

# CQ Chatter

**AUGUST 2020**

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## **WOOD COUNTY AMATEUR RADIO CLUB**

<b>President</b>	<b>WB8NQW</b>	<b>Bob Willman</b>
<b>Vice President</b>	<b>KD8VWU</b>	<b>Doug Perez</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>KE8CVA</b>	<b>Terry Halliwill</b>

### ***July Breakfast Meeting***

The July Breakfast meeting was held on 4 July at Frisch's Big Boy in Bowling Green. This is the first such live occasion since the State shut down back in March. The ambience in the restaurant was quite different than before. Social distancing and masks were prevalent, and it was good to see faces in person that had only been heard on the air for three months. Many topics were discussed, but one at the top of the list is that there was a consensus for holding another foxhunt immediately after the September breakfast meeting on the 5th. The editor believes the driving force is due to many members having obtained advanced attenuators and being eager to try them out. ■

### ***CW Net Change***

The informal slow-speed CW Net has moved to 28.050 MHz on account of the 10 meter band opening up. On several occasions, the calling frequency of 28.335 MHz was occupied by SSB stations, requiring the net to move. Those who are interested in becoming more proficient with the CW mode are encouraged to listen in and to join in by pounding the brass if so inclined. ■

### ***August Meeting On-Air***

As was done in June, the August Business Meeting of WCARC will be held on the 147.18/444.475 MHz repeaters. There has as yet been no indication about if or when the Sheriff's Office will be available for Club meetings. ■

## Net Check Ins

**Jun 30**      **Traffic: 0**  
N1RB      (NCS)  
KC8EKT  
KE8CVA  
KG8FH  
KE8CUZ  
WD8LEI  
K8BBK  
W8PSK  
WB8NQW  
KD8RNO  
KA8VNG  
WE8TOM  
N8VNT  
K8JU      (14)

**Jul 7**      **Traffic: 0**  
KG8FU      (NCS)  
N1LB  
KC8EKT  
KE8CVA  
WD8LEI  
WB8NQW  
W8PSK  
KD8NJW  
KA8VNG  
N1RB  
KD8RNO  
N8VNT  
WE8TOM  
K8BBK      (14)

**Jul 14**      **Traffic: 1**  
KD8NJW      (NCS)  
KE8CUZ  
KC8EKT  
KE8CVA  
KG8FH  
WD8LEI  
WB8NQW  
W8PSK

## BRAIN TEASERS

1. How does the wavelength of a radio wave relate to its frequency?
  - a.) wavelength gets longer as frequency increases
  - b.) wavelength gets shorter as frequency increases
  - c.) there is no relationship between wavelength and frequency
  - d.) wavelength depends on the bandwidth of the signal
2. Which of the following is a good electric conductor?
  - a.) glass
  - b.) wood
  - c.) copper
  - d.) rubber
3. Which of the following electronic components can amplify signals?
  - a.) transistor
  - b.) variable resistor
  - c.) electrolytic capacitor
  - d.) multi-cell battery

# August Contests

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

<b>Aug 1-2</b>	<i>0001 to 2359 Z</i>	10 m
<b>10-10 Int'l Summer 'test</b>		<b>SSB</b>
<b>Aug 1-2</b>	<i>1800 to 0559 Z</i>	160 m to 10 m
<b>North American QSO Party</b>		<b>CW</b>
<b>Aug 8-9</b>	<i>0000 to 2359 Z</i>	80 m to 10 m
<b>WAE(urope) DX 'test</b>		<b>CW</b>
<b>Aug 8-9</b>	<i>1400 to 0400 Z</i>	160 m to 10 m
<b>Maryland-DC QSO Party</b>		<b>all modes</b>
<b>Aug 15-16</b>	<i>0800 to 0800 Z</i>	160 m to 10 m
<b>Russian District Award 'test</b>		<b>CW/SSB</b>
<b>Aug 22-24</b>	<i>0400 to 0400 Z</i>	160 m to 10 m
<b>Hawaii QSO Party</b>		<b>all modes</b>
<b>Aug 22-23</b>	<i>1600 to 0400 Z</i>	80 m to 10 m
<b>Ohio QSO Party</b>		<b>all modes</b>
<b>Aug 29-30</b>	<i>1200 to 0300 Z</i>	160 m to 10 m
<b>W/VE Islands QSO Party</b>		<b>all modes</b>
<b>Aug 29-30</b>	<i>1200 to 1200 Z</i>	80 m to 10 m
<b>YO (Romania) DX 'test</b>		<b>CW/SSB</b>
<b>Aug 29-30</b>	<i>1200 to 1200 Z</i>	160 m to 10 m
<b>WW Digi DX 'test</b>		<b>Digital</b>
<b>Aug 29-30</b>	<i>1400 to 2000 Z</i>	80 m to 10 m
<b>Kansas QSO Party</b>		<b>all modes</b>

