pounding

brass” to give it a try. The informal net meets on 28.050 MHz. Some discussion followed about how the TMRA code practice is conducted, and Jeff mentioned that it might be something to try.

- There was a brief discussion of the plans to implement AREDN in Wood County. The nodes that are planned include one atop the Courthouse Annex for EOC access, and one atop Offenauer for wider coverage. W8ALM, who is also a member of the TMRA AREDN group explained how that group is approaching the subject and gave some advice and explanation of how it could be done here.
- Jeff mentioned that the TMRA Hamfest is slated to be held on March 14 at Owens College, but everyone is cautioned to stand by in case of cancellation. WCARC is usually offered a courtesy table to provide information about our activities.

**New Business:**

- Terry, KE8CVA, has applied for Life Membership through the dues method. Motion to accept his application and approve Life Membership for KE8CVA was made (RB/JWJ). Motion was approved unanimously.
- Bob (NQW) recounted his operation experience in the State-wide VHF/UHF

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**Minutes— from p. 6**

simplex contest—he reported that 2 meters was wide open in the morning and he was able to rack up quite a few contacts all over the State. After a break, he tried UHF and was able to make a couple of nearby contacts. He recommends that it is a fun experience to try when it comes around again next year.

**Adjournment:** at 8:05 PM (NQW, NJW) ■

## ***Hamvention 2021 Cancelled***

With distribution of the COVID-19 vaccine falling behind schedule in the U.S., organizers of Hamvention 2021 have called off the annual event for the second consecutive year. The Executive Committee posted the news on various

social media outlets on Monday, January 11th, citing several setbacks related to the pandemic, with the vaccine delay named among them.

The posting said: [quote] "We make this difficult decision for the safety of our guests and vendors. Those who had their tickets deferred last year will be deferred again."

The theme for this year's Hamvention was to have been "The Gathering." Instead, a Hamvention QSO Party is planned instead on the dates the event was to have taken place.

The organizers added:"We'll be back next year!!!" ■

## **February Meeting to be All Business**

As scheduled, the February meeting will be held as a regular business meeting. A rearrangement of the usual bimonthly schedule has been necessary because the annual banquet was not held. ■

## ***Time to Renew***

**WCARC 2021 membership dues are  
payable to:**

**WCARC Treasurer, P. O. Box 534  
Bowling Green, OH 43402**

## ***Got a Minute? er, 59 Seconds?***

from ARNewsline

Got a minute? Or maybe a millisecond less? Things might just get a little challenging for UTC - Coordinated Universal Time, that is - the time-keeping system so familiar to us hams who pursue precision in our DX contacts or use some of the newer digital modes. As reported on the UK news website, *The Telegraph*, scientists are now suggesting that the world's atomic clocks, which control UTC, shorten the minute so that UTC can better keep pace with the irregular rate of the Earth's rotation, which most people measure using the less precise method known as "solar time."

Let's face it, it's hard to stay in sync. When the Earth's rotation was seen to be slowing, scientists added something called a "leap second" to the end of a particular year. They've done this 27 times since 1972 to keep atomic clocks and UTC *simpatico* with solar time. Scientists believe Earth's 24-hour rotation has grown swifter now, making the days ever-so-slightly shorter. They also believe 2021 could well be the shortest year we've had in many decades. They say this will ultimately have an impact on navigation systems and satellite communications and anything else that requires precision in cosmic timekeeping.

This very subject is up for discussion at the World Radiocommunication Conference in 2023 which is at least two years - and many, many, many, many seconds away. Now that's a thought that could probably make our own heads spin a lot faster too. ■

### ***Digital— from p. 4***

your signal is being heard all over the world. Subsequently, Taylor implemented weak-signal modes for having QSOs. These are described in detail at the WSJT Home Page under the WSJT-X link.

WSJT-X implements communication protocols or "modes" called **FT4**, **FT8**, **JT4**, **JT9**, **JT65**, **QRA64**, **ISCAT**, **MSK144**, and **WSPR**, as well as one called **Echo** for detecting and measuring your own radio signals reflected from the Moon. These modes were all designed for making reliable, confirmed QSOs under extreme weak-signal conditions (low SNR). Modes **JT4**, **JT9**, **JT65**, and **QRA64** use nearly identical message structure and source encoding (the efficient compression of standard messages used for minimal QSOs). They use timed 60-second T/R sequences synchronized with UTC. **JT65** and **QRA64** were designed for EME ("moonbounce") on the VHF/UHF bands; **JT65** has also proved popular and effective for worldwide QRP communication at HF. **JT9** is optimized for the LF, MF, and HF bands. It is about

***continued on p. 9***



# February Contests- continued

Feb 20-21	1200 to 1159 Z	160 m to 10 m
Russian WW PSK 'test		Digital
Feb 27-28	0600 to 1800 Z	80 m to 10 m
REF (France) DX 'test		SSB
Feb 27-28	1200 to 1200 Z	80 m to 10 m
FTn DX 'test		Digital
Feb 27-28	1300 to 1300 Z	10 m
UBA (Belgium) DX 'test		CW
Feb 27-28	1500 to 0159 Z	160 m to 10 m
South Carolina QSO Party		all modes
Feb 27-28	1800 to 0559 Z	80 m to 10 m
North American QSO Party RTTY		Digital
Feb 28-Mar 1	1500 to 0059 Z	80 m to 10 m
North Carolina QSO Party		all modes

## *digital—from p. 8*

2 dB more sensitive than **JT65** while using less than 10% of the bandwidth. With either **JT9** or **JT65**, world-wide QSOs are possible with power levels of a few watts and compromise antennas.

**JT4** and **QRA64** are optimized for EME on the VHF and higher bands, and especially the microwave bands from 2.3

to 24 GHz. Newer modes, **FT4** and **FT8** are operationally similar but use T/R cycles only 7.5 and 15 s long, respectively.

**MSK144** is designed for Meteor Scatter on the VHF bands. These modes offer enhanced message formats with support for nonstandard callsigns and some popular contests. Give it a try, it's easy and fun! ■

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