

The Wobbly Oscillator Cuyahoga Amateur Radio Society

NO8A Special Event Call

K8ZFR Cleveland Area Repeaters 146.82 - 443.825 - 444.75



OCTOBER 2006

Volume XXXIV

Issue X

FROM THE PREZ

Our first meeting back at Bush started out bad... they forgot to have someone unlock the door and it was almost 8:00pm before we could start.

I am happy to report after a long dry spell I was



the winner of the 50/50 drawing, a cool \$30 for CARS & myself.

I want to give a special thanks to George K8KR for bringing several old crystal sets and giving a very interesting talk about each one from his collection. George was kind enough to share a few from his large collection with us.

The 2007 ARRL Division Convention will be held at the Embassy Suites in Independence, OH September 22, 2007. Please keep this date open and attend the Convention. We have a GREAT lineup of seminars featuring: Bob Heil K9EID on a variety of topics, Tedd KB8NW, John K8YSE, Bernie W3UR and others with a DX seminar, Dan K3UFG on Emergency Communications, Bob WA6EZV &

Dick WB4SUV talking ARDF (Fox hunting) and their experience at the 2007 world championships in Bulgaria, Tim K3LR on antennas/contesting, and DX Engineering. **PLUS our featured Banquet speaker will be Joel Harrison, W5ZN who is the current President of the ARRL!**

You will not find a better or more complete lineup at ANY Ham Radio event in the US! This is the perfect opportunity to meet and hear these Hams in person plus show your support for the ARRL, CARS and LEARA. There is truly something of interest from almost every aspect of Ham Radio.

Gary KI4LA, Chairman of the ARRL 2007 Great Lakes Division Convention came to Cleveland September 23 to see the facility and offer his help and some good suggestions. The CARS and LEARA committees will be working closely with Gary on this project over the next 12 months.

AGAIN YOU HAVE 12 MONTHS ADVANCE NOTICE. DO NOT SCHEDULE ANYTHING ELSE ON September 22, 2007. Please no excuses next September.

That's it for another WO. This month's thoughts: *About being oneself - If all pulled in one direction, the world would keel over. (Yiddish proverb)*

73, de Bob, W8GC

**DON'T FOR GET THE C.A.R.S.
NET AT 9:00 P.M. EVERY
WEDNESDAY NIGHT**

SEPTEMBER MEETING MINUTES

President Bob Check, W8GC called the September meeting of the Cuyahoga Amateur Radio Society to order at 7:35 PM on September 12th, 2006. The meeting was held at the Bush Funeral Chapel Community Room in Parma, Ohio. Twenty-three members and one guest introduced themselves to begin the meeting.

Terry, KB8DTC motioned to accept the August meeting minutes as published in the September *Wobbly Oscillator*; and Scotty, WA8SLN seconded. No additions or corrections were noted, and the group voted on and passed the motion.

Tina, W8HBI gave the treasurer's report. She updated the balance, noting in addition to the normal expenditures, a three hundred dollar payment in full was given to the Al Koran for next year's Field Day. President Check informed the group that a final selection had been made to hold the 2007 ARRL Great Lakes Division Convention at the Embassy Suites on Rockside Road in Independence. He also mentioned a lot of good prospective seminars were planned.

Gary, NI8Z reported there had been a VE session held Sunday, September 10th. He was disappointed that there had been only one participant, but took a moment to thank all the members of the VE team who have helped him over the years. Gary announced that there would be another VE session in November.

Bill, KC8YSV reminded all C.A.R.S. members to renew their ARRL dues through the club. He said that the Copley Middle School radio club held a meeting on the past Wednesday, and seven students attended. Due to other school activities, the normal room was not available and the situation was somewhat awkward. Plans were made to have the club go back to their regular meeting day of Friday. Bill once again informed everyone that the October meeting program will feature Tom Price, KP2VI giving a presentation on Maritime Mobile radio operation. In November, Scotty, WA8SLN will give a talk and bring in his camera collection. Bill reported for Dave, KD8V our vice president and sunshine chairman, who was unable to attend the meeting. Cards were sent to Kayla, N8KAY who had five wisdom teeth extracted in one day; and

Betty, wife of W8GC, who injured her arm.

