

# The Wobbly Oscillator

## Cuyahoga Amateur Radio Society

NO8A Special Event Call

K8ZFR Cleveland Area Repeaters 146.82 - 443.825 - 444.75



MAY 2004

Volume XXXIII

Issue V

### From the Prez

Thanks to the 32 members who came out for a good meeting on April 21, 2004. Don KC8NIX was teaching the general class and missed the meeting, Carol KC8TIE was sitting with the boys as Don was presiding over the class.

Carol KC8TIE provided a good supply of refreshments for the meeting which Tina W8HBI & Kayla N8KAY picked up and brought to the meeting.

Kayla N8KAY collected \$52.00 for the 50/50 drawing this month, I was the lucky winner of the 50/50 raffle, the club received \$42 and I donated \$16 of the winnings to CARS.

A special thanks to Lin WD8SDP for a very informative presentation on the history of the ship and Ham operations at the W.G. Mather station W8WGM.

Both a CW class and General class are running concurrently, General on Wednesday evening and CW on Thursday evening all students are doing a great job.

On April 22 we all had a great time at the North Royalton Middle School, doing a Ham radio demonstration for 322 students and 24 teachers. We started at 8:15am and finished at 3:00pm, a full day. Steve N8IS and the gang did a great job. We had 7 tables set up showing digital, emergency communications, CW, 2 HF stations with kids talking on the air, a VHF station plus a table explaining about Ham radio.

That's it for this month except for these words of wisdom: *We are all teachers and students to each other, and we are never finished in either role.*



These are a couple of pictures taken from the demonstration at the school. More can be seen on the CARS web page in "photo gallery".

73,  
de, Bob W8GC

Contents:

From the Prez.....pg 1  
Meeting Minutes.....pg 2  
Trivia Question.....pg 3  
V.P.'s Interview.....pg 4  
From the V.P. ....pg 5  
For Sale.....pg 5  
Birthdays, Dxers Psalms.....pg 5  
The Random Wire.....pg 5  
From the CQ Newsroom.....pg 8  
Officers & Committees.....pg 9

The Wobbly Oscillator is a publication of the Cuyahoga Amateur Radio Society.

### Minutes of CARS Meeting of April 21, 2004

President Bob Check, W8GC called the meeting to order at 7:40 PM at the Busch Funeral Chapel Community Room in Parma, OH. Introductions were held around the room. 32 Members were in attendance.

A motion to accept the minutes of the March 17, 2004 meeting was made by Ron, K8VJG and seconded by Terry, KB8DTC. A vote was held and passed.

The treasurers report was made by Mike, KB8UGT and he advised that only 5 members haven't renewed their dues this year. A motion to accept the treasurers report was made by Steve, N8IS and seconded by Terry, KB8DTC. A vote was held and passed.

Tina, W8HBI announced that she will be unable to attend the May 19th meeting and that V.P. Toby, WT8O will be covering. Tina's daughter Kayla, N8KAY has a performance at school that evening. Ron, K8VJG will be covering the 50/50 Raffle duties for Kayla at that meeting.

Bob announced that Dave, KD8V the Sunshine Chairman, was unable to attend tonight, his grandson was receiving a award in Twinsburg tonight. No "sunshine" cards sent that we know of.

Gordon, W8GTK reported that Wednesday

night nets have been going good.

We could always use more participation so please think about checking in.

Bob announced that there will be a Technical Committee meeting at the Board Meeting on May 2nd at Independence Town Hall after the VE Testing. There is still some work to be done on the repeater at the Channel 55 site but things are going well. Jim, WD8CHL, Dave, K8DAV and Roy, KB8JF have been doing a lot of work and it's greatly appreciated. Darren, K8DMT asked about a problem he had with the repeater timing out too quickly. He was told it will be checked into.

Terry, KB8DTC said reservations are slowly coming in for the Dayton Bus. Cost is \$35.00 and the bus can hold up to 42 people. Please refer to the CARS website with any questions or to submit a reservation.

Dave, K8DAV reported that the website has a new look to it. If you haven't been there in awhile please visit at [www.cars.org](http://www.cars.org). Also added are some new DX Links.

