

The Open Feed Line

A Publication of the Michigan Amateur Radio Alliance (MARA)

Volume 17, Issue 2 - Friendship, Community Service & Advancement of the Hobby - April-June 2008

Upcoming Events

By Jim ki8jd

Richie had an article about Field Day here, complete with a goofy picture of myself, but I moved it to page 4 because I thought that we should put more important things here, in the first column of the first page.

Before I bore you too much, let me remind you of the Independent Repeater Association's Hamfest. It will be held on Saturday, June 7th, at the Hudsonville Fairgrounds. These guys have given us the linked-repeater system that covers most of the state, and beyond. And this year, they are making every attempt to give us the best hamfest that this town has seen in recent years. Seriously! Let's support their efforts by making every attempt to attend this swap. Our attendance is necessary to make it a huge success. Many informative forums are planned, and it should be tons of fun. You will find a rip-out flyer towards the rear of this newsletter.

Also, you will see many references to the Operation Care coffee-stop in this issue. The Memorial Day weekend is this week already. We still need people to volunteer for 4-hour shifts.

In addition, Field Day weekend is coming up in about a month. Field Day is always the 4th full weekend in June, and so will be on June 28th and 29th. The local clubs that put forth effort to set up portable stations would welcome and appreciate your stopping by to visit.

I fully understand that life is hectic, but sometimes we must stop to smell the flowers, and enjoy our short, busy lives. Please try to attend one or all of these events.

Operation C.A.R.E. Memorial Day Weekend



Memorial Day weekend starts our public service event, Operation CARE. The Combined Accident Reduction Effort was started to help provide tired, weary motorists with a hot cup of coffee, a cookies and a live person to talk with. I remember when a lady stopped into the rest area and just got out of her car and told us how glad she was that we were here. It made all the work and investment worthwhile. This coming weekend we're looking for another great start to the summer holidays. Memorial Day, the 4th of July and ending with Labor Day. If you'd like to help out, please check out our operation CARE sign up sheet on our web site. www.w8usa.org and click on Operation Care. We always need volunteers to operate the operation. The shifts are 4 hours long and usually involve making sure the serving table is neat and clean and that we have plenty of hot coffee and iced orange drink on hand. Let's help keep our traveling motorists stay safe during this Holiday weekend.

The Open Feed Line

The Open Feed Line is published quarterly. It is the official journal of the Michigan Amateur Radio Alliance, or MARA for short.

MARA, an American Radio Relay League affiliated club, was created to provide opportunities for friendship, community service, increasing technical knowledge, and upgrading our skills in the hobby of Amateur Radio.

You may freely reprint any material in the Open Feed Line, but please credit the Open Feed Line, the original author, and the original publication, if given.

Everybody is encouraged to submit original articles on topics relevant to the hobby of Amateur Radio to the editor. The deadline for submission is the end of January, April, July, and October, and the newsletter will be published within the following month.

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Membership Information

Annual dues to MARA are \$20. Family memberships are an additional \$5. Persons aged 70 and over - \$5.00. Membership is free to students under 21. Memberships expire on December 31st, and club dues are due on January 1st. MARA membership is open to all interested persons.

Please send change of address information and membership applications to the club secretary.

Great Lakes Award

Send inquiries regarding the Great Lakes Award to the Awards Manager
Larry Dells KC8KVR c/o
MARA
P.O.Box 670
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* Some of these positions become open occasionally. If you'd like to volunteer, contact one of the board members and let them know what your interested in. *

Club activities

MARA holds their weekly 2-meter Net, every Thursday, at 8 PM on the MARA W8USA repeater, 145.230 MHz -600Khz PL. 94.8. MARA holds their monthly meetings on the 2nd Wednesday of the month at 7:30PM, at the Steepletown Building, located on the SW corner of 5th street and Davis NW, in Grand Rapids. This site is handicap accessible, with additional parking on the West side of the building. All are welcome to attend our meetings.

