# ( STATIC SHEET ( )

# 2012 DMRAA Hamfest



The Des Moines Radio Amateurs' Association is proud to present the 2012 edition of the DMRAA Hamfest on April 21,8 a.m. to 1 p.m. in the Elwell Center at the Iowa State Fairgrounds. Admission is \$6 and children under 12 are free.

Radio City and D&L Antennas will be on hand, and reservations are still coming in from other vendors!

The Elwell Center is a recentlyrenovated 15,000-sq.ft. climatecontrolled facility with ADA accessibility, and convenient restrooms. A full-service concession stand will be provided during the Hamfest by Campbell's.

Flea market tables can be rented for \$20 for the first table and all subsequent tables are \$10 each. Payment is due upon entry of the

Hamfest venue. Cash and checks are accepted (sorry, no credit or debit cards).

Checks can be made payable to the Des Moines Radio Amateurs' Association. Tables can be reserved online at the DMRAA Hamfest website at <a href="http://www.dmraa.com/hamfest/">http://www.dmraa.com/hamfest/</a> until April 20.

VE testing for all classes will be available in the nearby Maytag Family

Continued...

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Kevin Sanders	KØKDS	President
George Noble	KK7FM	Vice-President
Kirk Nelson	WL7CLI	Secretary
Bill Claypool	NUØQ	Treasurer

Bruce Brumm KCØZMT Ron Hobbs NØXWI Chuck Hoveland WØIBG Dennis O'Brien KAØDOS Ben Sinclair KCØZMX

## 2012 DMRAA Hamfest

Theater. Testing fee is \$15. Contact Rick Allen NOCFL with any questions via e-mail at nocfl@arrl.net.

Registration begins at 9 a.m., and no testees will be admitted after 9:30.

Testing will begin at 9:30 and end at approximately 11:45.

Each paid admission receives one raffle ticket for door prizes. This year we are offering as a grand prize an MFJ-269 VHF/UHF/HF antenna analyzer and counter, a value of \$390! Covers 1.8 to 170 MHz and 415 to 470 MHz. Use as signal source for testing/alignment. Super easy to use! Just set the bandswitch and tune the dial — just like your transceiver.

The winner of the MFJ-269 will also receive a high-quality 30-piece RF connector adapter kit, a value of \$65 to use with the analyzer!

The runner-up prize will be a KG-UVDIPVHF/UHF dual-frequency and dual-display handheld radio and a gain antenna to use with the radio, a combined value of over \$140!

Gift certificates to the ARRL's online store will also be given out as door prizes. These git certificates can be used on any merchandise in the ARRL's online store, including books, kits, videos, clothing, and more!

Talk-in will be available on the club's WOAK Des Moines repeater,

146.940 (negative shift), PL tone 114.8.

For full details on the DMRAA Hamfest, table reservations, and award presentations, visit the DMRAA Hamfest website at <a href="http://www.dmraa.com/hamfest/">http://www.dmraa.com/hamfest/</a> or contact a DMRAA board member.

### **Door Prizes**



Wouxun KG-UVDIP



MFJ 269 Antenna Analyzer

# President's Soapbox

#### **Kevin Sanders - KØKDS**

I am very excited to announce the location for this year's WOAK Field Day event.



The DMRAA board has settled on moving to Fort Des Moines Park, a county park located 7200 SE 5th Street, just southwest of Southridge Mall.

For those who have attended previous DMRAA Field Day events at Big Creek State Park (2010 and prior), this will feel familiar to you. We will be located at the park's #2 shelter, an open-air shelter that's sort of sunk into the surrounding ground and near a small lake. Around the shelter, there are numerous trees and vast greenspace. Modern restrooms are located nearby with drinking

fountains. There is a grill and a nearby playground. All facilities are ADA-accessible.

Last year's location at Camp Dodge worked well -- especially given last year's rainy start -- but the board felt that this location would strike a better balance between having easier access to the event and enjoying an outdoor atmosphere that a park provides. This is a "true" Field Day site -- the park is not on electrical mains, so the event will be 100% off the grid.