Toby, WT8O reported that the net was doing very well, averaging fifteen to twenty check-ins and that George, K8KR was a welcome addition as a new net control station. He also thanked the club for buying the digital recording device to record the meeting and help make the minutes more accurate.

George, K8KR the C.A.R.S. contest director, regretfully announced there were not enough participants from the club to award a plaque for the Ohio QSO Party. He did add that the bands were "terrible" during the contest. George reminded everyone that the next contest the club would participate in would be the November Sweepstakes, and we will limit the participation to the phone contest. Shortly after the Sweepstakes we will be doing the Ten Meter Contest.

Bob, W8GC announced that the board of directors had met and had passed a motion recommending that the repeater system be upgraded to replace the receivers at the Parma location as well as install the voter at the Parma site. Dave, K8DAV briefed the group on the technical aspects of the project. He said the receivers we were considering are commercial quality. He also explained the cavity type band pass filters we looked at are also very good quality and made by Bird. He added that the rack at Parma would be completely rewired and labeled. The project was discussed and several specific questions were answered. Dave estimated the total cost of the project would be approximately \$3,200. The installation would probably be done by the end of the year, allowing for about a month delivery time on the equipment. Terry, KB8DTC motioned to appropriate the necessary funds and undertake the project. Mike, K8EHP seconded the motion. The members present voted on and passed the motion.

Bob, W8GC, reminded the group that next month would be the nominations for club officers for the year 2007. He also said the odd year board members' (K8KR, KB8DTC, and WB8N) terms would be expiring. Any nominations for *continued on next page....*

new or incumbent officers and board members would be voted on at the November meeting.

Dwaine, K8ME reported on the Mather station. He said a committee meeting had recently been held, and he was trying to establish contact with the director in order to get authorization for the antenna projects. Bob, KC8MRC gave information that the Mather would soon be affiliated with The Great Lakes Science Center.

Henry, KD8BAO suggested that we incorporate Echo Link capabilities with the new repeater equipment. After a brief discussion, it was concluded the idea would seriously be considered.

Dave, K8DAV asked members to send in pictures of their shacks to be featured on the C.A.R.S. website. He even offered to come over and take the pictures.

Gary, NI8Z announced that the annual Christmas party would be held Saturday, December 9th, at the Independence Civic Center, from 6:00 to 10:00 PM. There will be karaoke, provided by Jack, W8JAK; "Zap" the magician, a catered dinner, and pizza. The cost is \$15.00 for adults, \$7.50 for children six to twelve, and free to children five and under. Reservations can be made by contacting Tina, W8HBI, or on the C.A.R.S. website. Tina suggested we make a deposit on the room for 2007, if we want to be assured of getting a date early in December, preferably the 8th. Bob, KC8MRC, made a motion to make a deposit on the room for 2007, and Henry, KD8BAO, seconded. The motion was voted on and passed.

The 50/50 raffle was won by the Prez; Bob, W8GC. He pulled in \$30, with \$30 going into the club treasury.

A motion was made to close the meeting by George, K8KR. Linda, N8LRS seconded and it was voted on and passed. The meeting was adjourned at 8:25 PM.

Respectfully submitted by Toby Kolman, WT8O, C.A.R.S. secretary.