## Amateur Radio Operator Assists Lost Pilot

From [QRZnow.com](http://QRZnow.com) via *Peruvian Radio Club* –suggested by *K8BBK*

On Thursday, July 9, an aircraft departing Santiago, Chile, carrying out an air ambulance mission to pick up a patient on Easter Island, lost communication with its control tower more than 1,000 nautical miles from the continent, so the pilot turned to the frequency of the Peruvian Relief Chain on 7.100 MHz.

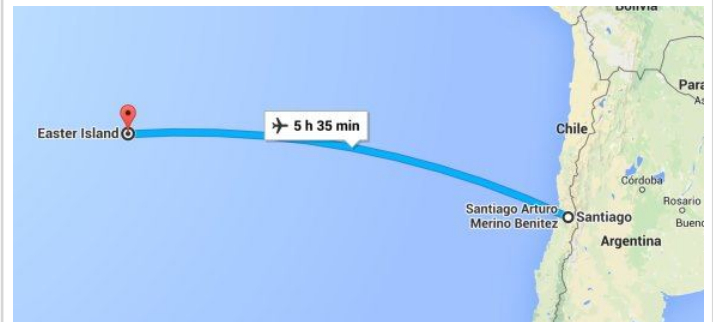
Fortunately, a drill of the Peruvian Socorro Chain had ended a few minutes earlier, and Guillermo Guerra, OA4DTU, had stayed on air, because the director of the Chain was the pilot, Giancarlo Passalacqua, OA4DSN, and so he was able to contact Guillermo.

Communication was successfully established with the aircraft, and its dire situation was detailed, on account of an apparent failure in its satellite communication equipment. The pilot requested support to communicate via telephone with Ocean Air Control, a service of the Directorate General of Aeronautics of Chile that watches over 32

million square kilometers of airspace in the South Pacific Ocean off the coast of Chile.

Ultimately Oceanic Control was able to reach Guillermo, to his great relief. This was indeed a high alert situation due to the loss of contact with the aircraft, and the fact that the Easter Island Tower remote HF team was not operational at the time, so communication was not possible for them.

About 10 phone calls were made with this service, indicating progressive positions and times along the route, plus providing alerts for other pilots and air control.



Other OA colleagues were on tap and ready to take action if necessary, keeping Guillermo in contact until he knew he could reach his destination. The map above shows the situation at

*continued on p. 9*

# August Hamfests

**Aug 8 Land of Lakes ARC Hamfest.** Gateway Community Church, Angola, IN  
web: NA

## **WCARC Weekly Net**

Tuesdays at 2100 all year

147.18 MHz 67 Hz PL

### **Net Control Roster**

<i>Aug 4</i>	<i>N1RB</i>
<i>Aug 11</i>	<i>KG8FH</i>
<i>Aug 18</i>	<i>KD8VWU</i>
<i>Aug 25</i>	<i>KD8NJW</i>
<i>Sep 1</i>	<i>WB8NQW</i>
<i>Sep 8</i>	<i>N1RB</i>

## **NEXT MEETING** *Business Meeting*

*Monday August 10*  
*ON 147.18/444.475 RPTR*

**TIME: 7:30 PM**

### **PLACE**

~~Sheriff's Training Room  
S. Dunbridge Rd. &  
E. Gypsy Lane Rd.  
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 FM*

**Informal net**

## Net Check Ins

Jul 14 *continued*

KB8QEW  
KA8VNG  
KD8RNO  
N1RB  
N8VNT  
WE8TOM//M (14)