I would be remiss if I didn't recognize Ron Hobbs, N0XWI, and Dennis O'Brien, KA0DOS, for spearheading the effort this year to find a new location that provides this balance. They viewed several different locations and spoke with different government bodies to make sure they found the right fit. Polk County ARES EC Scott Kirstein, N0OOD, worked with Polk County EMA Assistant Coordinator Jon Davis to secure a special event permit with the county conservation board for our event. This effort really proves what can be accomplished when individuals step up to the plate and work together as a team.

We look forward to seeing everyone at WOAK Field Day again in June. Look for more details on dmraa.com and the next edition of the Static Sheet!



# Polk County ARES

#### Scott Kirstein - NØOOD



We are now into the ARES event season; the Power Climb was March 4th and by all accounts went very well. Thanks to those of you who helped out. This year's event was handled just a little differently from a technical perspective — individual building nets were run on separate simplex frequencies. This provided a different level of experience for the operators, which is something that may one day prove beneficial in a time of emergency.

One of the things we sometimes get complacent about is our infrastructure as a community.

Whether from a global perspective —

"I turn on the faucet and water comes out"; or as an amateur radio organization — "we can meet in the .94 machine after work". Most of the reason ARES exists is to keep operators ready to respond in an emergency, we say things like "When all else fails ..." but without opportunities to learn how to work together differently, we wouldn't know how to respond either.

As I write this, we here on earth are preparing for the impact of a solar flare. I'm wondering how the systems we have come to rely on for our daily existence like our GPS, cellphones, and power grid are going to be impacted. One of my coworkers indicated that we should close the office today since they saw on the news a solar storm was going to hit (that's not quite the news story I saw, so I think we'll stay open).

I should point out that at this point there is no widespread panic, but that could have more to do with situational awareness which is a different topic all together.

As you look at the list of this year's events, you will see largely the same ones as previous years. My hope this year is that we try and find a way to make them different in some way from last year. I expect this to provide a new challenge for each of us, and provide some learning opportunities for the group.

Our next ARES event is a new one for us, we will be providing communications support for the Drake Relays Half Marathon on April 28th. For more information or to sign up, please contact Rick Allen (NØCFL@arrl.net).

Thanks for reading ...

Scott Kirstein
NØOOD
Polk County ARES EC
515 490-7414 (cell)
n0ood@arrl.net

#### 2012 ARES Events:

Drake Relays - April 28th
MS Walk - May 19th
Dam to Dam June 2nd
ARRL Field Day - June 23-24
Camp Sunyside Walk With Me - June 23rd
Camp Sunyside Regatta - July 19th
Airport Drill August - 4th
State Fair Parade August - 8th
Head of Des Moines Rowing Regatta - September 29th
Asthma Walk - October 13th
Des Moines Marathon - October 21th
Living History Farms Cross Country Race - November 17th

# Static Sheet Trading Post

# A complete working HF Radio Station - \$1750.00

#### John Hana - W0DXR

Most items listed below can be seen in the photograph at qrz.com under W0DXR

If you wish you can stop by my residence and take it for a test drive...

- Icom 756 Pro I
- Samlex America SEC 1223 Power Supply
- MFJ-989D Legal Limit Roller Inductor Antenna Tuner
- MFJ-1312D Power Supply AC Adaptor
- Ameritron ALS 600S 600 Watt Solid State Amp with Switching PS
  - Factory rebuilt on 10/20/2010 "Documented"
  - · Amp is wired for 110v
- Ameritron ARB 704 Universal Radio Amplifier Interface
- Heil Pro Set Plus
  - AD-11 Icom Pro Set Adapter Cable
  - HS-2 New Style Hand Switch
- · Commercial copper ground bar w/96 ground points
- · Sounds Sweet Communications Speaker
- MFJ-906 6m Tuner 200 Watts SSB with MFJ- 1312B power transformer
- MFJ-945E HF & 6m Tuner 300 Watts SSB with MFJ- 1312B power transformer
- MFJ-1020C Active Antenna with MFJ- 1312B power transformer
- MFJ-108B 12/24 Hour Dual LCD Clock
- 43' Tower
- Alpha Delta DX-CC multi-band 80 10m dipole antenna
  - Includes 10' in ground poles/hardware for inverted V installation
- Alpha Delta- 2 Coax Switches ... two switches total
  - 1500 Watt & lightning surge protected



