

The Open Feed Line

A Publication of the Michigan Amateur Radio Alliance (MARA)

Volume 22, Issue 2 - Friendship, Community Service & Advancement of the Hobby - April-June 2013

Saturday Breakfast! Change in this coming Breakfast.

The Breakfast crowd has settled on "Golden Corral for Saturday morning early eats. Due to the upcoming holiday weekend and the IRA Swap being held on June 1st, the next MARA breakfast will be held on June 8th at 830 AM at the Golden Corral on Alpine NW, Walker, MI. The restaurant is located just south of 4 mile road and Alpine, on the SW side of the street. Across the street from "Steak N Shake". Sounds like a great way to start the day!

Mike K8OOK, MARA secretary

We don't just meet each Saturday for breakfast. Below is a photo of "Handi_Day" during one of our Breakfasts. We also have fun and learn more about our hobby. The photo was taken shortly after the Golden Coral opened.

(Below, left to right, Gale N8GS, Mike K8OOK and Wayne K8WMD s.k.)



Let's make Amateur Radio a Life Long Hobby, not just for one day.

During our last club meeting we brought up the current popular Ham-in-a-day license courses, and discussed offering a session or class for those folks who had completed the "Ham-in-A-Day" class but felt they wanted, needed more information. This session or class, would be to help them learn more about the technical side of Ham Radio. Just using short term memory may get one a Technician class license, but it won't prepare the person for the scope of what Ham Radio is about."

We are thinking about having a session before each monthly club meeting and perhaps even on the Thursday night 2 meter net. If we have enough interest, we could have a class on theory.

We are going to give the best possible technical information we can give and if we don't have the resources ourselves, we'll get the answer from technicians who do know.

Along with offering a technical class, we've also talked about holding a Learn the Morse code class. We have had a rich history in providing on the air classes learn the code and also provide practice. (Jim KI8JD actually wrote a poem just for on the air practice!)

What you can do is spread the word about the technical class and also if there is interest on learning the Morse Code.

Let's learn and have fun together.

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.

Publisher

Michigan Amateur Radio Alliance
Post Office Box 670
Comstock Park MI 49321-0670
Visit our website- <http://www.w8usa.org>
E-mail us at- w8usa@arrl.net

Editor

Richard M. Ranta K8JX
812 Graceland NE
Grand Rapids, MI 49505
E- mail- rranta@sbcglobal.net

Membership Information

Annual dues to MARA are \$20. Family memberships are an additional \$5. Persons aged 70 and over - \$20.00. 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
Comstock Park MI 49321-0670
E-mail- LLDGRD@netscape.net