CARS OCTOBER CALENDER

Submitted by Tina Check, W8HBI

October 4 Club Net 146.82 @ 9:00 pm
October 7 Diabetes Walk Volunteer Event
October 10 CARS Meeting @ Busch @ 7:30 pm
October 10 Nominations for Officers & Board
October 11 Club Net 146.82 @ 9:00 pm
October 18 Club Net 146.82 @ 9:00 pm
October 24 Newsletter Submission Deadline
October 25 Club Net 146.82 @ 9:00 pm
October 27-28 CQ Worldwide Phone Contest

CARS HOLIDAY PARTY

Submitted by Tina Check, W8HBI

The CARS Holiday Party will be Saturday, December 9th from 6:00 - 10:00 p.m. at the Independence Civic Center on Selig Drive. Boston Market is catering the event: Rotisserie Chicken, Roasted Sirloin, Mash Potatoes, Green Beans, Hot Cinnamon Apples and Corn Bread. Augies Pizza & Ribs is providing Lasagna and Meatless Rigatoni. We are asking our guests to please bring their favorite desserts to share :)

Zap the magician will be doing strolling magic and a show after dinner. Jack W8JAK has agreed to again be our famous Karaoke Man :) Everyone is expected to get up in front of the microphone and sing their heart out. Of course, awesome gifts and awards will be presented this evening.

Please make your reservations as soon as possible on the CARS website, or with me at the October or November meetings. A good time **WILL** be had by all!
See you there !

DIDDLING AROUND

By Gary Dewey, NI8Z

I am an avid RTTY fan. I've been involved with this form of communication since 1959. My Elmer K8ARY, who got me started in amateur radio, was a teletype specialist in the AirForce. He loved the clicklyclack of the old M19s, the ASR's or "greenkey" machines. He still has all the necessary tuning forks for the 60 and 100 wpm gearbox, oil spewing noisemakers. He almost had me talked in getting started with an ASR 33 with a TD and tape cutting option. But, I found out that my wife would have been very disturbed with the sound of a newsroom in the radio shack. So, I had to find another way to get in rtty. That's when computers were the obvious alternative. I acquired a 10" amber monitor from a hospital's surplus throwaway. The Commodore 64 with an AEA CP-1 (a computer interface box) made up the first setup which worked okay. Besides, it was silent. You could watch the printing on the screen without any sound output to a speaker if you chose. That was back in the 1970s, bringing you up to date there are lots of other options for rtty now. There are at least three manufacturers of TNCs (terminal node controllers) if you want a electronic box to hook up like the ole CP-1. The CP-1 is obsolete it was designed to work with the Commodores which as you all know have been relegated to the computer historical museums like horse buggies are now found in museums.

Not only am I a avid rtty fan, I like rtty contesting the best. If you have never even listened for rtty signals. You have to know where you find them. Everyday from sunup to sunset on 20 meters you can hear the diddling sounds between 14.075 and 14.090 MHz. Hearing them on your radio is one thing, but to see what they are typing you need a decoder. Newer radios like the Icom 746 and

756 have built in decoders that do quite well. But the way to go if you don't have those radios is to use your computer with its soundcard. If you have Internet access you can find freeware that decodes rtty. Of all the programs you may find, I recommend MMTTY (found at <http://mmhamsoft.amateur-radio.ca/mmtty/>). There is MMVari and MixW32 if you want to experiment with others. Or just type in <http://www.csun.edu/~skatz/johnpage/rttysoft.html> to find lots of rtty software programs. All you have to do is take a line from the radio audio-out to the line-in on your computer sound card. Watch the tuning feature on the screen ... it may show two lines flowing downward or a tuning cross with a vertical and horizontal line representing a properly tuned signal you should then be "copying" legible text.

My next article will deal with what to do if you want to actually send rtty from your transceiver. In the meantime, if you have an interest in rtty and run into any difficulty you can give me a call for assistance. When you get to the point of communicating in rtty, then the next step is to couple this with a easy to use rtty logging program, which can lead you into becoming a rtty contester. There are probably more rtty contests than any other. There is sure to be one every month.