Jul 21 *Traffic: 0*

(NCS)  
WB8NQW  
K8BBK  
KE8CVA  
KC8EKT  
KG8FH  
WD8LEI  
KD8RNO  
W8PSK  
N8VNT  
WE8TOM  
WD8ICP  
KE8CUZ  
K8JU (13)

Jul 28 *Traffic: 0*

(NCS)  
WB8NQW  
N8VNT  
K8BBK  
KE8CVA  
KC8EKT  
KG8FH  
KD8NJW  
KD8RNO  
W8PSK  
WD8LEI  
N1RB  
KA8VNG  
K8OVO  
KC8NKC  
WE8TOM (15)

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

## Why WWV and WWVH Still Matter

*From Radioworld—by James Careless  
-suggested by KD8RNO*

Last year was one of both celebration and uncertainty for WWV, the station adjacent to Fort Collins, Colo., that transmits automated time broadcasts on the shortwave bands. On the plus side, it marked the 100th year of WWV's call letters, making the site, operated by the [National Institute of Standards and Technology](#), one of the world's oldest continuously operating radio stations. On the negative side, WWV and its sister time station WWVH in Hawaii nearly missed this centennial. That's because NIST's original 2019 budget called for shutting down the pair, along with WWVB, the long-wave code station co-located next to WWV, as a cost-saving move.

Fortunately, these cuts never happened, and WWV, WWVH and WWVB seem likely to keep broadcasting the most accurate time from NIST's atomic clocks, at least for the immediate future. (No further cuts have been threatened.) That's good news for the stations' many supporters, who say that time broadcasts still matter even in the Internet Age.

### ***What They Have to Offer***

Today, listeners around the world can get the most accurate time possible via WWV and WWVH's broadcasts on the shortwave bands. To make this happen, "WWV broadcasts continuously on six shortwave frequencies: 2.5, 5, 10, 15, 20 and 25 MHz," said Glenn Nelson, an electronics technician at WWV and WWVB. "WWV has 11 operational HF transmitters (including standby equipment), eight transmitting antenna towers, and associated time and frequency distribution equipment."

*continued on p. 7*

## WWV—from p. 6



### ***Timecode generators at WWV***

Located on the southwest portion of Kauai, WWVH “broadcasts 5 kW on 2.5 MHz and 10 kW on 5.0, 10.0 and 15.0 MHz,” said WWVH Station Engineer Dean Okayama. “The time/frequency systems and transmitters are similar to WWV.” Both stations are known for the automated voices that tell the current time; WWV uses a male voice, while WWVH uses a female one, both timed to speak one after the other whenever both

stations are heard on their shared channels. This NIST service also broadcasts standard time intervals, standard frequencies and other information including solar conditions affecting radio propagation. Both stations report the time using the Coordinated Universal Time zone, a.k.a. Greenwich Mean Time, which is five hours head of Eastern Standard Time.

In the early days of radio, WWV/WWVH’s standard frequencies were used by commercial broadcasters to calibrate their transmitters to their assigned frequencies. “In the 1930s, WWV began broadcast standard time interval pulses,” said Nelson. “In the 1940s, the U.S. Navy granted WWV permission to broadcast time of day announcements (this had been the exclusive responsibility of the Naval Observatory up until then). Voice announcements of time were added in the 1950s and a digital time code was added in 1960. In the ’70s, the WWV audio signal was made available by telephone at (303) 499-7111, and this service has continued to the present day.”

### ***Why They Still Matter***

The possible closing of WWV, WWVH and WWVB did not pass unnoticed. Tens of thousands of supporters signed petitions opposing the move, for a variety of reasons. Even today, WWV and WWVH’s standard time broadcasts and frequencies are a great help for engineers calibrating equipment.