MARA Club Officers

President

Barton Bechtel N8XQH
6155 Horstmeyer RD
Lansing, MI 48911

Vice President

Larry Dells KC8KVR
4317 Willow Dr. NE
Grand Rapids MI 49525
616-363-8235

LLDGRD@netscape.net

Secretary

Mike Eilers K8OOK
3648 Sundance Ln NE
Grand Rapids MI 49525
616-363-4998

K8ook@comcast.net

Treasurer

Jerry Wittkoski W8MSK
1025 Kendalwood St. NE
Grand Rapids MI 49505
616-363-6146

jeromeW551@aol.com

Appointed Positions

Awards Manager

Larry Dells KC8KVR
4317 Willow Dr. NE
Grand Rapids MI 49525
616-363-8235

LLDGRD@netscape.net

Club Trustee

Richard M. Ranta K8JX
812 Graceland NE
Grand Rapids MI 49505
616-361-5975

rranta@sbcglobal.net

Membership Director

Mike Eilers K8OOK
3648 Sundance Ln NE
Grand Rapids MI 49525
616-363-4998

K8OOK@comcast.net

Education Director

Larry Dells KC8KVR
4317 Willow Dr. NE
Grand Rapids MI 49525
616-363-8235

LLDGRD@netscape.net

Bereavement Director

Jerry Wittkoski W8MSK
1025 Kendalwood St. NE
Grand Rapids MI 49505
616-363-6146

jeromeW551@aol.com

Field Day Chairperson

Barton Bechtel N8XQH
6155 Horstmeyer RD
Lansing, MI 48911

Net Director

Richard M. Ranta K8JX
812 Graceland NE
Grand Rapids, MI 49505

rranta@sbcglobal.net

Webmaster -- ERIN AMMONS KD8NSU

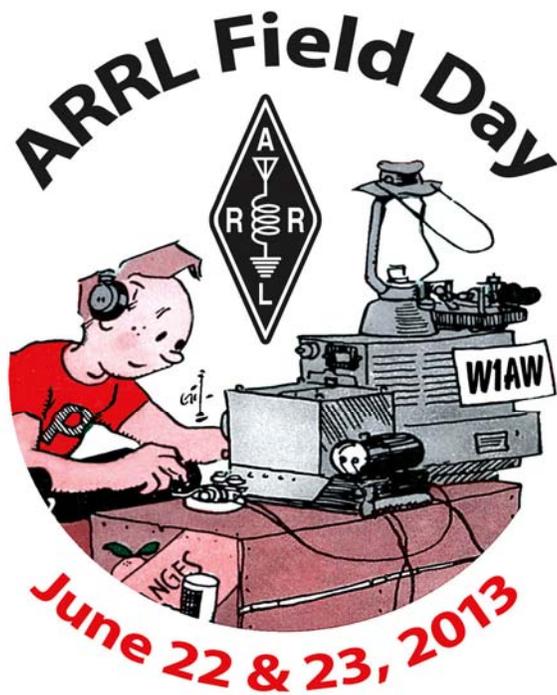
6155 Horstmeyer RD
Lansing, MI 48911

Webmaster@W8USA.ORG

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 Plainfield Township Fire Dept. Training Building, located on the SW corner of 5 Mile RD and Plainfield Ave NE, in Grand Rapids. This site is handicap accessible.

All are welcome to attend our meetings.



www.arrl.org



Join us for Field Day 2013 and a picnic!

Larry & Peg are holding their picnic and hosting our Field Day 2013. Bring a small dish to pass , your favorite beverage, silver ware and a chair. If you wish to attend, please R.S.V.P. Larry & Peg at 363-8235.

We will be discussing what equipment we'll need for the Field Day operation at our next club meeting. "Come join us for some Radio fun!"

Visit us on the World Wide Web <http://www.w8usa.org>

K800K's Shack

My love of Ham Radio!

Ham radio is a hobby with many facets. You might be interested in just plain rag chewing, maybe contesting, DX-ing, VHF/UHF, or Digital modes, etc. Or, you can do what I do. I chase USA counties and try to work a station in each of the 3077 counties. But, not every County has any active operators or none at all. So, someone has to install a HF radio in their vehicle and drive to these rare counties.

In fairness or payback to those who spent lots of gas money and time driving to these rare counties, I will install a HF radio in our car and put out some rare counties. In February, Nancy and I went to Florida. The first two days, we didn't run any counties because all the travel was on the Interstates. These counties are not rare as they are run quite often plus I do not like to run counties for safety reasons on high traffic roads. On our 3rd day of travel south, partly to avoid Atlanta traffic, we took the back roads of Georgia.

KZ2P worked us in Rabun County, GA, his last county to work all 3077 counties for the 15th time. K2JG worked us to finish all counties for the 10th time. We also gave a California station his last 3 GA counties. Running a rare county can create a big pileup of stations, almost like being rare DX. Several stations have driven to and transmitted from all 3077 counties. In Hawaii you have to fly or take a boat to each island county.

Not an easy task to work all counties, but over 1200 operators have worked each county at least once, even many DX stations.

500 counties confirmed is the basic certificate. Main County hunter frequencies are 14,336 and 7188.

Check MARAC.org for more frequencies and information.

Mike K800K

PS, fishing in Florida was the worst in recent history.

(While pursuing Counties, Mike also is MARA's Secretary and Membership chairman)

Amateur Radio Week in Michigan June 17-23, 2013

SR-39, As Adopted by Senate, April 30, 2013

Senator Jones offered the following resolution:

Senate Resolution No. 39.