K8JGR

Jane Garson Reed
1254 Hadcock Road
Brunswick, Ohio
44212-3018

OHIO

Ohio USA Medina County
Grid: EN91

OCTOBER BIRTHDAYS

K8DAV Dave Kushman 10-3-44
KC8TID Toby Kolman 10-4-48
K8AAB Bob Evans 10-4-41
KD8BHS Gary Morgan 10-5
K8DMT Darren Turk 10-20
N8GXR James Glor 10-22-49
WA8EYF Ev Chitester 10-22-31
WD8IOU David Autry Jr 10-26-55
KB8VJQ Carol Shaw 10-27-34

Congratulations to all and may you have many more!

AMERICAN DIABETES ASSN. WALK

The annual Cleveland Chapter of the American Diabetes Assn. is once again holding their annual walk to raise funds to be used to find a cure for diabetes, a most terrible disease. The walk will be held on Saturday, October 7, in downtown Cleveland. The walk will start off from the Tower City Pavilion in the Flats. C.A.R.S. will once again be doing communications for the walk, as we have in the past several years. The Diabetes association greatly appreciates our help and depends on us to come out and help them every year. We have need of several more volunteers from the membership in order to adequately provide the communications that are necessary for this event. I know there are many of you, if not all, who either has diabetes, has a family member who is afflicted with diabetes, or has a friend or acquaintance with this disease. It only takes a few hours of your time to come out and help with this public service. Hey, what the heck do have a hand-held 2 meter radio for anyway? So give Tom Wayne a call at 440-232-4193 or e-mail him at wb8n@sbcglobal.net and let him know that you will be there. Information on what time and directions on how to get there will be forthcoming. This event is less than 2 weeks away folks. For your efforts, you will get a T-shirt,

coffee a breakfast of sorts, lunch of pizza and the satisfaction that you did something good with your radio license you worked so hard to acquire. It ain't hard guys and gals. Even if you have never done a public service event before, don't be afraid to come on down!
We need your help!

Brown Engineers Build A Better Battery With Plastic

Submitted by Terry Pillat, KB8DTC

Brown University engineers have created a new battery that uses plastic, not metal, to conduct electrical current. The hybrid device marries the power of a capacitor with the storage capacity of a battery.

A description of the prototype is published in *Advanced Materials*. Batteries have limits, said Tayhas Palmore, an associate professor in Brown's Division of Engineering. They have to be recharged. They can be expensive. Most of all, they don't deliver a lot of power. Another option is capacitors. These components, found in electronic devices, can deliver that big blast of power. But they don't have much storage capacity. So what if you combined elements of both a battery and a capacitor??

That's the question Palmore set out to answer with Hyun-Kon Song, a former postdoctoral research associate at Brown who now works as a researcher at LG Chem, Ltd. They began to experiment with a new energy-storage system using a substance called polypyrrole, a chemical compound that carries an electrical current. Discovery and development of polypyrrole and other conductive polymers netted three scientists the 2000 Nobel Prize in Chemistry.

In their experiments, Palmore and Song took a thin strip of gold-coated plastic film and covered the tip with polypyrrole and a substance that alters its conductive
continued on next page....

properties. The process was repeated, this time using another kind of conduction-altering chemical. The result: Two strips with different polymer tips. The plastic strips were then stuck together, separated by a papery membrane to prevent a short circuit.

The result is a hybrid. Like a capacitor, the battery can be rapidly charged then discharged to deliver power. Like a battery, it can store and deliver that charge over long periods of time. During performance testing, the new battery performed like a hybrid, too. It had twice the storage capacity of an electric double-layer capacitor. And it delivered more than 100 times the power of a standard alkaline battery.

But Palmore said the new battery's form, as well as its function, is exciting. In width and height, it is smaller than an iPod Nano. And it's thinner, about as slim as an overhead transparency.

"You start thinking about this polymer and you start thinking that you can create batteries everywhere out of it"

Palmore said. You could wrap cell phones in it or electronic devices. Conceivably, you could even make fabric out of this composite.

Palmore said some performance problems - such as decreased storage capacity after repeated recharging - must be overcome before the device is marketable. But she expects strong interest. Battery makers are always looking for new ways to more efficiently store and deliver power.