Tom, WB8N reported on the W.O. Not enough articles coming in. Please consider contributing to YOUR newsletter. Send newsletter articles to: [newsletter@cars.org](mailto:newsletter@cars.org) Tom also announced that Field Day preparations are beginning. Food expenses are being looked into. We are hoping for a 8A station set up again this year, so far we have several stations confirmed. If you are interested in manning a station please get in touch with Tom, WB8N or Bob, W8GC.

Bob announced that we are still looking for a logo for a CARS Field Day shirt that can be used year after year until they wear out. If anyone has any ideas please let us know. Toby, WT8O has some great ideas in the works.

New QSL Cards for the Mather are also being worked on and should be ready soon.

Bob announced that it looks as if the FCC is going to approve the Novice frequency re-farming.

Toby reported that several CARS Members worked the Mather for Spring Lights. On April

*continued on next page....*

10th Toby, WT8O, Gordon, W8GTK, Tom, WB8N and Dennis, AB8NI operated. The following weekend on April 17th Steve, N8IS and Bruce, N8DJX operated. Toby thanked Lin, WD8SDP for helping everyone gain access to the boat before it was open for the year.

Gary, NI8Z announced that the CW Class is in the 3rd week and things are going well. He has also added supplemental tapes to help the participants get up to speed. Our next VE Session is the first week in May since the second week is Mother's Day.

Bob announced that the General Class is being taught tonight by Don, KC8NIX.

Bob informed us that we received 4 new applications for membership, but only 2 had sent in their check by meeting time: Kenn Rothman, WD8ILB and Tim Francisco, N8XK. Since neither applicant are in attendance a vote was taken and both were accepted as new members.

Bob announced that Mike, K8EHP isn't feeling well and would not be at the meeting. The first fox hunting building session has been scheduled for May 8th at 10:00 a.m. at the home of W8GC. Approximately 20 members are signed up.

Steve, N8IS announced that the North Royalton School event is April 22nd. If you aren't available to be there but can listen for us on the repeater or other bands that would be great. The event may as many as 500-600 kids participating.

Toby announced to all in attendance that Lin Shaw, WD8SDP will present a program about the S.S.Wm.G. Mather tonight. Upcoming programs we hope to have are: in June George, K8KR will give a talk on his UFO investigator experiences. In July, Marian Rubin, KC8ZBN will give a talk about her experience with ham radio in Honduras. In August we hope that the Assistant Section Manager from ARRL can come down to visit us.

Bob announced that anyone interested in operating at the Mather to give Toby, WT8O, Steve, N8IS or himself a call to make sure access to the boat is available, to get parking passes and if necessary to give you some information about operating the Stepp IR Antenna.

Bob said that we are signed up to work the 8th

Annual Worldwide Museum Ships Weekend, July 17-18, 2004. If you are interested in operating please let us know what date and time. We hope to make a schedule so everyone can get some time operating that would like to. The radio room is rather small and fits only a couple operators comfortably.

Bob reminded everyone that the May Meeting will be the last one for the summer at the Busch Funeral Home meeting room. Beginning with the June meeting and for July and August meetings we will be back at the Oak Grove Picnic Area in Brecksville, OH

The 50/50 raffle was won by our president, Bob W8GC. His share was \$26.00, \$16.00 of which he generously donated back to the club and only kept his \$10.00 original investment from purchasing tickets. Thanks Bob !!

Bill, WA8GEO (and Larry, KC8VZZ not in attendance) presented Gary NI8Z with a hard hat and with his name and call sign on it to help protect him from further damage to his head at the upcoming field day.

A motion to adjourn the meeting was made by Lin, WD8SDP and seconded by Gordon, W8GTK. A vote was taken and passed. W8GC adjourned the meeting at 8:31 p.m. and Lin then gave his talk on the Mather.

Respectfully submitted by Tina Check W8HBI, CARS Secretary.

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### TRIVIA QUESTION of the MONTH

Which of the following Country Music Artists is or was not a licensed Amateur Radio Operator?

