CQ CHATTER

MAY 2024 VOLUME B24 •ISSUE 3

WOOD COUNTY AMATEUR RADIO CLUB

President	KG8FH	Jeff Halsey
Vice President	WE8TOM	Tom Leingang
Secretary	N1RB	Bob Boughton
Treasurer	KD8NJW	Jim Barnhouse
Board Members	WB8NQW/KE8QGV	Bob Willman/Roger Weith

Eclipse Occurs without a Hitch

The total solar eclipse that occurred over Wood County on Monday, April 8, presented a once-in-a-lifetime opportunity for observers to see almost complete darkness in mid-afternoon, and to get a glimpse of our nearest star's corona. The Wood County ARES group was on standby in case any emergency communications facilities were needed due to the large increase in population that the County experienced. Working in conjunction with Jeff Klein (KG8QP), Director of the County EMA Office, and Sheriff Mark Wasylyshyn's (KD8BOI) Office, the ARES group were in contact and monitoring the situation over a repeater.

Fortunately, there were no cell phone black-outs, no serious highway incidents, and no gasoline shortages. As a result, most members were able to enjoy the eclipse at home or at one of the designated mass viewing/educational areas, such as Doyt Perry Stadium on the BGSU campus. The freeways were jammed immediately after the event, but there were apparently no serious traffic mishaps.

It can be said that the perfect emergency exercise is when no serious emergency occurs. We are grateful to the EMA and Sheriff's Offices and all of the First Responders for being so well prepared ahead of time. ■

Net Check Ins-I

Apr	*9*	*Traffic: 0*
	N1RB	*(NCS)*
	KA8VNG	
	KE8WTG	
	KD8RNO	
	WE8TOM	
	KD8NJW	
	W8PSK	
	WB8NQW	
	KE8QGV	
	KG8FH	
	KC8EKT	
	KE8CVA	*(12)*

Apr	*16*	*Traffic: 0*
	KG8FH	*(NCS)*
	KE8CVA	
	KC8EKT	
	KD8NJW	
	W8PSK	
	WB8NQW	
	KE8RNO	
	KA8VNG	
	WE8TOM	*(9)*

Brain Teasers

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

a.) resistor
b.) potentiometer
c.) oscillator
d.) capacitor

2. Which of the following describes combining speech with an RF carrier signal?

a.) impedance matching
b.) oscillation
c.) modulation
d.) low-pass filtering

3. What weather condition would decrease range at microwave frequencies?

a.) high winds
b.) low barometric pressure
c.) precipitation
d.) colder temperatures

May Contests

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

May 4-5	*1200 to 1159 Z*	80 m to 10 m
ARI (Italy) Int'l DX 'test		**all modes**
May 4-5	*1300 to 0700 Z*	160 m to 10 m
7th Area QSO Party		**all modes**
May 4-5	*1500 to 0300 Z*	160 m to 10 m
Indiana QSO Party		**all modes**
May 4-5	*1700 to 2359 Z*	160 m to 10 m
Delaware QSO Party		**all modes**
May 4-5	*2000 to 2359 Z*	80 m to 10 m
New England QSO Party		**all modes**
May 11-12	*1700 to 0300 Z*	40 m to 10 m
Canadian Prairies QSO Party		**all modes**
May 18	*0600 to 2100 Z*	80 m to 10 m
UN (kazakhstan) DX 'test		**CW/SSB**
May 18-19	*1200 to 1200 Z*	160 m to 10 m
King of Spain 'test-CW		**CW**
May 18-19	*1400 to 0200 Z*	160 m to 10 m
Arkansas QSO Party		**all modes**
May 25-26	*0000 to 2359 Z*	160 m to 10 m
CQ WW WPX 'test-CW		**CW**

Net Check Ins-II

Apr 23 Traffic: 0
KD8NJW (NCS)
KE8WTG
KE8CVA
KC8EKT
WB8NQW
KD9AY-Adam
W8PSK
KD8RNO
KA8VNG
WD8LEI
N1RB
WE8TOM
KD8VWU (13)

Apr 30 Traffic: 0
WB8NQW (NCS)
KD8RNO
KE8CVA
KC8EKT
KG8FH
KE8QGV
N1RB
WE8TOM
KE8WTG
W8PSK (10)

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

Radio Frequency Burns, Flying a Kite, and You

Lewin Day, Hackaday

Most hams can tell you that it's possible to get a nasty RF burn if you accidentally touch an antenna while it's transmitting. However, you can also cop a nasty surprise on the receiving end if you're not careful, as explained in a video from **Grants Pass TV Repair**.