NASA and the U.S. Air Force are also exploring polymer-based batteries. "What we've got is a good concept," Palmore said. "Put electroactive molecules into conducting polymers and you can come up with all sorts of interesting materials that store energy."

The National Science Foundation funded the work on this development.

A BUNCH OF DU- DU

Submitted by Bob Check, W8GC

Dateline August, 2006

The extra propagation bulletin in August concerning a proposed DARPA project which could disrupt HF radio communications generated

a huge boatload of e-mail.

After sifting through it all, some of it from retired military or defense engineers familiar with the VLF transmitters mentioned by Dr. Rodger, it may be that Ward Silver, N0AX had the right idea when he wondered how it could be done, when "the sheer energy required from the start would tend to rule it out".

When Dr. Rodger said that "two of the US Navy transmitters radiate 1 megawatt", he probably didn't realize that this is the input power (before inefficiencies are factored in) to the transmitter, and doesn't reflect the efficiency of the antenna.

David Olsen, W6PSS pointed out that a 2-megawatt Navy VLF transmitter in Michigan only radiates 1 watt, and the efficiency is around .00005%. He wrote, "As I understand it, the limitation in achieving efficiency is the coupling factor. As the operating frequency is lowered, there's an exponential increase in reactances such that it becomes nearly impossible to couple energy to an antenna."

TRIVIA QUESTION

This was the question on the Sept. 27th CARS net and no one got the answer correctly.

The late great legendary guitarist, Chet Atkins had special phonetics for the suffix of his callsign, WA4CGP. What are the alternative phonetics for CGP?

1. Country Guitar Picker
2. Crazy Guitar Player
3. Certified Guitar Picker
4. Cool Guitar Picker.

Answer to be found somewhere in this issue.

C'mon now, don't let me down...I know SOMEONE knows the correct answer.

Those who tried to answer on the weekly net need not take part in answering this question cuz you already know the answer.

NEWS FLASH

As of the latest news, 70% of the buildings on Wake Island (KH9) have suffered moderate to severe damage from Typhoon Ioke. There is no potable water, sewer, or electrical distribution facilities available on the island. The Air Force is in the process of deciding whether to simply abandon the island or to make repairs and reopen the facility.

Until the decision to reopen the island is made, no visitors of any kind will be permitted on the island.

MAGNETIC CAR RIBBONS FOUND TO IMPROVE VHF COMMUNICATIONS

Reprinted with permission from the
GEARVAKf (the f is silent) Bulletin
By W8YFO

Assistant Deputy Director P. Kahso-Moore of the Gearvakf Division of Vehicular Adornment tells of a possible link between the colorful magnetic ribbons people stick on their vehicles and solar activity. The bedecked vehicles create a distorted but dynamic magnetic pattern that acts as a passive repeater for VHF signals.

Mr. Kahso-Moore discovered that the effect becomes noticeable at 28 mph, peaks at 73 mph, and is no longer effective above 118 mph. Orienting the two "feet" of the ribbon in the direction of the transmission creates a polarizing effect that increases signal strength in that direction. Kahso-Moore believes that this phenomenon was first unnoticed because most people place the magnets on their vehicles in a vertical manner. In one three-hour test on Nevada Highway 50, hundreds of large vans were covered with thousands of ribbons each and were spaced at 63 meter intervals. All VHF distance records were immediately smashed. A KH6 running 100 mw. On 146.52 simples had a 90 minute QSO with a W1 using a dummy load antenna. Curiously, there were no reports of any 2-meter contacts in Nevada itself during the period.