In Appreciation...

By Rich K8JX

On April 24th, Wayne Dowling KB8VOZ, Mike Eilers K8OOK and Richie Ranta K8JX, presented appreciation plaques to three companies whose contributions have helped in making our club as successful as it is. We started talking about presenting plaques way back in 1996 when we first received donations from these companies. It was originally Bill Zaidel N8VWI who thought of doing this. This is our way of showing how much we appreciate the support and donations these people provided us over the years.

If you should meet these people, please tell them “thank-you” for all they’ve done.

George Hofacker Lawn and Garden



(Here Kay Hofacker receives their plaque.)

When our club first decided to hold a Field Day, we didn’t know much about how to set it up and what to look for in an area where antennas could breathe. It was back in 1999 when we were offered George Hofacker’s company yard to hold our Field Day. We kind of knew this was special, because George

also offered to set up a free port-a-potty for our use. There are not many companies around that will do that. The area itself will support large wire antennas and vhf beams. And we have oodles of room for trailers and guest parking. This is a Ham Radio club’s dream come true. This happened with the help of two our members, Steve K8VOL and Sandy K8VOJ Biziorek. Steve works for Hofacker and presented us with the offer. We haven’t looked back since.

We sincerely thank George, his wife Kay for their kind offer over all these years. “Thank you so very much”.

Greenridge Fruit



(Here Wayne KB8VOZ, Mike K8OOK, Jeff and Marcia in front of the company sign)

When we were first becoming acquainted with how to set up and run an Operation Care coffee stop, one of our members, Louie White N8ZVB asked his boss if they would donate apples for our operation. That was way back in 1997 or so and each and every year since, we’ve been giving out Michigan apples at the Operation Care Coffee Stop!

Continued on page 5

Terry Francis WB8ZNO S.K.

By Richie K8JX



Terrell LaRue Francis, WB8ZNO, was a friend to all who met him. Terrible Terry, as he was known affectionately, would always greet friends and strangers alike with his smiling face and bright white mustache. Terry worked in Grand Rapids MI at Kutsche's hardware, and then retired to Farwell Mi. It was while living up there that he continued writing his column "Terrible Terry's Corner or Northern Over Exposure" for one of the clubs he belonged to, the Michigan ARA. But being retired couldn't stop Terry. He also along with Tom Tackaberry N8ERV, Gustave Glass K8GUS and Jim Kennedy K8OOL started up the Amateur Radio Emergency Communication Association (A.R.E.C.A. KC8YZP). in Farwell MI. Terry always put helping out friends and perfect strangers before his own needs. Terry and his wife Patricia, raised horses before they retired.

Terry passed away on February 28, 2008 and his wife Pat, passed away on February 19, 2008. Thank you Pat and Terry for all you've done, for all of God's creatures.

You will be missed.

Field Day 2008



(Jim KI8JD, shows the new FD2008 tee shirt.
Photo by Richard Ranta K8JX)

We haven't even knocked the snow off our shoes, and before we turn around, presto, summer is here and with it, Field Day 2008. This year we've already invited several non-hams to join us. There's nothing like having a cook out and then talking about Ham radio and then, letting them participate in Amateur Radio. Especially on Field Day. We always have FD breakfast and then, dinner. What a concept, earn points and gain weight at the same time. We'll be running the same class as before and this time we are looking to beat our past year's score. What a beautiful way to spend an early summer weekend. This year, we're also going to use Field Day as a starting point in holding a Learn the Morse code class. We haven't worked out the details, but it will start sometime early fall. Lets share our special love of Amateur Radio and Field Day with others.

In Appreciation

Continued from page 3

Being able to offer fresh Michigan produce has started many a conversation at the coffee stop, from how best to bake an apple pie to making fritters. I think the most important thing is that people can get free Michigan products and this is probably one of the best public service devices around. Please take the time to thank these wonderful folks for providing apple for our operation, year after year.