***continued on p. 8***

### **WWV—from p. 7**

“While time-of-day information can nowadays be obtained through the internet, the combination of circuits involved in internet distribution can result in delays,” said Dr. Kim Andrew Elliott, retired Voice of America broadcaster and audience research analyst, and now producer of the experimental broadcast [Shortwave Radiogram](#). “These delays usually involve fractions of seconds, but that is enough to be significant in certain endeavors such as high-speed trading. For a lack of delay, nothing beats terrestrial radio. It is held back only by that pesky speed of light.” WWV/WWVH’s audio tones are also precise and thus useful. “On WWV, the 440 Hz tone (the musical note A above middle C) is broadcast once each hour, during Minute 2 on WWV, and Minute 1 on WWVH,” Elliott said. “You can tune your violin using WWV.”

On a more scientific note, these reliable signals play an important role in forecasting “space weather,” which can have a serious impact on the world economy whenever it gets “stormy.” “As WWV’s signals move from their transmitter site in Fort Collins to shortwave receivers, they pass through the ionosphere and undergo slight delay and frequency changes,” said Dr. Philip Erickson of the MIT Haystack Observatory’s Atmospheric and Geospace Sciences Group.

“These changes, if measured carefully, contain much information on waves, density changes and other phenomena that form space weather known to affect national telecommunications, long-distance power grids, and human spaceflight.”

Initially, these changes could only be detected using professional-grade receivers. But times have changed. “Atomic clock signal accuracy at the Colorado and Hawaii transmission sites means that modest receivers using inexpensive, modern technology can use these time signals as beacons to sense ionospherically induced changes,” Erickson said. “This allows the formation of a distributed space weather network in the backyards of thousands of amateur radio enthusiasts across the continental U.S.”

Such a concept is being realized now by the Ham Radio Science Citizen Initiative (HamSCI; [www.hamsci.org](http://www.hamsci.org)), which is developing a personal space weather station for use by citizen scientists.

### ***They Would Be Missed***

These benefits would come to an end should NIST’s time stations ever go dark. “The ideas I’ve outlined, plus other similar concepts, naturally extend WWV’s 100-year historic mission into the 21st century, and form an important part of national infrastructure in both the professional and emerging citizen

***continued on p. 9***



**WWV—from p. 8**

science field,” said Erickson. “It is vital that these signals continue to operate for the benefit of advancing human understanding of our near-Earth space environment.”

It’s not just WWV and WWVH that would be missed: “The general public will take notice if NIST station WWVB shuts down as its 60 kHz signal controls self-setting clocks known as ‘atomic’ clocks,” said Thomas Witherspoon, editor of the shortwave radio website the [SWLing Post](#). “Many don’t realize it, but a large portion of wall clocks, alarm clocks and watches, not to mention weather stations, cameras and potentially a number of other devices, have a built-in receiver that self-calibrates,” he said. “NIST notes that there are more than 50 million radio-controlled clocks in operation and another few million wristwatches that rely on WWVB for self-calibration. “The thing is, these devices are so embedded in our lives here in North America we scarcely notice them, and many consumers likely assume they’re set by the internet. They’re not.”

**A Defense Against Fake News?**

WWV and its sister stations could also have relevance now for another reason. “The internet has become infamous as a purveyor of false information and counterfeit sites,” said Kim Andrew Elliott. “This is true even during emergencies, including the coronavirus outbreak. “WWV and WWVH can be useful

transmitters of emergency information: They are much more difficult to spoof than a website.” “If a fake station tries to transmit on WWV/WWVH frequencies, co-channel with WWV and WWVH, the listener will hear immediately that something is not right. If the fake station comes from overseas, it will usually sound distant, compared to the signal we are used to hearing in North America.” ■

**pilot—from p. 4**

approximately 23:30 local time (04:30 UTC), when the aircraft reported that it had managed to make contact via VHF with the Easter Island Control Tower, confirming the descent and landing instructions on the island!!!

The joy and satisfaction of all those who were on frequency was even more profound, since minutes after losing contact by HF, the pilot communicated with Guillermo by sending him his greetings, thanks and a photograph of the aircraft perched on the runway at Mataverí, where it was waiting for a patient to be air-taxed to Santiago, Chile.

The communication with the aircraft lasted nearly 3 hours, and was continuous from the first contact until its arrival at its destination, with thanks also from the Ocean Air Control Service to Guillermo and the Peruvian Socorro Chain.

This action attests to the role that can be played by amateur radio in such high risk emergency situations. ■

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