CQ CHATTER

VOLUME B11 • Issue #8 WOOD COUNTY AMATEUR RADIO CLUB SEPTEMBER 2010
P.O. BOX 534, Bowling Green, OH http://wcarc.bgsu.edu

President	WB8NQW	Bob Willman
Vice President	K8NEA	Duane Ashbaucher
Secretary	N1RB	Bob Boughton
Treasurer	WD8JWJ	Bill Wilkins

Minutes

WCARC Meeting

August 9, 2010

thanks to WB8VUL for taking minutes while Secretary was absent

Meeting called to order at 7:30 pm.
Pledge of Allegiance
Minutes of last meeting were approved
Treasurer's report approved

Old Business:

•Field Day: discussion by many---general opinion is that it went well.

•September Breakfast Meeting: All breakfasts to be held at the Edgewood Inn until further notice.

•Face Book: Craig, WD8NJZ, reported that there are 25 friends now. He suggested that everyone use the "SHARE" settings. An e-mail was sent to WB8NQW explaining it.

•QST for the Library: Loren, W8PSK, will follow up on it.

•Tower Situation: Loren discussed the City's position on the erection of towers. City Attorney currently says it is prohibited. Loren went to Council meeting and provided information from Ohio Section, ARRL, etc. He is on the Planning Commission agenda to make presentation at the Sept. 6th meeting. Hopefully a favorable ordinance can be developed. W8PSK would like additional support at the September meeting.

•License Class: Meeting on Sundays at 2:00 pm at the Sheriff's Office.

•Brett Luna Repeater: Jim, K8JU, has a problem with the antenna but thinks he can

continued on p.4

WCARC Weekly Net:
Tuesdays at 2130 EDST
(0130 Z year-round)
147.18 MHz 67 Hz PL

Next Meeting
BREAKFAST
Saturday, September 4th
TIME: 9:00 am
PLACE: Edgewood Inn
Routes 6 and 199, Pemberville

Net Check Ins

August 3

N1RB (NC)
KD8OS/M
KD8NJZ
W8PSK
K8NEA
WB8NQW (6)

August 10

WB8NQW (NC)
WD8JWJ
K8NEA
N8QMV
KD8MLN
KD8NJZ
KA8CKT
WB8VUL
W8PSK
K3RC
K8OVO (13)

WCARC

2 m Net Control Roster

Net meets every Tuesday at
2130 EDST/0130 Z

Aug	**31**	**N8QMV**
Sep	**7**	**WB8NQW**
Sep	**14**	**N1RB**
Sep	**21**	**K8OVO**
Sep	**28**	**KD8NJZ**
Oct	**5**	**N8QMV**
Oct	**12**	**WB8NQW**

Brain Teasers

1. What would happen if a person accidentally touched your antenna while you were transmitting?

a.) could cause television interference
b.) they might receive a painful rf burn
c.) they might develop radiation poisoning
d.) all of the above

2. What device takes the output of a low powered 28 MHz SSB exciter and produces a 222 MHz output signal?

a.) high pass filter
b.) low pass filter
c.) transverter
d.) phase converter

3. Which semiconductor component has a gate electrode?

a.) bipolar transistor
b.) field effect transistor
c.) silicon diode
d.) bridge rectifier

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 4-5	*0000 to 2400 Z*	80 m to 10 m
All Asia DX 'test		**SSB**
Sep 4	*0000 to 2400 Z*	80 m to 10 m
Russian RTTY WW 'test		**RTTY**
Sep 4-5	*1200 to 0400 Z*	160 m to 10 m
Colorado QSO Party		**all modes**
Sep 5-6	*1800 to 0300 Z*	160 m to 10 m
Tennessee QSO Party		**all modes**
Sep 11-12	*0000 to 2400 Z*	80 m to 10 m
Worked All Europe DX 'test		**SSB**
Sep 11	*0800 to 2000 Z*	80 m to 10 m
Arkansas QSO Party		**all modes**
Sep 11-13	*1800 to 0300 Z*	6 m on up
ARRL VHF QSO Party		**all modes**
Sep 18	*0000 to 2359 Z*	80 m to 10 m
Connecticut QSO Party		**all modes**
Sep 18-19	*1300 to 2100 Z*	80 m to 10 m
South Carolina QSO Party		**all modes**
Sep 18-19	*1600 to 2400 Z*	160 m to 10 m
Washington State Salmon Run		**all modes**
Sep 25	*1400 Z*	160 m to 10 m
Texas QSO Party		**all modes**

Third Annual Ohio State Parks On The Air Contest

Saturday, September 11, 2010, from the hours of noon to eight p.m. EDT (1600Z to 2400Z).

For hams throughout the State of Ohio, this contest presents an opportunity to visit and enjoy the amenities offered by the seventy-four beautiful State Parks here in Ohio. You can spend the day or even spend the weekend at the park of your choice. No matter whether you are camping or staying at one of the outstanding lodges or resorts you will find that the parks are one of Ohio's greatest assets.