McDonald's Restaurant, Sparta, MI



(Here Shelley, a Manager at the Sparta Mi. MacDonal'd's, receives the plaque)

We knew when we first started thinking about operating an operation C.A.R.E. public service event; we would need a variety of refreshment for all of our travelers. It was at this time that Brenda Braybrook, the manager of the Sparta MI MacDonal'd's restaurant came forward and provided us with orange drink mix and cups and all the paper material we could ever use. While coffee may help keep Mom and Dad awake and alert

during a road trip, an icy cup of orange drink keeps the kids refreshed. This was community involvement in action. We wholeheartedly thank Brenda Braybrook and MacDonal'd's for their active involvement. Thank you so very much.

M and W Inc



(Here, Sue D. accepts the appreciation plaque from Larry D. and Wayne D.)

Mara members decided that we should probably quit using member's kind donations of their motor homes, tool sheds and get our own portable shelter. We bought a small trailer and with it, came the problem, where to store it. Along came M and W Auctions. They have graciously allowed us to park our trailer there when we're not using it. It's a very secure fenced-in area and they have further allowed us to have access to it if we need it in an emergency. It's simple. Without M and W's donation, we couldn't possibly be operating our coffee stop and probably our Field Day operation. Having our own trailer and a place to park it is essential. They have also allowed us to work on the trailer and now it's a great shelter. We thank you Sue.

Waves II

By Jim ki8jd

In the last issue, on page 6, I wrote a little about alternating current, electron movement, and wave movement. It was a spur-of-the-moment article, designed for new hams, or hams that are new to antenna theory. This is a continuation of the first article, and also spur-of-the-moment.

We often think of the signal flowing from our transmitter into our coax as alternating current. It is sometimes helpful to also think of this signal as a wave. Actually, it is a wave, since it has varying voltage and current, and moves at nearly the speed of light. *((If your coax has a 66% velocity factor, then the signal travels at 66% of the speed of light. The velocity factor is rarely important, unless you need to have your coax cut to a specific electrical length for phasing, or some other special reason.))*

In a fictional radio station, the signal flows from the transmitter, through the coax, and to a half wave dipole. There is some electrical rule (I don't remember its name) that states that maximum power will be transferred through a connection when the impedance is equal on both sides of the connection. This rule applies to the connection between the transmitter and the coax, and also to the connection between the coax and the antenna. So if our impedances are not equal at the antenna feedpoint, and if maximum power is not transferred, then what happens to the power not transferred? You guessed it, it is reflected back down the coax towards the transmitter.

In the previous article, we talked about waves in a pond. If you throw a rock into each end of the pond, and watch the waves as they meet each other, you will notice that they pass right through each other. However, as the peaks meet, you will also see that they reinforce each other, and briefly cause larger waves.

Now back to our reflected power: as these reflected waves collide with the waves from

the transmitter, we get what is known as a "standing wave". We use a SWR meter to measure our "Standing Wave Ratio." A one-to-one ratio (1:1) indicates a perfect impedance match, with no standing wave.

Most of the coax used by hams has a 50-ohm "characteristic impedance". This means that an infinitely long piece of this coax, with no end, would have an impedance of 50 ohms. Of course, other types of coax are also used; the most common of which would be 75 ohms.

If we are using 50-ohm coax, and our antenna has an impedance of 75 ohms, then the SWR will be 75:50, or 1.5:1. If our antenna has an impedance of 35 ohms (common with a ¼ wave vertical over a good, flat counterpoise), the SWR will be 50:35, or 1.4:1. Transmitters will be happy with 1.5:1, but many will balk at an SWR over 2:1. Some transmitters will even be damaged by high SWR, but most have SWR protection built in.