- A. Ronnie Milsap
- B. Garth Brooks
- C. Patty Loveless
- D. Chet Atkins

The answer can be found elsewhere in this issue.

## V.P. MEMBER INTERVIEW

By Toby Coleman, WT8O

**CARS:** How did you become interested in Amateur Radio, what got you started?

**Dennis:** Back in the early 80's I was active on CB and that sparked my interest in communications and ham radio. After a short time with CB I got my novice ticket and than upgraded to general (N8DRB) but as life has it, I moved on to other things at let it expire.

**CARS:** How long have you been licensed and what class license do you currently have?

**Dennis:** My interest in ham radio was rekindled in 2001 after breaking my neck and needing a hobby to pass the time. I got my general in September of 2001 and upgraded to extra March of 2002.

**Cars:** What do you like about Amateur Radio?

**Dennis:** For me, the best part of Amateur Radio is the many different modes and activities available. With so many different things going on I'll never get bored with the hobby.

**CARS:** What are your favorite bands to work?

**Dennis:** Wow, now that's a tough one. I spend most of my time on 75 meters working with the NTS (National Traffic System) but enjoy 17 meters for "RAG CHEWING" and DX hunting on 20 meters and of course chatting on 2 meters with my local ham friends. I really can't pick any band as my "FAVORITE".

**CARS:** Do you collect QSL cards? If so, how many confirmed countries do you have?

**Dennis:** I sure do Toby, and look forward to the mailman coming every day to see what goodies he might have for me. As of today, I have 109 countries confirmed and hope to get the cards checked at Dayton this year for my DXCC.

**CARS:** What types of Awards or Recognition have you won or been awarded with?

**Dennis:** I am a ARRL VE and that is the top of my list, it is so much fun to see a new ham's eyes light up at a VE session after they have passed a test. I am the ARRL Assistant Emergency Coordinator for Lake County, Net Manager for the TCTTN (Tri-County Traffic Training Net), Advisory Board

member of the OSSBN (Ohio SingleSide Band Net), Instructor on the MSN (Maryland Slow Net), NCS on the OSSBN and OSN (Ohio Slow Net). I did take first place in the 2003 SPDX contest for the USA on 20 meters and 1st place in the 2003 CQ WPX RTTY contest for W8 land in the ROOKIE class.

**CARS:** What other hobbies do you have besides Ham Radio?

**Dennis:** I enjoy doing some fishing in the summer months but even than ham radio goes along with me in the form of an HT.

**CARS:** What would your dream station be, and where would it be?

**Dennis:** I am happy with my station and wouldn't add much other than a tower but the landlord drew the line there. I currently have a Yaesu FT1000MP Mark V, a Kenwood TS-2000, ALPHA 99 AMP and a SteppIR 3 element beam. The beam is still on the ground but hope to get it up on a 9' roof mounted tower soon. As far as location, I wish I was back in New Mexico with my 54 acres. What a antenna farm I could have grown there....sigh.

**CARS:** What type of work do you do? Or if retired, what did you do?

**Dennis:** I am retired due to that darnn broken neck I mentioned but spent my first 4 working years in the Marines as a radio operator and then on to the telephone company after that. I have also worked as a maintenance supervisor, chimney sweep and 5 years as a correctional officer in the Santa Fe state prison while in New Mexico. *(Editors note: What? No cowboy or space shuttle pilot? Only kidding Dennis.)*

**CARS:** Thanks Dennis, for taking time to let our members know a little more about you. Look for another member interview in the next W.O. issue. Who knows, you could be next!

de, Toby WT8O

**FROM THE V.P.**  
Participation In Club Events

The Steamship Wm. G. Mather station was successfully used in April for participation in the Amateur Radio Lighthouse Society's Spring Lights QSO Party. Operating the station over a period including two weekends were: Gordon W8GTK, Steve N8IS, Tom WB8N, Dennis AB8NI, Bruce N8DJX, and Toby WT8O. Special thanks to Lin WD8SDP for all his help with the necessary details. The event yielded many contacts with individuals, society members and lighthouses. The high point of the event was a QSO between Gordon W8GTK and Jim Weidner K2JXW, founder of the lighthouse society and member number 001. A great time was had by all.