A resolution to designate June 17-23, 2013, as Amateur Radio Week in the state of Michigan. Whereas, Amateur radio operators are celebrating over a century of the miracle of the human voice broadcast over the airwaves; and Whereas, Amateur radio has continued to provide a bridge between people, societies, and countries by creating friendships and the sharing of ideas; and Whereas, Operators of amateur radio have also provided countless hours of community services both in emergencies and to other local organizations throughout the decades, which are provided wholly uncompensated; and Whereas, The state of Michigan recognizes the services made available to our many civilian emergency response organizations

It's good to be recognized and also, to have a whole week designated for us.

Special Event: Museum Ships

The Brazos Valley Amateur Radio Club, KK5W is participating in this year's Museum Ships Weekend. June 1-2, 2013. Our call sign, KK5W will be credited as a contact with both WW II Submarine USS Cavalla and Destroyer Escort USS Stewart. Visit our web page for more information, www.bvarcmswe.org. We will be operating from Seawolf Park in Galveston, Texas, NA-143.

Frequencies as follows:

SSB

7.260 MHz

14.260 MHz

21.360 MHz

28.360 MHz

CW

7.039 MHz

14,039 MHz

21.039 KHz

28,039 KHz

Amateur radio operators in the Galveston - Houston area are cordially invited to participate. You can sign up on the web page if you would like to operate KK5W during the event at Seawolf Park.

KK5W will also host two VHF Nets for Houston-Galveston amateurs to contact the local museum ships using the WA5CYI repeater 146.94 (-) PL 167.9 on Saturday and Sunday from 11AM - 1 PM Local time. We are anticipating the USS Texas (NA5DV), Elissa (N5E), and the Grandcamp/High Flyer Memorial (AC0TX) will be on the net.

Operation on OSCAR satellites is planned for daytime passes on Saturday, June 1.

A balloon launch is scheduled for Saturday morning,

For the second year, KK5W is sponsoring the Texas Navy Award.

This year's Texas Navy Fleet is expanded to include:

USS Cavalla and USS Stewart – KK5W

USS Texas – NA5DV

Tall Ship Elissa – N5E

USS Lexington – W5LEX

SS High Flyer and SS Grandcamp Memorial – AC0TX

National Museum of the Pacific War – N5P
For KK5W and AC0TX, one contact counts for both ships.

Provide evidence of two way communication (log extract) with at least four of the call signs during MSWE 2013 to earn the 2013 Texas Navy Certificate. Work all six to earn the coveted "Clean Sweep" endorsement. Visit our web page, www.bvarcmswe.org for information on how to claim the certificate.

73,

Ron, K5HM

Event Coordinator

k5hm.ron@gmail.com

www.qrz.com/db/k5hm

Help is just around the corner!

Listeners to MARA's 2 Meter Net have noticed that Bob, WC8O hasn't been on lately. There's a good reason for this: His Handi-Talkie battery won't hold a charge and his mobile VHF Radio's volume control is noisy. "What's a ham to do?" It is expensive and time consuming to send rigs back for repair. The answer came about with several hams coming together to find a local repair person. Presto: the radio can be repaired and a new battery is on its way. It just took the involvement of good people to help others out.

THE SECRET TO HEALTHY BATTERIES

New technology will guarantee optimal use of each battery and prompt replacement of a faded battery.

By Isidor Buchmann

The “ready” light on a battery charger will eventually illuminate, but this doesn’t mean “able.” There is no link between “ready” and battery performance. The amount of energy a battery can hold is measured in capacity, a value that gradually decreases with use and time. A faded battery charges quicker than a good pack because there is less to fill. Being ready first causes bad batteries to gravitate to the top, to be picked by the unsuspecting user. There is a caution: The “ready” light may give a false sense of security.

A new battery is rated at 100 percent, but few packs in the field deliver this; the acceptable bandwidth ranges from 80 to 100 percent. As a simple guideline, a battery on a portable device with a capacity of 100 percent should provide about 10 hours of runtime, 80 percent is eight hours and 70 percent is seven hours. The service life of a battery is specified in number of cycles. A lithium and nickel-based battery will deliver between 300 and 500 full discharge/charge cycles before the capacity drops to 80 percent when replacement is recommended.