If our dipole is mounted very high above the ground, in respect to its wavelength, the impedance may be about 75 ohms. In a lower mounting, the antenna capacitively couples with the earth, and our impedance may be closer to 50 ohms. When using an antenna with 75-ohm impedance, it may be better to use 75-ohm coax, because then we will not have a standing wave on our coax, thereby minimizing the loss associated with standing waves on coax (the higher the SWR on coax, the more the loss). We will still have a 1.5:1 SWR between the transmitter and the coax, but there is no loss associated there.

You can install an "antenna tuner" between the transmitter and the coax. When properly adjusted, the tuner will present a low SWR to the transmitter. However, if you have a long run of coax (say, 100 feet or more), and a high SWR on your coax (say, 5:1 or more), then you will probably lose a lot of signal as heat in your coax. Ladder-line is a better choice for such conditions, because it has much less loss at high SWR than coax does. More later. 73 Jim

GRAND RAPIDS, MICHIGAN I.R.A. 'GOOD OLD DAYS' HAMFEST

Saturday, June 7, 2008 - 8 a.m. until 2 p.m.



We're bringing back the 'Good Old Days' at West Michigan's Largest Hamfest & Computer Fair. Support your Michigan linked repeater system. Be there!

Convenient location with spacious facilities at the Hudsonville Fairgrounds. Located 14 miles west of Grand Rapids, two miles north of I-196 at exit 62. FREE tables and FREE trunk sales spaces (tickets required). Friday night potluck, camping, demonstrations, and exhibits. We have listened to your suggestions!

OVER 22,000 SQUARE-FEET INDOOR FACILITIES with CONVENIENT ACCESS and FREE PARKING. FREE 8' tables (indoors) and FREE trunk sale spaces (outdoors). **Sellers and dealers must reserve tables and/or trunk sale spaces with a prepaid ticket order!** Tables/spaces first come, first served. Tickets: \$5.00 ea. through June 6th; \$6.00 ea. on June 7th. NOTE: Prepaid ticket reservations held until 0745 Saturday then released (no refunds). All reservations with SASE please. Camping, tables, and trunk spaces are not an admission to Hamfest; tickets are required. Friday night set-up available after 7 p.m. or 6:00 a.m. start on Saturday. CAMPING: \$10 fee, showers and electricity available for camping. There is a \$5 additional fee for any electrical hookup. Food and drinks available in comfortable indoor eating facilities. Many sit down "Eyeball QSO areas." Children under 12 years admitted free accompanying an adult. Handicapped parking and access. In case of rain, trunk sellers could move indoors if space is available.

•FAMOUS "ROADKILL-CHILI" POTLUCK FRIDAY EVENING

Bring a main dish to pass and join in the fun at 6:45 P.M. after helping with setup. Enjoy "Eye-ball QSOs," entertainment, awards, and surprises. Last opportunity to purchase reduced-price Hamfest tickets. GRARA Club meeting held immediately after the potluck. Over 125 people attended the potluck last year.

- NEWS-TV, SKYWARN & EMERGENCY VEHICLE EXHIBITS
- LINK REPEATER SYSTEM OPERATION EXHIBIT
- DX-PEDITION VIDEOS AND AWARDS EXHIBIT
- ARRL CERTIFICATION FOR DXCC, VUCC AND WAS AWARDS
- MDXA ISLAND ACTIVATIONS FORUM - 9:00 A.M.
- D-STAR WHAT IS IT? DEMO AND FORUM - 10:00 A.M.
- GETTING YOUTH INTO HAM RADIO FORUM - 11:00 A.M.
Dale Williams, ARRL Michigan Section Manager - Moderator
- VE AMATEUR EXAMS - 12:30 P.M. START
All walk-ins. Technician, General and Extra Class. Please bring original and a copy of your license, any C.S.C.E.'s with some form of photo ID and a check made out to "ARRL / VEC".
- GRAND RAPIDS FESTIVAL OF THE ARTS - DOWNTOWN

DEALERS: BRING YOUR HAM EQUIPMENT, COAX, COMPUTER EQUIPMENT, SOFTWARE, WIRE, ALTERNATIVE ENERGY EQUIPMENT, BOOKS, PARTS, JEWELRY, CAPS, SWEAT-SHIRTS, JACKETS, ETC., TO SELL BE THERE!