Find out more about the parks and all that they have to offer at

http://tinyurl.com/5ucyxg

This contest places a premium on working stations at the State Parks. That means that it is critical to have as many parks activated as possible. The challenge for Ohio stations will be to work HF in the 50 to 300 mile range. Contacts can be made with any mode on the HF and VHF bands: 80, 40, 20, 15, 10, 6 and 2 meters and all contacts have the same point value. This is a great chance to try something new, like an NVIS antenna or two meter SSB.

Individuals and clubs can operate high or low power park stations and there is a special award for the club that activates the greatest number of parks! Non-park stations in Ohio as well as outside of Ohio can also compete with each other.

So get to an Ohio State Park and get On The Air in September. Have some fun with this contest! You can get complete information, including rules, forms and FAQ's, at http://parks.portcars.org, or contact the contest chairman, Chuck, W8PT, at w8pt@portcars.org. Check back at the web site for announcements about updates and prizes. ■

Brain Teaser answers: 1-b, 2-c, 3-b

minutes---from p. 1

work out a deal to get another one. Will make further progress after the Fair.

New Business:

•Bob, WB8NQW, asked for suggestions on fund raising ideas. Some ideas are trunk sales and 50-50 drawing at other hamfests. Item was tabled for future consideration.

Meeting Adjourned

W8PSK demonstrated the severe interference problem the 147.18 machine is experiencing whenever the ARES (146.79) machine is keyed. The ARES machine wipes out the audio with a loud squeal. ■

DON'T FORGET! 10 meter informal net meets each Sunday at 2030 EDST on 28.335 MHz

Letter from the President September 2010

Breakfast will be at Edgewood at least for the rest of 2010. We are on their schedule for September 04 and November 06 at 09:00 AM.

The WCARC Facebook page has had some activity since Craig KD8NJZ put it up. Please check it out. I still don't understand all this social networking stuff but we seem to be getting some public exposure from it which is not a bad thing. Hopefully we will encourage some local hams to become new club members.

The next breakfast is September 04 at Edgewood and the next meeting is October 11 at the sheriff's office. See you there.

73, Bob WB8NQW ■

It's Inventory Time

One of the most frustrating events in the history of our Club occurred when we were told to vacate the clubhouse in the Fairgrounds Administration Building. At that point in time, all of the Club's equipment was divided up among several of the members to take custody of the equipment until perhaps a new club station could be established.

Bill, WD8JWJ, suggested that it would be a good idea to inventory all of this Club property so that we know what is where. If you are the custodian of some of the WCARC equipment, please try to attend the October meeting on the 11th and submit a list of the equipment that you possess to the President. If you find that you cannot attend the meeting, please e-mail your list to Bob by the time of the meeting. ■

The Digital Ham Radio Revolution!

by NB6Z

Communication technologies that are specifically designed to improve "live" HF keyboard operation can now be achieved that were previously only theory or too complex to be practical. Thanks to the generosity of radio hams with programming knowledge, and to the World Wide Web, new and powerful communications tools are available to all hams. The evolution and widespread use of the Personal Computer with a digital sound card for DSP, is allowing us to use these tools to "push the envelope". The distinguishing features of live HF digital operation today are the use of lower power, compact or indoor antennas and courteous operating techniques. This reverses the trend of several years ago. The PSK31 mode led the way starting in 1997, and since then experimentation has shown that incremental improvements can be made. The popularity of a single mode like PSK31 over other new modes seems to be driven at this time by how many freeware programs are available for the mode. It is possible that a more advanced mode like MFSK16 will emerge as a standard for HF band operation in the future.

continued on p.6

September Hamfests

Sep 12 **Findlay Radio Club** Annual Hamfest. Hancock County Fairgrounds, Findlay, OH. Contact Eric, K8ERW.
e-mail: hamfest@findlayradioclub.org
web: http://www.findlayradioclub.org

Sep 19 **Adrian ARC.** Hamfest. Lenawee County Fairgrounds, Adrian, MI. Contact Mark, NU8Z.
e-mail: nu8z@comcast.net
web: http://www.w8tqe.com/

Sep 26 **Hamfest Association of Cleveland.** Cleveland Hamfest and Computer Show. Cuyahoga County Fairgrounds, Berea, OH. Contact Bill, N8LXY.
e-mail: k8wmw@arrl.net
web: none

digital---from p. 5

We can all participate in the revolution by trying out the other modes and judging their performance on all of the HF bands. Fortunately, the interface needed to operate these new PC sound card programs is the same for all the modes. The next challenge for the ham programmers out there is to create a single program that will incorporate modules for all the new sound card modes.

Confusion over band space is the obvious down-side as new and old modes compete for band space. Crowding on a single band like 20 meters is partly to blame for this issue. Fortunately, the new modes, like MFSK16, are designed to improve performance inside a wide range of operating conditions. This should allow for increased ham band usage to relieve crowding and extend contact opportunities as propagation changes to favor different bands. I don't know what is going on with the phone portion of the ham bands, but these are exciting times for us digital operators!

