CQ Chatter

Volume B5•Issue #4 **Wood County Amateur Radio Club** **OCTOBER 2002**
P. O. Box 534,Bowling Green, OH 43402 **http://wcarc.bgsu.edu**

President	**WB8NQW**	**Bob Willman**
Vice President	**K8NEA/KB8QEW**	**Duane Ashbaucher/Shawn Hudson**
Secretary	**AA8XS**	**John Lagger**
Treasurer	**N1RB**	**Bob Boughton**

Minutes--Meeting of September 9, 2002

President Willman brought the meeting to order at 1937 hours with 7 members present. (B. Willman, B.Boughton, L.Boughton, E.Creps C.Dicken, S.Hudson, K. Otte)

Treasurers report was given showing a net worth of #3,451.60. After a short discussion of the figures shown, Kevin moved to accept the report. Esther 2nd the motion. And the report was received.

The president then asked for a Technical Committee report. Not much to say except the repeater is still chirping. President then read from the TMRA newsletter and told about a "take it all deal" including a 140 foot tower and several repeaters and associated parts. Bob and Chuck will make a trek to the site and make a report back asap on the disposition.

Old Business: included the Treasurer asking for a complete listing of club owned equipment. This should include "make, model,S/N & crude numerical valuation if possible" for all the repeaters, computers and antennas along with the radio gear.

New Business: Discussion of RACES representation with a county Administrator was a hot topic. After several minutes of talking about what, why, where, who, - Linda Boughton volunteered to speak with the Administrator and possibly get the details first hand. Hopefully this will be the beginning of a new era in communications.

Bob Boughton moved that the meeting be adjourned., seconded by Shawn Hudson. After the meeting, Pres. Bob Willman suggested having the next meeting at his QTH. This will be presented in the next newsletter. ■

WCARC Weekly Net:
Tuesdays at 2130
147.18 & 444.475 MHz

Next Meeting
Monday, Oct. 14th
Location: the Willman's
14118 Bishop Rd.
Social Hour: 7:00 pm
Meeting: 7:30 pm

Repeater Update

The chronic motorboating problem that we have experienced for a number of months on the K8TIH repeater system has been eliminated. Through the diligent efforts of Chuck, WD8ICP, and Shawn, KB8QEW, a new input cavity filter was installed at the receiver input to eliminate any leakage that might occur from the transmitter. Secondly, the PL tone frequency has been changed to 203.5 Hz (on 2 meters only), on the theory that another repeater with wide coverage in a neighboring state was using the same PL frequency as we had been using (77 Hz). It is anticipated that with the motorboating problem eliminated that the previous squelch and transmit power levels can be restored. Many thanks to Chuck and Shawn and any other members who helped to tackle and to solve this pesky and sometimes irritating problem. The K8TIH repeater system is now back in operation and can be used for its intended purposes. ■

Answers to last month's Brain Teasers:
1 (b), 2 (a), 3(b)

October Contests

The full contest line-up for the month of September includes the following:

Oct 5-7	*0800 to 0800 Z*	160 to 10 m
Oceania DX 'test		**SB**
Oct 5-6	*1600 to 2200 Z*	160 to 2 m
California QSO Party		**all modes**
Oct 6	*0700 to 1900 Z*	15 to 10m
RSGB 21/28 MHz		**SB**
Oct 12-13	*0800 to 0800 Z*	160 to 10 m
Oceania DX 'test		**CW**
Oct 12-13	*1600 to 2200 Z*	all HF
Pennsylvania QSO party		**all modes**
Oct 20	*0700 to 1900 Z*	15 to 10 m
RSGB 21/28 MHz		**CW**
Oct 20-21	*1800 to 0200 Z*	160 to 2 m
Illinois QSO party		**all modes**
Oct 26-27	*0000 to 2400 Z*	160 to 10 m
CQ WWDX 'test		**SB**
Nov 2-4	*2100 to 0300 Z*	all HF
Arrl Sweepstakes		**CW**

October Hamfest

Oct 6 **Medina 2m Grp.** 8 am to 2 pm
National Guard Armory, 920 Lafayette Rd., Medina, OH. Contact Mike, N8TZY, (330) 273-1519 or www.qsl.net/m2m.

Oct 27 **Massilon ARC** 8 am to 3 pm
Stark County Fairgrounds, 305 Wertz Ave., NW, Canton, OH. Contact Terry, N8ATZ or www.qsl.net/w8np.

Oct 27 **USECA** 8 am to 1 pm
Italian/American Cultural Center, 28111 Imperial Dr., Warren, MI. Contact Delphine, KC8JSH, (586) 791-4669 or www.useca.org.