HAMS: BRING YOUR RADIOS, BOOKS, ANTENNAS, COAX, COMPUTERS, AND EQUIPMENT TO SHOW, TRADE OR SELL BE THERE!

COMPUTER HOBBYISTS: BRING YOUR EXCESS HARDWARE, BOOKS, SOFTWARE, PARTS, ETC., TO TRADE OR SELL BE THERE!

EVERYONE: LOOK AT ALL THE ACTIVITIES BE THERE!

Write for reservations & tickets to: I.R.A. Hamfest, 562 92nd Street SE, Byron Center, MI 49315. Camping fee: \$10.00; w/elec. \$5.00 more. Tickets: \$5.00 ea. before June 6th; \$6.00 ea. on June 7th.

INFO: Call Kathy at (616) 698-6627 after 4 p.m. (E.D.S.T.) for info and discount rate motels. Check out the IRA Web-site at: www.w8hvg.org. Talk-In will be on 147.160 link system (94.8 pl).

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NAME _____ CALL _____ DATE ____/____/2008
 ADDRESS _____ COMPANY _____
 CITY _____ STATE _____ ZIP _____ PHONE () _____
 NUMBER OF TABLES ____ TRUNK SALES SPACES ____ NUMBER OF TICKETS ____ CAMPING: Y / N (circle)
 ELEC. REQ'D: Y / N (circle) KIND OF MERCHANDISE _____
 TOTAL ENC. _____ MAKE CHECKS OUT TO: INDEPENDENT REPEATER ASSOCIATION, INC.
 INCLUDE S.A.S.E. AND MAIL TO: I.R.A. HAMFEST, 562 92ND STREET SE, BYRON CENTER, MI 49315

STATE OF MICHIGAN



Executive
Office

Jennifer M. Granholm
Governor

CERTIFICATE OF PROCLAMATION

On behalf of the citizens of Michigan, I, Governor Jennifer M. Granholm, do hereby proclaim the week of June 23, 2008, as

Amateur Radio Awareness Week

Whereas, Amateur Radio provides a bridge between peoples, societies and countries by creating friendships and the sharing of ideas; and,

Whereas, Throughout its history, Amateur Radio Operators have provided countless hours of community services without compensation; and,

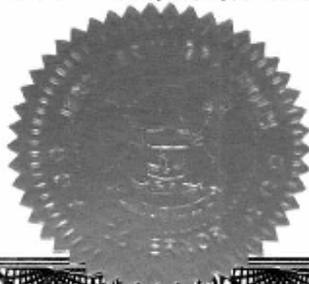
Whereas, Amateur Radio Operators provide services to many of the state's Emergency Response Organizations including, FEMA, The Michigan Department of Human Services, and the Office of Emergency Management, and also serve as weather spotters in the Skywarn program of the National Weather Service; and,

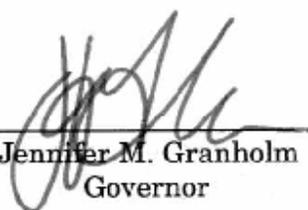
Whereas, In 2005, Amateur Radio Operators provided emergency communications during the devastation of Hurricanes Katrina and Rita in the United States and in the tsunami catastrophe overseas; and,

Whereas, The American Radio Relay League (ARRL) is the leading organization for Amateur Radio in the USA; and,

Whereas, This year's Amateur Radio Field Day, taking place June 28-29, will be a 24-hour emergency encampment exercise and demonstration of the Radio Amateurs' skills and readiness to provide communications; and now therefore be it,

Resolved, That I, Jennifer M. Granholm, Governor of the State of Michigan, do hereby proclaim the week of June 23, 2008, as Amateur Radio Awareness Week in Michigan.




Jennifer M. Granholm
Governor