TOR is an acronym for Teleprinting Over Radio. It is traditionally used to describe the three popular "error free" operating modes, AMTOR, PACTOR and G-TOR. The main method for error correction is from a technique called ARQ (automatic repeat request) which is sent by the receiving station to verify any missed data. Since they share the same method of transmission (FSK), they can be economically provided together in one TNC modem and easily operated with any modern radio transceiver. TOR methods that do not use the ARQ hand-shake can be easily operated with readily available software programs for personal computers. For these less complex modes, the TNC (terminal node controller) is replaced by an

on-board sound card or out-board audio device. These modes may use redundancy or "human processing" to achieve a level of error correction.

AMTOR is an FSK mode that has been fading into history. While a robust mode, it only has 5 bits (as did its predecessor RTTY) and can not transfer extended ASCII or any binary data. With a set operating rate of 100 baud, it does not effectively compete with the speed and error correction of more modern ARQ modes. The non-ARQ version of this mode is known as FEC, and known as SITOR-B by the Marine Information services.

PACTOR is an FSK mode and is a standard on modern TNCs. It is designed with a combination of packet and Amtor Techniques. It is the most popular ARQ digital mode on amateur HF today. This mode is a major advancement over AMTOR, with its 200 baud operating rate, Huffman compression technique and true binary data transfer capability.

PACTOR-II is a robust and powerful PSK mode which operates well under varying conditions. It uses strong logic, automatic frequency tracking; it is DSP based and as much as 8 times faster then Pactor. Both PACTOR and PACTOR-2 use the same protocol handshake, making the modes compatible.

CLOVER is a PSK mode which provides a full duplex simulation. It is well suited for HF operation (especially under good conditions), however, there are differences between CLOVER modems. The original modem was named CLOVER-I, the latest DSP based modem is named CLOVER-II. Clover's key characteristics are band-width efficiency with high error-corrected data rates. Clover adapts to conditions by constantly monitoring the received signal. Based on this monitoring, Clover determines the best modulation scheme to use.

RTTY or "Radio Teletype" is an FSK mode that has been in use longer than any other digital mode (except for morse code). RTTY is a very simple technique which uses a five-bit code to represent all the letters of the alphabet, the numbers, some punctuation and some control characters. At 45 baud (typically) each bit is 1/45.45 seconds long, or 22 ms and corresponds to a typing speed of 60 WPM. There is no error correction provided in RTTY; noise and interference can have a seriously detrimental effect. Despite it's relative disadvantages, RTTY is still popular with die-hard operators.

PSK31 is the first new digital mode to find popularity on HF bands in many years. It combines the advantages of a simple variable length text code with a narrow bandwidth phase-shift keying

digital---from p. 7

(PSK) signal using DSP techniques. This mode is designed for "real time" keyboard operation and at a 31 baud rate is only fast enough to keep up with the typical amateur typist. PSK31 enjoys great popularity on the HF bands today and is presently the standard for live keyboard communications. Most of the ASCII characters are supported. A second version having four (quad) phase shifts (QPSK) is available that provides Forward Error Correction (FEC) at the cost of reduced Signal to Noise ratio.

HF PACKET radio is a FSK mode that is an adaption of the very popular Packet radio used on VHF FM ham radio. Although the HF version of Packet Radio has a much reduced bandwidth due to the noise levels associated with HF operation, it maintains the same protocols and ability to "node" many stations on one frequency. Even with the reduced bandwidth (300 baud rate), this mode is unreliable for general HF ham communications and is mainly used to pass routine traffic and data between areas where VHF repeaters maybe lacking.

HELLSCHREIBER is a method of sending and receiving text using facsimile technology. This mode has been around along time; the recent use of PC sound cards as DSP units has increased the interest in Hellschreiber. The single-tone version (Feld-Hell) is the method of choice for HF operation. It is an on-off keyed system with 122.5 dots/second, or about a 35 WPM text rate, with a narrow bandwidth (about 75 Hz). Text characters are "painted" on the screen, as opposed to being decoded and printed. A new "designer" flavor of this mode called FM HELL has some advantage for providing better quality print, at the expense of a greater duty cycle. ■

Ohio QSO Party

If you like to check out how well your rig is getting out, this Saturday, August 28th, from noon until midnight EDST is a good opportunity for you to see. The Ohio QSO party is one of many state-oriented QSO parties that are held throughout the year. Usually, the ultimate goal is to work all of the counties in the state (88 for Ohio) and to otherwise make a lot of contacts.

The standard operating frequencies are in the vicinity of 3.825, 7.200,14.250, 21.300 and 28.450 MHz. Since operators all over the country and in fact the world will be trying to work different Ohio counties, this party gives you the chance to see what it's like to be a DX station and have pile ups of other stations trying to work you!

Some folks even go to the extent of jumping in the car and working mobile from several different counties. Try it on for size---you might enjoy the Ohio party.

Adrian Amateur Radio Club
Adrian, Michigan
Sunday, September 19, 2010

37th Annual Hamfest and Computer Show

8:00 A.M. until the event ends…
Talk-in 145.370 – 85.4 pl

At the Lenawee County Fairgrounds

Tickets $5.00

8 ft tables $10.00 each

Trunk Sale Spots $5.00 each

Handicapped Parking

Additional Information
Email
adrianhamfest@w8tqe.com
Table forms are on the web
www.w8tqe.com

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