Kahso-Moore stated that he possesses an

unreleased document from the League of Radio Relaying Americans arguing that the federal government should authorize the construction of "amateur radio only" traffic lanes open only to cars covered with the magnets and, of course, cars displaying call letter license plates. "If commercial aircraft could be covered with these ribbons", the secret report speculated, "we could have a free worldwide 2-meter repeater system. And because of likely degradation of the navigational systems, the planes will stay in the air longer while they hunt for airports, thus providing more air time for users." FCC Chairperson of Magnetic Anomalies, Mr. Garrett Glick-Boolean, not known for his deep understanding of electronic theory, discounted the so-called "yellow ribbon effect" by saying that the sudden explosion of various cause promoting silicon rubber wrist bracelets, copying the yellow Livestrong originals, will counter the effect because rubber is an insulator. "Speculation about the yellow ribbon effect is all a waste of time.", he stated. "Trust me, we're the government and we know what you need."

The Wobbly Oscillator is a monthly publication of the Cuyahoga Amateur Radio Society, P.O. Box 31264 Independence, OH 44131-0264.

Articles in this newsletter may be reprinted in any Amateur Radio related publication, provided credit is given to this newsletter and the author, if known.

All submissions should be e-mailed in .doc, .wpd, or .txt format to: newsletter@2cars.org by the 26th of the month for publication in the next month's publication.

By reading the contents of this box, you have obligated yourself to check into the weekly C.A.R.S. net which is held every Wednesday evening at 9:00 p.m.

THE RANDOM WIRE

By Tom Wayne, WB8N

WHAT A SUMMER!

Yup, we did have quite a summer filled with ham radio activities. First we had the Dayton Hamvention® in May, then the Diabetes Assn. Tour de Cure and Field Day in June. There were plenty of hamfests to go to for us all to enjoy, plus our monthly club meetings and cookouts in the park. Also this summer, for the first time, we had a family picnic for our members and their families to enjoy. Thanks to George, K8KR for suggesting that and heading up the picnic committee. We also had the Ohio QSO party on HF, of which George was also the committee chairman. Unfortunately we needed at least five participants in that event and we fell short in that respect as a few members that normally would have participated in the contest were not able to due to prior commitments. Hopefully we'll have better participation next year George.

CLEVELAND HAMFEST

I managed to make it to the annual Cleveland Hamfest at the Cuyahoga County Fairgrounds in Berea once again. It was a great day, with great weather for a hamfest; sunny, but not too hot and not too cold. Unfortunately, the weather guys had been predicting rain for that Sunday and I think this kept some of the flea marketeers and attendees away. I thought the attendance was down from last year. But I enjoyed myself, and if you didn't make it, you missed a good one. I got to see a lot of people I know there, some I only see once a year at the hamfest! I didn't have anything on my shopping list this year. I mainly went just because it will probably be the last hamfest for me for the year, and to meet up with old acquaintances. I managed to get a couple of volunteers for the Diabetes Assn. walk there as well, so it was time well spent. It's not too late to volunteer for that event. Give me a call or an e-mail. We can use all the help we can get.

TRIVIA QUESTION ANSWER

The correct answer for this month's trivia question is number 3, Certified Guitar Picker. No one got it correct when it was on the weekly net. Chet Atkins was primarily known as a country musician, but had a slew of pop records as well and

was also a very successful record producer. He was an General Class licensee and his previous callsign was WA4CZD.

MONTHLY MEETINGS

We have a lot of things coming up in the next couple of months. Nomination of officers, election of officers, some interesting programs, and of course the holiday dinner in December. Make your reservations early for this one. It promises to be a good one, once again! If you have not attended a C.A.R.S. meeting in some time, make it a point to get to the next couple of meetings, renew acquaintances, make some new ones, and have a good time with fellow hams.

RANDOM RAVINGS

The C.A.R.S. repeaters have been rather quiet of late, which can be a good thing, but it would be nice if they were utilized more than they presently are. The 146.82 is being upgraded with new equipment and will be even better than it is now. Hey, you went to all the trouble of getting your amateur radio license and the expense of purchasing a 2-meter or dual band handheld transceiver, or maybe in addition, a mobile rig for your car. So what's keeping you from getting on the air and using what you spent your hard earned time and money for? At least, you can check in on the weekly net. If at all possible try taking your 2-meter handheld rig to work with you, listen, and when you hear someone announce themselves on the air, go back to them for a short QSO. If you are at home on the computer or putzing around in the basement or garage, or outside barbequing, take the handheld with you and listen. I do this all the time, even if I'm taking the dog for a walk or bicycling around the neighborhood.