Cycling is not the only cause of capacity loss. Storage, especially at elevated temperature, also robs capacity; excess heat can be more stressful to a battery than cycling. A partially charged Li-ion that is kept at room temperature loses about 4 percent of its storage capability in a year. The loss increases to about 20 percent when stored at full charge. This occurs when keeping a laptop plugged into the main; laptop batteries are known to have a short life.

Internal battery resistance also plays an important role in battery performance. Applying a heavy load on a battery with elevated resistance causes the voltage to collapse. This ends the runtime before the capacity is depleted. Rising resistance with age is common with nickel-based and early Li-ion batteries.

The modern Li-ion no longer exhibits this problem. The resistance stays low, and the end-of-battery-life is solely determined by capacity. Capacity becomes the leading health indicator of most batteries. Improvements in Li-ion occurred around 2005; the same test on an older Li-ion would show an increase in resistance and likely cross the capacity line.

Lead acid batteries also keep low resistance with decreasing capacity. A starter battery cranks well until that one morning when a lack of capacity prevents turning the motor. Older starter batteries may run at less than 20 percent capacity but still start the motor well. Most battery testers only measure voltage and internal resistance; the capacity remains unknown. The end-of-battery-life often comes as a surprise.

Equipment manufacturers base the runtime of a wireless device on a new battery with 100 percent capacity, but this can only be achieved in roughly the first year. Realizing the difficulty to measure capacity, the medical industry often relies on date stamping to prompt battery replacement. With heavy use, the capacity could fade sooner than the mandated two years, but most modern batteries last much longer. Date stamping causes many good batteries to be replaced too soon, increasing operational costs and stressing the environment.

“Smart” batteries with SMBus come to the rescue by recording the cycle count and advising replacement after a given number has been delivered. But this technology comes with

baggage as well. Smart batteries need periodic calibration to maintain accuracy. The largest limitation, however, is its inability to reveal capacity; the fuel gauge only indicates state of charge. This means that a battery that has dropped to 50 percent capacity will still show 100 percent charge. The result is a runtime that has been cut in half. SMBus batteries are found in portable computing, medical and military devices.

Public-safety organizations often use the battery until it stops dead. Failures almost always occur at the most awkward time during heavy traffic or in an emergency. Battery analyzers can prevent this from happening. Attaching a removable label to a battery indicating service date, due date and capacity offers a simple and self-governing way to manage a battery fleet. With this information on hand, prudent battery users only pick a pack that has recently been serviced. Expired units are removed, run on the battery analyzer and are relabelled. The setup is simple, and managing the system requires only about 30 minutes per day.

Conventional battery analyzers measure the capacity with a full discharge, but there is a need for faster test methods. Rapid testing has been offered, and the accuracy varies according to the method used. Early devices linked battery state of health (SoH) with internal resistance. While this may still be effective for nickel-based batteries, the steady low resistance of the modern Li-ion renders this method obsolete.

New technologies look at the mobility of ion flow between the electrodes and use electrochemical dynamic response to estimate battery SoH. The test takes 30 seconds, provides a 90 to 95 percent correct prediction and services batteries with a state-of-charge from 40 to 100 percent.

The next step is incorporating the SoH engine in a charger. When the “ready” light on this charger illuminates, the user is assured that the battery is fully charged and has a capacity of 80 to 100 percent. A faded battery with a low capacity or other anomalies is given a red “fail” light, prompting replacement. Placing health validation in a charger provides quality control at no extra effort. More importantly, the system guarantees optimal use of each battery while reducing fear of unexpected power loss. Only good batteries are kept in the fleet; faded packs are shown the exit door. This saves money and protects the environment.

The new charger can also check batteries on the fly. The user simply inserts the pack into the charger, presses “test” and a snapshot of the electrochemical battery is given in 30 seconds. The readings reflect the electrochemical condition of the battery independent of coulomb counting, impedance tracking and other data that may be stored in the battery.

The charger also assists in incoming inspection to verify proper function before releasing the batteries into the field. Another useful application is inventory control by evaluating unknown packs that have accumulated in boxes. Many batteries are protected with diodes, and the new charger can also service these, but the manual test is not possible.

Isidor Buchmann is the founder and CEO of Cadex Electronics. For three decades, Buchmann has studied the behavior of rechargeable batteries in practical, everyday applications and has written award-winning articles and the book “Batteries in a Portable World,” now in its third edition.