An experiment was used to demonstrate this fact involving a kite and a local AM broadcaster. A simple calculation revealed that an antenna 368 feet and 6 inches long would be resonant with the KAJO Radio signal at 1.270 MHz. At half the signal's wavelength, an antenna that long would capture plenty of energy from the nearby broadcast antenna.

Enter the kite, which served as a skyhook to loft an antenna that long. With the wire in the air picking up a strong signal from the AM radio tower, it was possible to get a noticeable RF burn simply by touching the end of the antenna.

The video explains that this is a risky experiment, but not only because of the risk of RF burn itself. It's also easy to accidentally get a kite tangled in power lines, or to see it struck by lightning, both of which would create far greater injuries than the mild RF burn seen in the video. In any case, even if you know what you're doing, you have to be careful when you're going out of your way to do something dangerous in the first place.

AM radio towers aren't to be messed with; they've got big power flowing. View video at: **kite antenna** ■

WCARC Weekly Net

Tuesdays at *2100* all year

147.18 MHz 67 Hz PL

Net Control Roster

Apr	*30*	*WB8NQW*
May	*7*	*N1RB*
May	*14*	*KG8FH*
May	*21*	*KD8NJW*
May	*28*	*WB8NQW*
Jun	*4*	*N1RB*

NEXT MEETING

Breakfast Meeting

Saturday May 4

TIME: 9:00 AM

PLACE:

Frisch's Big Boy
E. Poe Rd. & N. Main St.
Bowling Green, OH

10 meter Nets

Informal SSB group meets Sunday@ 20:30 local on 28.335 MHz

Informal CW group meets Tuesday @ 20:00 local on 28.050 MHz

Fusion Net

Thursday

@ 19:30 local

on 442.125 MHz

Wires-X Operators welcome

Informal net

Brief History of the Hamvention

Where it all started…Since 1952 Hamvention® has been sponsored by Dayton Amateur Radio Association (DARA). For many years it has been the world's largest amateur radio gathering, attracting hams from throughout the globe. About 1950, John Willig, W8ACE, had asked the Dayton Amateur Radio Association to sponsor a HAM Convention, but was turned down. John wanted to have a quality affair. Speakers and prizes would be a drawing point. John finally found a champion in Frank Schwab, W8YCP (W8OK), the newly elected president of the club.

A meeting was held and the DARA Board allocated $100 to get started. The first organizational meeting was held in January 1952. The Southwestern Ohio Hamvention was born. The first committee consisted of: John Willig, W8ACE, General Chairman Al Dinsmore, W8AUN, Arrangements Bob Siff, W8QDI (K4AMG), Prizes and Exhibits Frank Schwab, W8YCP (W8OK), Publicity Bob Montgomery, W8CUJ, Finance Clem Wolford, W8ENH, Women's Program Ellie Haburton, W8GJP (W4ZVW). The next year the name became "Dayton Hamvention®" and was registered as a trademark. April was determined to be the best time but the Biltmore Hotel, in downtown Dayton was booked. March

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Dayton Hamvention Ready to Roll

Preparations for the 2024 edition of the Hamvention are being finalized. The event will be held on May 17, 18 and 19 (Fri, Sat, Sun) at the Greene County Fair and Expo Center in Xenia, OH. For detailed information, please consult:

http://hamvention.org

The organizing committee has promised a bigger and better event than what has gone before. Tickets are $26 in advance and $30 at the door. Talk-in on 146.94 –. This event is one of the most highly attended in all of amateur radio, so if you have yet to experience it, make sure that you get at least one chance to do so. ■

IT'S TIME TO RENEW YOUR MEMBERSHIP

Dues Payable to:
WCARC, P. O. Box 534
Bowling Green, OH 43402

Senior/Student:	**$10**
Regular:	**$15**
Family:	**$20**

May Hamfests

May 17-19 Hamvention & ARRL National Convention. Greene County Fairgrounds and Exposition Center, Xenia, OH **web:** www.hamvention.org