I wonder how many of our membership have HF stations at home, some of which can be very expensive. I wonder how often you get on the air on HF. I know I don't get on as often as I'd like to, but I listen to the HF bands a lot while I'm messing around on the computer, and try to make at least a couple of HF contacts a week, even if they are not DX.

Hey, I'm running out of allotted space, so I'm outta here. 73, see you on the air or at a meeting. de Tom, WB8N

CARS 2006 Officers & Committees

Audit

KD8V ** KC8YSV, K8KR

ARRL Liaison & Media Representative

KC8YSV **

Awards

WB8N ** K8VJG, WA8GEO, K8KR

Christmas Party 2006

NI8Z ** W8HBI, N8IS, WB8N, KD8BAO, W8JAK

Community Education & School Programs

KD8V ** N8IS ** KC8YSV

Contests

K8KR **

Development

W8GC ** All officers

Diabetes events

WB8N ** All CARS members

Field Day

WB8N ** All CARS members

Fox Hunts

K8EHP ** N8IS

Good Operating Practices class

W8GC **, WB8N, K8DAV, N8IS, K8KR, K8ME

2007 ARRL Great Lakes convention

W8GC **, W8HBI, KB8NW, N8DJX, N8IS, KD8V, WB8N, KC8YSV

Interference & Jamming

WB8N ** NI8Z, N8IS, W8GC

Lighthouse events

WT8O ** 440-572-1544

Mentor/Elmer

KC8YSV ** K8VJG ** WB8N, W8GC

Membership

W8HBI ** W8GC **

Museum Ship W. G. Mather W8WGM

K8ME ** K8SAS, K8VJG, KB8DTC, KB8UGT
N8IS, NI8Z, WB8N, WD8SDP, WT8O

NET

WT8O **

WO/Newsletter

WB8N ** 440-232-4193

Program directors

KC8YSV ** W8JAK **

QSL manager - NO8A, W8WGM, W8BM & WA8CMS

WB8N **

Refreshments

KD8BAO ** KB8UDC **

50/50

KB8UGT **

Scholarship

WA8SLN ** NI8Z, KD8BAO, K8VJG, WT8O

Summer Picnic

K8KR ** N8IS, NI8Z, WB8N, W8HBI

Sunshine (welfare)

KD8V ** 330-666-8721

Technical

K8DAV** W8GC ** N8OVW, WB8N, WD8CHL

VE exams

NI8Z ** 216-642-8705

Web Master/e-mail

K8DAV ** W8GC **

** chairman or co-chairman

2006 Officers

PRESIDENT

Bob Check W8GC 216-524-1750

president@2cars.org

VICE-PRESIDENT ****

Dave Dressler KD8V 330-666-8721

vice-president@2cars.org

SECRETARY ****

Toby Kolman WT8O

440-572-1544

secretary@2cars.org

TREASURER:

Tina Check W8HBI

216-520-2621

treasurer@2cars.org



Board Members & License Trustees

even year executive board 2 year term

N8IS

KC8YSV

K8DAV

odd year executive board 2

year term

K8KR

KB8DTC

WB8N

K8ZFR trustee

WB8N

NO8A, WA8CMS &

W8BM trustee

W8GC



2006 CARS Christmas Party

**Saturday December 9, 2006 6:00p.m.
at the Independence Civic Center
in the Oak Room.**

Tickets are only \$15.00 adults, \$7.50 age 6 to 12
5 and under free



Prizes, surprises, karaoke and great food!

Zap is back with his Magic show

For tickets please contact

Tina W8HBI at 216-520-2621

or e-mail w8hbi@2cars.org

If you can please bring a simple desert