Email feedback to editor@RRMediaGroup.com



Independent Repeater Association, Inc.

2013 IRA Grand Rapids Hamfest



Hudsonville Fairground, 5235 Park Avenue, Hudsonville, MI 49426

Saturday, June 1, 2013 -- 8 AM until Noon

West Michigan's Largest Hamfest and Computer Fair !

Proceeds Support the W8IRA/R Linked Repeater System

◆ **DEALERS - HAMS - COMPUTER HOBBYISTS**

◆ **SHOW -TRADE- SELL**

- ◆ All ham equipment, radios, coax, antennas, accessories, software, hardware, books, parts, alternate energy equipment, ham related clothing, and all other ham related gear.

FOUR MAIN AND NUMEROUS OTHER DOOR PRIZES !!

- ◆ Convenient, spacious facilities at the Hudsonville Fairgrounds
- ◆ Indoor Sales Floor with 22,000 Sq Foot of Display Area
- ◆ Convenient Access and Free Parking - Handicapped Parking and Access
- ◆ Children under 12 admitted FREE (when accompanied by a paying adult)
- ◆ Food and drinks available in comfortable indoor facilities
- ◆ Interesting and Informative Forums and Seminars
- ◆ VE Amateur Radio License Exams - All Levels Offered

Admission Fee: \$5 in Advance / \$6 on June 1

Ray's Road Kill Chili and Potluck Dinner

6:30 PM Friday Night

Bring a dish to pass and join in the fun Friday at 6:30 P.M. after helping with setup. Enjoy "Eye-ball QSOs," entertainment, awards, and surprises. This will be the last opportunity to purchase reduced-price Hamfest tickets.

Don't miss this fun, exciting and well-attended social event!

For Reservations

Complete Reservation Form on Reverse and Send with your Payment

Questions ??? Call Kathy at 616- 262-8119

or

E-Mail -- hamvest@W8IRA.org

2013 CMARC "OUTDOOR" HAMFEST

(WE'VE GOT EVERYTHING BUT THE ROOF!!)



ARRL
Sanctioned

Sponsored by the
Central Michigan Amateur Radio Club

Saturday, July 27, 2013
8:00 AM to 1:00 PM
(Setup Saturday 6-8AM)
at the

Holt Christian Church
2424 S. Washington Rd.
Lansing, MI 48911-7207



Talk-in 145.390
(100Hz PL)

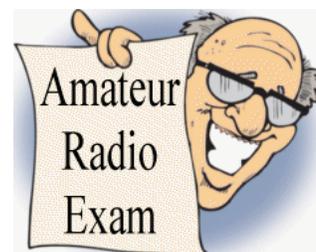
ADMISSION: Public = \$3.00 each, Kids 15 and under FREE!! (Handicap Accessible!!)
Vendors/Sellers = \$3.00 each (includes 1 trunk space). Additional spaces \$5.00 each. RSVP today to secure the number of spaces you need! Also, please remember to bring your own tables, chairs, and canopies. (We have a limited number of tables and canopies available for rental so RSVP early if you need them!!)

For Reservations or Questions please call Julie McLain KB8ZXR
at (517) 694-0812 or email me at: KB8ZXR@aol.com



DON'T FORGET to enjoy a Sweet Roll and Coffee, then later on grab a Sloppy Joe or a Hot Dog/Brat "Hot Off The Grill" with all your favorite trimmings!!

**"DENTRONICS" will be
HERE!! Denny is a
dealer for ALINCO,
MFJ, DIAMOND
ANTENNAS,
KANTRONICS and
LAKEVIEW!!**



VE TESTING at 10am.
Sponsored by the "Ingham
County VE Group". Walk-ins
are Welcome!!



"TYCHO AUSSIE" –
CMARC's Mascot will be here
again this year!!

**"K8H"
SPECIAL EVENT STATION!!**

From 8am to 2pm (1200 Zulu to
1800 Zulu) on Saturday, July
27, 2013. Frequencies are:
14.250, 21.325, and 147.420
simplex. QSL cards available.