The Mather station is something we are trying to promote as a club project. Not only is operation from the ship a great experience and a lot of fun, the Mather crew appreciates having the station in use during tours, as it adds to the effect. It would really be great to have somebody operating there as much as possible. Please contact one of the Mather committee members for any questions you have and for help with the basic operation of the equipment. A lot of time and effort has gone into this station, but without participation from club members the project will not survive.

The Wednesday club net is a weekly event that could stand more participation from club members as well. We have a few regulars who check in every week, but it would be cool to really have a large group of members check in on a regular basis. The net is good practice for emergency preparedness which is one of the core responsibilities of the Amateur Radio service. Besides, it's always fun to talk radio with friends and test your knowledge with one of our trivia questions. The net is great place to develop radio skills if one becomes the net control station. We can always use more net control operators, so take the plunge and contact Gordon W8GTK Your help will be welcomed greatly. By the way, hats off to Gordon for being there every week and picking it up when the scheduled net controller can't make it.

73  
de, Toby WT8O

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**ITEMS FOR SALE by CARS**

Recently, the widow of a silent key donated the gear owned and operated by her late husband. Some of this gear has been appropriated by CARS for use by the club at club functions and events.

Below is a list of items available for sale to CARS members only at this time. Any items not bid on by the end of May will be then placed on open market through Ebay or Qth.com Several of these items will be displayed at the May CARS meeting. Please contact W8GC to view or bid on any item by calling 216-524-1750 or by e-mail at: [president@cars.org](mailto:president@cars.org).

These items are to be auctioned individually. Minimum bid is listed:

Radio Shack 200channel memory Pro 2037 w/headset and external speaker - \$75.00

Bencher 1.8-30Mhz YA-1 Lowpass filter - \$40.00

Yaesu FT900 1.8-30Mhz HF Transceiver w/gen. coverage - \$500.00

13 in. Magnavox TV w remote control - \$50.00

Misc. small parts, cables, connectors - open. All this equipment is in good condition.

See ya at the May meeting!  
Bring Cash!

## MEMBERS BIRTHDAYS IN MAY

K8VJG Ron Borkey Sr 5-20-32  
KA8MZS Michael Mraz 5-12-40  
KB8QHC Robert Glover 5-6-48  
KC8RYH Kayla Check 5-12-90  
W8JAK Jack Andrisin 5-1-42  
WB8UES Sam Jenkins 5-13-32  
WD8CHL Jim Barbour 5-9-58  
WD8CWD J.W. Cox Jr. 5-11-41

HAPPY BIRTHDAY TO ALL AND KEEP  
ON HAMMIN'

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## ANSWER TO TRIVIA QUESTION

The answer to this month's trivia question is choice B. Garth Brooks. Yes all of the others are or were licensed Amateurs! The reason I say were is that guitar virtuoso Chet Atkins is now a silent key. His callsign was W4CGP (certified guitar picker) which is now held by another amateur op. Probably a fan. Patty Lovelace's callsign is KD4WUJ, under her real name, Patty Ramey. Ronnie Milsap's callsign is WB4KCG (kind country gentleman).

Now you know.

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## DXer Psalms

DXer Psalms 20:11 "Real men don't eat quiche and they don't eat a mic."  
DXer Psalms 11:23 "At the bottom of the solar cycle even an EA or DL is DX"  
DXer Psalms 14:28 "He who doesn't understand 'UP' shall wander in the desert"  
DXer Psalms 12:76 "He who doth not hear 'DX' shall calleth not!"  
DXer Psalms 32:15 "Blessed be the 'DX' that qsls, for his CALL shall be immortal"  
DXer Psalms 17:37 "Thou shalt give thy full call, and keep it wholly."

DXer Psalms 45:55 "Thy ground rod and thy tower, they comfort me..."

DXer Psalms 17:12 "Praise be he who useth the Dummy Load, for his grace shall be known throughout the land".

DXer Psalms 45:65 "He maketh me to call on frequencies clear..."