WCARC Net Control Roster

Net meets every Tuesday at 2130

Oct 1	WD8ICP
Oct 8	N1RB
Oct 15	N8QMV
Oct 22	AA8XS
Oct 29	KB8QEW
Nov 5	WD8ICP
Nov 12	N1RB

Brain Teasers

1. A ham on 20 m is running 100 W and receives a report of S-9. He kicks on the linear to run 1 kW. Theoretically his signal report should be:
(a) S-9
(b) S-9 plus 10 dB
(c) S-9 plus 5 dB
(d) S-7

2. The ALC meter on your new transceiver reads:
(a) amateur logging control
(b) automatic inductance control
(c) automatic learning cycle
(d) automatic level control

3. "QRP" operation means your power is:
(a) < 1 kW **(b)** < 100 W **(c)** < 5 W **(d)** > 5W

VINTAGE 1AW QSL BRINGS RECORD PRICE

We're not certain if ARRL co-founder and first president Hiram Percy Maxim would have been proud or surprised to know that one of his old 1AW QSLs apparently set a price record for the sale of a single QSL card. A 1923-vintage HPM 1AW card recently went for $2125 on the eBay auction site:

Neither the seller nor the buyer have been identified, but ARRL member Paul Cassel, VE3SY, of Petersburg, Ontario, Canada, acted as the sale agent and posted the card on the auction site. "The winning bidder is in California and is a very serious QSL collector," he said after the auction closed. Cassel pledged to donate half of his sale commission to the W1AW Endowment Fund

The 1AW card appears to verify reception of 9CTR on a wavelength of 193 meters rather than a two-way contact. "You were calling another 9," Maxim wrote in the card's "Remarks" section. Although the card proclaims "American Radio Relay League Station 1AW" across the top, the now-famous call sign was Maxim's own personal call sign at the time, not the League's, and Maxim operated from his home on *Hartford.*

Until the 1AW card sale, Cassel says the highest known price paid for a single QSL card was more than $1100 for an AC4YN QSL from the Tibet DXpedition of Sir Evan Nepean, G5YN, who died last March at age 92. ■

What is a radio wave?

The use of electromagnetic radiation to communicate is over a century old. Most amateurs routinely use this phenomenon on an everyday basis. How often do we think about what is actually going on with these radio waves? This is the first in a series of articles intended to explore how radio waves work on a basic level.

The name electromagnetic implies that radio waves involve electricity and magnetism. From a modern physics point of view, these two forces are part of the same unified phenomenon. However, we all can distinguish between the electrostatic attraction that occurs between a balloon and your hair when they are rubbed together and the magnetic attraction that occurs when you bring a magnet up close to a paper clip, for example.

The above examples are what are referred to as “static” phenomena. The connection between electricity and magnetism only happens when things start to move. For instance when electric charges move through a wire, a magnetic force field is generated in the surrounding region. By the same token, if a magnet moves in relation to a conductor (or vice versa), an electric force field is generated that can drive charges around a closed circuit if it is present. It is these dynamic effects that give us a clue about how electromagnetic waves propagate.

Suppose we take one more step into the abstract. Imagine a switched circuit with a parallel plate capacitor in series with a 6 volt battery and a resistor. We know that the battery acts like a charge “pump” and as soon as the switch is closed, the battery starts pumping charges from the negative plate and starts dumping them onto the positive plate. As more charges are removed from the negative plate and put onto the positive plate it gets harder and harder (takes more energy) for the battery to do it. That’s because like charges repel and opposite charges attract, so it becomes more and more difficult to remove a positive charge from the negatively charged plate as well as to put another positive charge on the positively charged plate. So we have a current flowing around the circuit during the charging process. A the same time the oppositely charged plates produce an electric force field in the region between them. Of course, eventually the capacitor gets fully charged to 6 volts and the current stops flowing and the force field is at its maximum value.

Our concern here is what happens during the charging process. Clearly there is a current flowing through the wires, the switch and the battery. This current will produce a magnetic field surrounding the wires that follows the current. The real question is what happens to this field when we get to the capacitor plates? There isn’t any current flowing between the plates, so do we conclude that the magnetic field abruptly ends at the plate boundaries, and that there is nothing happening in the space between them?

This very question is what puzzled James Clerk Maxwell over 100 years ago. He could not believe that mother nature was constructed so that a force field like the magnetic field around the wires would abruptly fall to zero at the capacitor plates. He therefore hypothesized that there can be another “dynamic” source of magnetic force field. The new source is the changing electric force field that exists between the capacitor plates as it is charging up. Maxwell figured that the changing electric field between the plates set up a magnetic field of the same strength and orientation as exists around the feed wires. It was this abstract breakthrough that led to the prediction and the later verification of electromagnetic radiation.

Whenever we observe wave motion, it is always the result of some kind of”bucket brigade” effect. If you pluck a guitar string, it oscillates in a fixed pattern because there are mechanical waves traveling back and forth. In this kind of wave, there is motional energy when a string segment moves and there is elastic energy when it stretches by being displaced. Theses two energy forms feed off of each other, sloshing energy back and forth and thus producing a wave. Next month, we will see how electromagnetism does the same. ■

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