"STAPPYWEAR" will be on
hand with samples and will
be taking orders for your
Ham-related apparel!!

DOOR PRIZES!!

We will have hourly prizes with our GRAND prize being an Alinco DJ-V57T Dual-Band HT drawn at 1pm!!

FORUM

“Digital Modes”
(9am-11am)

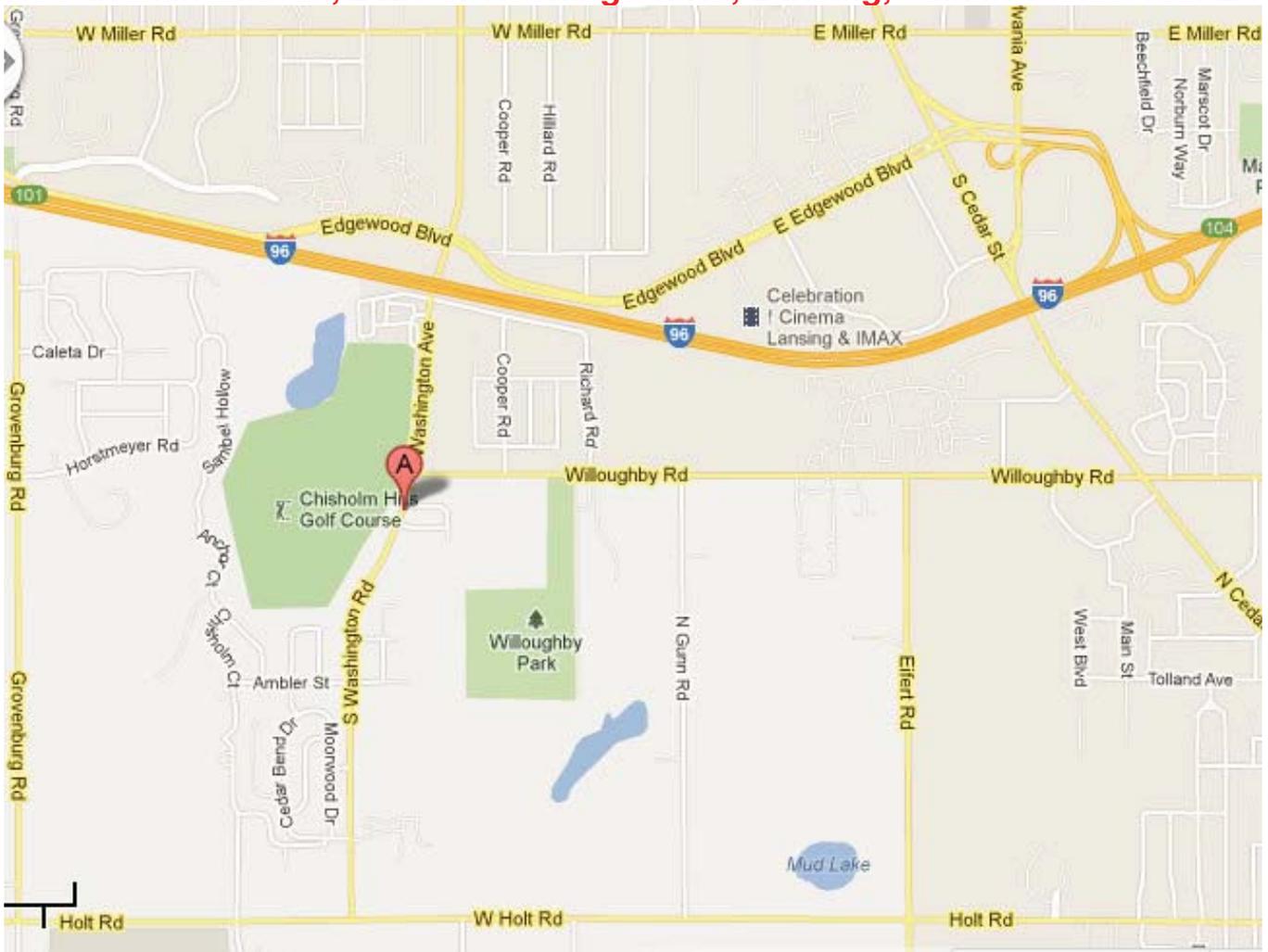
ANTENNA BUILDING DEMO

With free instructions for a “Roll up” 2-meter J-pole and a 2-meter or 440 tape measure antenna.
(11:30am)

G.O.T.A. STATION

Unlicensed? Come Get On The Air with the Youth of CMARC!!