DXer Psalms 23:89 "And the weak shall be strong when conditions be'ith mighty"

DXer Psalms 23:90 "And the already strong shall 'rocketh' thy rig!"

DXer Psalms 12;13 "And the Blasphemer who qsl not, shall wasteth and wander the Valley of LIDitites."

DXer Psalms 17;18 "Blessed be the QRP's, because they maketh not QRM!"

DXer Psalms 17:19 "Blessed be SWL's, because they always send QSL first".

by: KQ6VQ, CT1EAT

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## THE RANDOM WIRE

By Tom Wayne, WB8N

IT'S THAT TIME !

Yup, it is time for the great Hamvention, formerly known as the Dayton Hamvention. They dropped the Dayton part last year. Rumor has it folks, that this one might be the last one. How about them apples? Well, whether it is the last one or not, if you have never been to the Hamvention held in Dayton, you should make it a priority to get yourself down there this year, because you don't know what you are missing, and if it IS the last Hamvention, this will be your last shot at it! It is something you have to experience. Words alone cannot do it justice. It has probably the largest flea market you have ever seen, and the inside displays of the newest gear will boggle your mind! Every major manufacturer of ham gear and accessories will be there demonstrating their stuff, and you can check it out hands on! All the large ham radio dealers will be there selling stuff at Hamvention special low low prices! *Continued next page...*

There is all kinds of computer related stuff, as well as computers, and besides the ARRL having their booth there, other radio leagues from Canada, and Great Britain are represented as well. Then there are the forums various subjects of interest to the amateur radio population which are held at various times all day Friday, Saturday, and Sunday morning. Of course there is also the Hamvention Banquet on Friday evening, there is a DX Banquet held as well. Plus the hospitality rooms held by the various clubs at the Crown Plaza Hotel in downtown Dayton. I always go to the one held by the Northern Ohio DX Assn. from the Greater Cleveland area. There you can meet and chew the fat with hams from all over the country, not to mention various foreign countries as well.

In the flea market you can find everything related to ham radio you may be looking for, as well as a lot of stuff you are not looking for! You never know what you may find. You just have to cruise the lanes and check out every vendor's table because even if you are not looking for anything in particular, you just might happen upon that certain something that you just cannot do without! Just hope the rain holds off this year as it gets rather crowded indoors with everyone getting in out of the rain. Plus the vendors start covering everything up, giving up and pulling out, and it makes for an unpleasant experience.

You will meet new people, make new friends, run into old friends, and probably someone you did not even expect to find at the Hamvention.

CARS makes it easy to get down there and back, by way of the bus trip that CARS sponsors. All you have to do is show up at the meeting site, ride on down to Dayton, take in the show, hop back aboard the bus and head on home while taking a nap. It is only a one day shot at the Hamvention but you can take in most of the flea market and the main indoor exhibits if you walk fast! And if that is the only way you can get there, it is the best way!

Of course ideally you should take in at least two days of the Hamvention to do it and yourself justice. There is an awful lot of ground to cover, both indoors and outdoors! Plus, if you are staying the duration as I do, you can get there when you want in the morning and leave anytime in the afternoon.

My Hamvention buddy and myself go down Thursday, in a convoy of several cars with other hams from the area, getting there in the late afternoon. We freshen up and meet up with a group of hams from the Cleveland area for dinner that night.

Then it is back to the room to watch a little television and get to sleep early so we can get up and make it to the grand opening of the Hamvention at 8:00 a.m.

The first thing I try to do is get my ticket stub in the barrel asap, as they have drawings for prizes all day Friday and Saturday. The main prizes are given away on Sunday afternoon at the end of the Hamvention.

Then it is off to the Yaesu Booth to get my free Yaesu hat, a wall map of the world with all the callsign prefixes on it, and a free log book. Then to ICOM and Kenwood to see what they are giving away. Once I've got my booty, I start in on the flea market and then the indoor exhibits and take a rest occasionally by getting a bite to eat of the great Hamvention food or maybe taking in a forum or two. We usually call it a day the first day around 3:30 p.m. or so and head on back to the motel, take a swim in the indoor pool and jump in the hot tub to ease our aching feet and leg muscles before going out to dinner.