#### **ALSO INCLUDED:**

- COAX a 100', 85' and several lengths of jumper coax.
  - All have factory installed PL-259 connectors
- Panasonic RF-4900 I0 Band AM/FM Communications Receiver
- Radio Shack Pro 2052 Duel Trunking 1000 channel Scanner with Frequency to 1.3 GHz
  - Has DB-9 M/F Serial Computer Interface

You cannot have the kitchen sink but you can have the desk with hutch and swing arm lamps too.

Most items have original boxes and documents. Other miscellaneous items included.

#### Contact:

John Hana 641-923-2428

W0dxr@mediacombb.net

### Area Nets

**Ames** 

Sunday 147.240+ 7:00pm Story County ARES Net

Wednesday 147.375+ t114.8 9:00pm Cyclone Amateur Radio Club

Boone

Sunday 146.850- 9:00pm Boone County ARES Net

**Des Moines** 

Sunday 146.610- t114.8 8:00pm Central Iowa ARES Net

Sunday 146.940- t 114.8 follows ARES Central Iowa Technical Net

Sunday 146.610- t114.8 9:00pm ARTS Net

Wednesday 146.610- t114.8 11:00pm Night Owls Net

Thursday 146.940- t114.8 7:00pm Polk County ARES Net

Marshalltown

Sunday 147.135+ t141.3 6:00pm CIRAS Net

Perry

Monday 146.610- t114.8 8:00pm Dallas County ARES Net

Monday 146.610- t114.8 follows ARES HARC Net

Webster City

Monday 147.015+ 7:00pm Hamilton County Radio Club Net

Statewide Nets

Mon-Sat 3,970 12:30pm & 5:30pm (6:00pm summer) lowa 75 Meter Traffic Net

Sunday 3,970 5:30pm (6:00pm summer) Iowa Traffic and Emergency Net

Monday 3,990.5 5:30pm (1st Monday of the month) lowa RACES Net

#### ARES Nets serve several purposes:

- Operator training
- Training of Net control operators
- · Passing formal traffic

Please check in!

# Boys, Rain and Radio

#### Tom Reis - NØVPR

Promoting Amateur Radio at the local level can be very rewarding. Three radio groups in Des Moines, Iowa joined forces with the National Weather Service and PowerFilm Solar to support the Mid-Iowa Boy Scout Council's 100th Year of Scouting celebration on September 18, 2010.

It was decided early on to involve the local clubs. Initially Polk County Amateur Radio Emergency Service was asked if they could provide a demonstration of ham radio to over 5000 Scouts and leaders. Unfortunately, the event conflicted with the local Asthma Walk, for which Polk County ARES® had agreed to provide communications, so available resources were limited. The largest club in Des Moines is the Des Moines Radio Amateurs' Association (DMRAA) and they were eager to help. The Amateur Radio Technical Society (ARTS) immediately signed on. The National Weather Service was willing to help too. We needed only one planning meeting, which was very well attended, and we were ready to go.

One of our goals was to have an impressive display area and we

askedPowerFilm Solar in nearby Ames, Iowa if they would be willing to set up a PowerShade solar field shelter for us. They agreed to provide a 2 kW PowerShade.This Shade would provide 2000 W of

clean 110 V ac. It has over 800 Ah of battery backup as well. Plus, it would give us the visual draw we wanted while providing ample energy to power our equipment.



The event took place at Water Works Park near downtown Des Moines. The sun was shining Friday the day before the event. The crew from PowerFilm arrived at 9:30 AM and went to work. It took about 2 hours to set up the Shade. It usually requires 20 stakes but there had been a lot of rain saturating the ground so the crew needed to place 36 stakes to be sure the installation was safe.