Holt Christian Church, 2424 S. Washington Rd, Lansing, Talk-in 145.39-100Hz PL



COME OUT AND JOIN US FOR THIS YEAR'S "OUTDOOR" HAMFEST!! COME "RAIN OR SHINE" WE GUARANTEE YOU'LL HAVE A GREAT TIME!!



GRAHamfest 2013

Grand Rapids Area Hamfest

Saturday, September 7, 2013

Sponsored by: The Grand Rapids Amateur Radio Association—an ARRL Approved Hamfest



Annual Electronics, Amateur Radio, Shortwave
CB and Computer Equipment, Trains, Airplanes
or just about anything with an electron in it!

Swap Meet / Flea Market

Opens at 8 AM

Ends at 1:00 PM

Seller Setup: Friday 7- 9PM, & Saturday 7AM

(Vendors only prior to 8AM)

Indoor and Outdoor Sales

ARRL VE Session - 10AM

**Tickets are \$6 at the door
or \$5.00 in advance.**

K-12 Students are Free

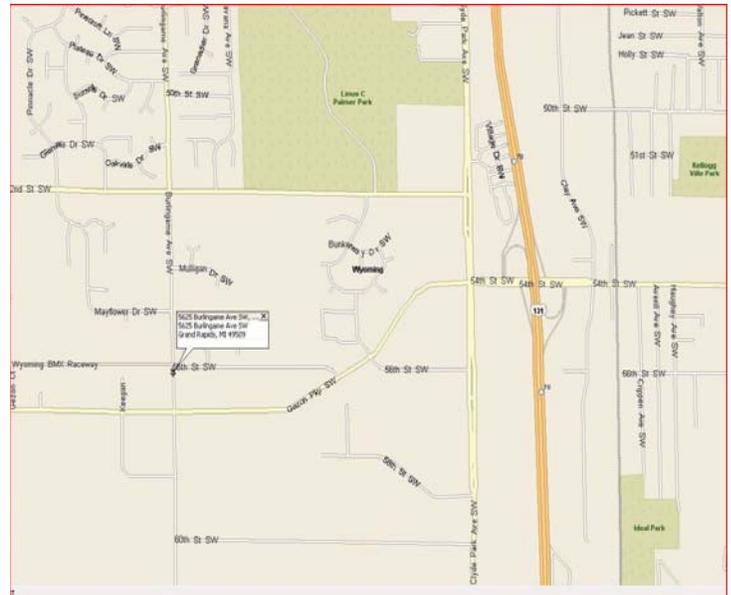
See: www.grahamfest.org

for updates, maps, directions and
additional information.

The Home School Building

5625 Burlingame, SW

Wyoming, MI 49509-9702



Talk-In: W8DC on 147.26+ (94.8HZ PL)

Table and Ticket Reservation Form

Description	Qty	Extended amount
6' table(s) along wall / WITH access to electricity (check for availability—limited quantity) @ \$10 ea.		
6' table no electricity @ \$5 ea.		
Advance admission ticket @ \$5 ea.		
Total	—	

Table rental does *not* include admission to the swap. No charge for
tailgate spaces - except an admission ticket is required, per person

General questions:

Rich Douglas KC8NKA 616-531-6218
(evenings)

Table reservations:

John Streyle W8QZ 616-791-9411
(evenings) or streyle.j@comcast.net

The deadline for guaranteed reservations
(payment in advance required) is
September 1

Make checks payable to: G.R.A.R.A.
Reservations received after August 26 will be
held at the door. Any tables unclaimed after 8
AM will be available on a first-come, first
served basis!

Mail the completed form and payment to:

G.R.A.R.A.

P.O. Box 3282

Grand Rapids, MI 49501-3282

Name / Callsign

Phone (optional)

Email * (required for table reserva-
tion confirmation)

Address

City, State, Zip