Afterwards, it is downtown to the hospitality room to see what is going on there. It is a great opportunity to meet new and old friends and relax after a hard day of Hamventioning!

The second day, we usually don't get up all that early and take our time getting to the Hara Arena where the Hamvention has been held all these may years, and do it all over again!

Sunday morning we get over to the Hamvention in time for my partner to take in the SWL forum. After that it is about time for the main prize drawings, then we head on home a little tired, maybe a little poorer, (depending on what was purchased).

I'll be looking for you among the throng !  
Catch you at the May meeting

73, de Tom, WB8N

## FROM THE CQ NEWSROOM

The National Telecommunications and Information Administration (NTIA) has issued its long-awaited report on the interference potential of Broadband over Power Lines (BPL). Despite a generally-glowing news release, the report itself identifies significant interference risks from BPL and concludes that the methods currently used for measuring BPL noise levels are inadequate and that more study is needed on such areas as ionospheric propagation of BPL signals.

The full report may be downloaded, either in full or chapter by chapter, from the NTIA website at:

[www.ntia.doc.gov/new.html](http://www.ntia.doc.gov/new.html). Our summary of the report's major findings follow.

NTIA concluded...

1) ...that the methods currently used to measure noise levels and interference potential are inadequate:

"(A)pplication of existing Part 15 measurement procedures for BPL systems results in a significant underestimation of peak field strength.

Underestimation of the actual peak field strength is the leading contributor to high interference risks. As applied in current practice to BPL systems, Part 15 measurement guidelines to not address unique physical and electromagnetic characteristics of BPL radiated emissions." (Executive Summary)

2) ... that noise levels must be measured from BPL-energized power lines as well as the "device" coupling the signal to the power lines: "BPL systems generate the highest electric field strength near the BPL device for horizontal-parallel polarized signals. However, these systems generate peak vertically-polarized field strength under and adjacent to the power lines and at impedance discontinuities at substantial distances from the BPL device." (Executive Summary)

3) ... that interference to weak-to-medium strength signals is likely out to 460 meters (1500 feet; more than 1/4 mile) from a BPL noise source at ground level and out to a 40-kilometer (25 mile) radius from the signal source for an airplane at an altitude of up to 6 kilometers (approx. 20,000 feet): "Interference to land vehicle, boat, and fixed stations receiving moderate-to-strong radio signals is likely in areas extending to 30 meters, 55 meters, and 230 meters, respectively, from one BPL device and the power lines to which it is connected. With low-to-moderate desired signal levels, interference is likely at these receivers within areas extending to 75 meters, 100 meters and 460 meters from the power lines ... (I)nterference to aircraft reception of moderate-to-

strong radio signals is likely to occur below 6 km altitude within 12 km center of the BPL deployment. Interference likely would occur to aircraft reception of weak-to-moderate radio signals within 40 miles of the center of the BPL deployment area. (Executive Summary)

4) ... that results of BPL tests and implementations in other countries have been mixed: "BPL apparently has been implemented with success in some countries, while other countries have postponed implementation of BPL systems until further interference studies are ... conducted. Still others have withdrawn their approval for operation of BPL systems after experiencing interference problems." (Section 9, Summary of Results). One example cited was that "(d)uring an emergency exercise of the Austrian Red Cross in May 2003, communication was massively disturbed by (BPL), with interference levels exceeding the limits by a factor of 10,000." (Appendix B)

5) ... that more study is needed in several important areas, including skywave propagation of BPL signals, that it will conduct further studies and issue a report later this year: "NTIA will complete a Phase 2 study later this year that will assess the potential interference risks due to aggregation and ionospheric propagation of interfering signals from BPL systems; refine and apply BPL deployment models; and evaluate the effectiveness of proposed Part 15 measurement techniques."

(NTIA News Release) NTIA is recommending more stringent measurement standards and procedures, along with several interference mitigation techniques some not mentioned in the NPRM although it admitted that the nature of power lines and of BPL would limit the effectiveness of some of them. Additional recommendations are likely after the second phase of the NTIA study is completed later this year. Acting NTIA Administrator Michael Gallagher called the NTIA recommendations "the technical foundation for the responsible deployment of broadband over power lines."