During the day we delivered two mobile antenna towers, one 30 feet and the other 40 feet. The Polk County ARES trailer was placed for our use as well. Friday



evening

we gathered to set up the towers, add the antennas and sink the ground rods. We placed the Mosley CL-33, 20 meter beam on the 40 foot tower and the GAP Titan DX vertical on the 30 foot tower. As the sun went down we were all pleased with the setup. Saturday morning we arrived at 7 to set up the stations and raise the towers. Unfortunately, the rain returned.

We had decided to use two HF stations and a U/VHF go-kit station. We had the ARES trailer and set up a multiradio control station as well as a D-STAR radio inside. We set up signs that described each station and were ready to rock and roll.

#### **Here Come the Troops**

At 9 AM, the Scouts began to arrive. They were very interested in both the PowerShade and our Continued...



radios. Even though the rain and the cold were relentless, the Scouts and leaders who visited were able to make many contacts. Many of the Scouts complained about the rain; they were referred to the National Weather Service table. NWS Meteorologist in Charge Brenda Brock, KCØNEX, and Warning Coordination Meteorologist Jeff Johnson, KCØOGL, from the Des Moines Weather Forecast office did a great job demonstrating the weather radios and discussing why they couldn't really stop the rain, even though they wanted to.

The biggest draw was the Flex-5000 software defined radio with quad LCD monitors. The Flex was putting out 50 W into a Heathkit SB-1000 amplifier for 500-600 W PEP. Dean Madsen, NØXR, manned the radio and helped many Scouts make lots of contacts. We had one Scout who got his first taste of ham radio by licking the boom microphone. The 20 meter band was friendly and yielded many contacts. We

were very fortunate to contact the Battleship New Jersey Amateur Radio station, NJ2BB. Dave, WA2TVS, their chief engineer stayed with us so that several Scouts and visitors could talk with them. Dave even routed the audio over the ship's intercom.

We had one little 8 year old girl who got to speak with them. As soon as she was finished, she went to the back of the line and got to speak two more times — she's hooked! The deteriorating weather forced us to lower the beam to 20 feet and reduce the power to 100 W. When the risk of lightning became evident we closed the HF stations taking the opportunity to teach the Scouts about safe operation.

#### **Being Prepared**

Ben Sinclair, KCØZMX, brought his Yaesu FT-817 transceiver and a BuddiPole antenna to demonstrate the portable aspect of HF.The FT-817 and a NUE-PSK modem became a PSK31 station.

At another table Greg Long, KCØEMP, was demonstrating a small go-kit station consisting of a Kenwood TM-733A

mobile transceiver, two 12 Ah batteries with a small clamp-on ground plane antenna, all housed in a small aluminum case. On another table a Motorola GR300 UHF portable repeater was in operation on 442.575 MHz. DMRAA President George Noble, KK7FM, and Board Member Ron Hobbs, NØXWI, were able to promote an upcoming Technician licensing class.

Julia Stone from PowerFilm Solar provided several examples of their folding solar cell products and demonstrated the beneficial aspects of solar power. She also had a visual display panel to show how the PowerShade took the energy of the sun and converted the power into charging the batteries and providing 110 V.

A constant line of folks moved through the ARES trailer. Several contacts were made using the control station and the ICOM



IC-2820 D-STAR radio. At one point a FT-857D transceiver was shown for discussion.

The PowerShade provided the power needed for the HF stations except the 600 W Heathkit amplifier. It also provided power for the portable repeater, weather radios and the solar demonstration area. Because the amplifier required 220 V we used the ARES trailer Honda 3000 W generator for its power.

We should note that while the PowerShade provides both power and shade, it is constructed with a very strong open mesh fabric. It does not stop rain! To alleviate this obvious problem, several EZ-up tents were used underneath the PowerShade.

Coffee, donuts and lunch (sloppy Joes and cake) were provided by the clubs and prepared by Heather Reis. The Iowa State University solar car team members to the east of us were really interested in ham radio when they were given a hot lunch.

# A Good Time Was Had by All

So how did it go? The rain forced the Scout council to end the event 2 hours early but we had a great time and we will gladly do it again, given the opportunity. The popularity of our area and the interest shown by the Scouts was very encouraging. The hams who participated took pride in their task and were rewarded by the inquisitiveness of the Scouts.