Single Sideband Jubilees

Pieter-Tjerk de Boer, PA3FWM
pa3fwm@amsat.org

Editor's note: **most modern hams operate using the phone mode because it is convenient and familiar. Communication by voice requires no special training, and is the normal way of communication. It is important however to realize that the HF phone mode we most often use (SSB modulation) has had a long and tortuous history.**

The year 1915, now well over a hundred years ago, is seen as the beginning of single-sideband technology. A few scientists had already realized that in theory two sideband frequencies arise with amplitude modulation, but in 1915 it was realized for the first time that one in fact needs to transmit only one sideband. H.D. Arnold proposed to tune the antenna of a long-wave Navy transmitter a bit to the side of the carrier frequency, so that one sideband would be transmitted much more strongly than the other. John R. Carson realized that one could omit the carrier entirely, and got a patent for this. In the following years, single sideband was mostly used on cable connections, to transport multiple telephone calls on a

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hamvention from p. 6

22 was the chosen date, causing a short lead time.

How far did $100 go? Not far! A 12″ TV was raffled off to help raise funds. The FCC agreed to give license exams and Phil Rand, W1BDM, a pioneer in TVI elimination was on the program. First prize, a Collins 75A2, was purchased locally. Hoping for 300 visitors, the committee was amazed that over 600 showed up! There were 7 exhibitors and 6 forums. The ladies program was successful with a luncheon at the Biltmore and a trip to a local TV station.

In 1955, the Awards Program began with the "Amateur of the Year." The Flea Market had grown from 200 to more than 2000 spaces.

In 1964 the Hamvention® moved to Hara Arena. Shuttle buses and handicapped parking were added in 1969. In 1973 it became a 2 day event with Sundays added in 1974. The program has grown to a "Souvenir Program" and in 1976 the dimensions changed from 6″x 9″ to the current 8-1/2″x11″. The growth of the Dayton Hamvention® can be attributed to caring, energetic people who enjoy being on a winning team. ■

SSB from p. 7
single cable, by converting them to different frequency ranges.

Radio application started in 1922, with an experimental one-way transatlantic voice transmission from the US to England on 57 kHz. After this had been shown to work, a two-way system was built, still at 50 to 60 kHz, which enabled transatlantic telephone calls in 1927, now over ninety years ago. (Sea cables at that time did not yet have amplifiers and were therefore limited to telegraphy, and satellites of course did not yet exist.). The first transatlantic telephone call has been recorded and preserved.

SSB application on the shortwave bands had to wait for technology to improve further, and started in the 1930s. But after that, it didn't progress very fast. In December, 1956 (now almost seventy years ago), a special issue of the scientific journal *Proceedings of the IRE* appeared, dedicated entirely to single-sideband technology. By that time it was perceived to be urgent to start using the shortwave spectrum more efficiently. In this issue we find among others, Donald K. Weaver's famous article in which he describes a "third" method of generating SSB signals. Another article in this issue is by John P. Costas, in which he favors the use of double sideband, an exception among all the other articles on single-sideband. This article has mostly become famous because he proposed a DSB demodulator which is now known as the "Costas loop" and is at the heart of demodulators for many modern digital radio signals.

In this special issue we also find about the state of radio amateur use of SSB. This article reports that already several thousand amateur stations are working in SSB, "despite the fact that the use of SSB imposes, for the average amateur, comparatively severe technical requirements". Indeed, already eight years earlier, in 1948, articles appeared in QST explaining and popularizing SSB (then called S.S.S.C., Single-Sideband Suppressed Carrier).

SSB with full break-in?

The article also mentions a surprising advantage of SSB specifically in radio amateur use: "It has also provided a more *natural* means of communication, since with voice-controlled transmitters and receivers, which are in universal use, it is possible to have "back-and-forth" communication similar to conversation over an ordinary wire telephone circuit." Technically this difference makes sense: with AM, one explicitly switches the carrier on and off, while with SSB there is no difference between transmitter off, or transmitter on but transmitting silence. I find this surprisingly advanced: a VOX, with loudspeaker reception, and switching so quickly that one can interrupt the other; as far as I know this is not standard even now, but was apparently commonplace back then? ■

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