CQ Opinion: It is clear from the results of the NTIA study that the FCC's rulemaking proposal is premature at best, and it would be irresponsible of the FCC to go forward in enacting BPL rules before the NTIA Phase 2 study is completed later this year.

Reprinted from the CQ Magazine Newsletter

## CARS 2004 Officers & Committees

### Audit

Toby WT8O \*\* Tina W8HBI, Gary NI8Z

### ARRL Liaison & media representative

Don KC8NIX \*\* Carol KC8TIE \*\* 216-524-4910

### CBARC Liaison

Dwaine K8ME 440-582-3462

### Christmas Party 2004

Gary NI8Z \*\* Steve N8IS \*\* Tina W8HBI  
Tom WB8N

### Community Education & School Programs

Dave KD8V \*\* 330-666-8721 Steve N8IS \*\*  
216-328-0432, Tina W8HBI, Kayla N8KAY

### Dayton Bus

Terry KB8DTC \*\* 330-273-1043, Bob W8GC

### Diabetes events

Tom WB8N

### Elmer

George K8KR \*\* 216-941-5304

### Field Day

Tom WB8N \*\* 440-232-4193, Aaron KC8INE  
Bob W8GC, Steve N8IS, Gary NI8Z

### Fox Hunts

Mike K8EHP \*\* 216-252-6640 N8IS, N8TCP

### Ham License classes

Bob W8GC\*\* Gary, NI8Z \*\* Tom WB8N, Steve  
N8IS, Don KC8NIX, Ron K8VJG, Bruce N8DJX,  
George K8KR, Dave K8DAV

### Interference & Jamming

W8GC\*\*, NI8Z, N8IS, N8TCP, WB8N

### Scouts

Steve N8IS, Tina W8HBI, Kayla N8KAY

### Lighthouse events

Toby WT8O \*\* 440-572-1544, Bob W8GC  
Gordon W8GTK, Steve N8IS, Bruce N8DJX

### Membership

Tina W8HBI \*\* Bob W8GC\*\*

### Museum Ship W. G. Mather W8WGM

Bob W8GC \*\* Lin WD8SDP \*\* Steve N8IS,  
Gary NI8Z, Bob W2THU, Mike K8EHP, Mike  
KB8UGT, Bruce N8DJX, Toby WT8O

### NET

Gordon W8GTK \*\*

### Newsletter Editor & K8ZFR Trustee

Tom WB8N \*\* 440-232-4193

### Program director

Toby WT8O \*\* 440-572-1544

### QSL manager-NO8A & K8ZFR

Tom WB8N \*\* 440-232-4193

### Refreshments & 50/50

Carol KC8TIE \*\* 216-524-4910  
50/50 Kayla N8KAY

### Sunshine (welfare)

Dave KD8V \*\* 330-666-8721

### Technical

Roy KB8VJF \*\* Bob W8GC \*\* Terry KB8DTC  
Vince N8OVW, Dave K8DAV, Tom WB8N  
Jack W8JAK, Jim WD8CHL, Steve N8IS

### VE exams

Gary NI8Z \*\* 216-642-8705

### Web Master/e-mail

Dave K8DAV \*\* 440-243-3593, Bob W8GC \*\*  
\*\* chairman or co-chairman

### 2004 Officers

#### PRESIDENT

Bob W8GC 216-524-1750  
president@cars.org

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Toby WT8O \*\* 440-572-1544  
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#### SECRETARY \*\*\*\*

Tina W8HBI 216-328-0432  
secretary@cars.org

#### TREASURER:

Mike KB8UGT 216-663-2717  
treasurer@cars.org

#### Board Members

even year executive board 2 year  
term;

George K8KR 216-941-5304  
Gary NI8Z 216-642-8705  
Steve N8IS 216-328-0432

odd year executive board 2 year term;

Gordon W8GTK 330-225-6917  
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Tom WB8N 440-232-4193