We closed the area and packed up the equipment. The van towing the 30 foot trailer got stuck in the mud but was rescued with 4-wheel-drive SUV. The lousy weather just couldn't dampen the energy and enthusiasm of the Scouts or the operators.

We are indebted to PowerFilm Solar for providing the PowerShade, the National Weather Service for their constant support and the rain, hi hi. We would also like to thank DMRAA, ARTS and Polk County ARES for providing the resources and operators needed to make this a quality event. Amateur Radio was promoted in a way that exemplifies our commitment to service and passion for our hobby.



# 2011 DMRAA Calendar

### General Meetings and Events

#### 21 April, 2012 Hamfest

24 April, 2012

22 May, 2012

26, June, 2012

23-24 June, 2012 - Field Day!

24 July, 2012

### **Board Meetings**

3 April, 2012

I May, 2012

5 June, 2012

3 July, 2012

### **Testing Sessions**

#### 5/20/2012 I:00pm 7/15/2012 I:00pm

Registration starts at 12:30 PM (no admittance after 1pm)

Johnstone Supply Classroom (2nd floor)

11000 Justin Drive

Urbandale, IA 50322

Contact: Rick Allen ACØCFL

(515) 795-2162

n0cfl@arrl.net

#### 4/14/2012 06/09/2012

Boone

Boone Amateur Radio Klub Kruck P&H Warehouse Classroom 9:00 AM (Walk-ins allowed)

#### 4/12/2012

Waukee

South Middle School 7:30 PM (No walk-ins)

LIMITED SEATING - MUST CALL!

(515) 795-2162

n0cfl@arrl.net

#### Hungry and looking to meet local hams?

Friday's at the City Buffet on University (next to Toys R Us) a group of hams meet for lunch.
This is an informal meeting and provides an excellent opportunity to pass in enjoying a nice selection of Chingson usually agrices around Live



excellent opportunity to pass information while enjoying a nice selection of Chinese cuisine. The group usually arrives around 11:45 and breaks up at about 1:00. All are welcome, including family members.

# March Board Meeting Minutes

#### Minutes - March 6, 2012

The meeting convened at 7:04 p.m. with the following people in attendance:

#### **Club Officers:**

President: Kevin Sanders, KOKDS

Present

Vice President: George Noble, KK7FM

Present

Treasurer: Bill Claypool, NUOQ

Present

Secretary: Kirk Nelson, WL7CLI

Present

#### **Board Members:**

Bruce Brumm, KC0ZMT Present

Ron Hobbs, NOXWI Present

Chuck Hoveland, W0IBG Present

Dennis O'Brien, KAODOS Out of town

Craig Rose, KCOYHU Present

Ben Sinclair, KCOZMX Present

#### **Guests:**

Dean R Madsen, NOXR

Scott Kirstein, NOOOD

#### **Review of Last Meeting Minutes:**

The February Board Meeting minutes were read and approval was motioned by Bruce Brumm, KCOZMT seconded by Ron Hobbs, NOXWI and approved.

#### **Treasurer's Report:**

\$9,006.21; Club's insurance has been paid.

#### **Unfinished Business:**

**Hamfest:** ARRL packet has arrived, table reservations are coming in online, ARRL has asked to use the Maytag Family center after testing for their annual meeting.

**Field Day:** The club has been told that the park has been reserved but no written confirmation has been received.

#### **New Business:**

None presented

Polk County ARES update: The next ARES meetings will be held at the Polk County EOC at 7:00 PM on April 16, 2012. Rick Allen, NOCFL is coordinating 10 to 18 operators to support the Drake run on April 28, 2012.

#### **Subcommittee Reports:**

Hamfest: See Unfinished Business.

Field Day: See Unfinished Business.

**Repeaters & Packet:** Dean Madsen, NOXR is coordinating a work day to get the equipment installed at Lutheran Hospital, tentative date of March 10, 2012.

**Education:** The class is approximately half way through. On March 8<sup>th</sup> there will be a demonstration night. There has been interest in having another class at Waukee.

**Program:** The March program will be on High Altitude Ballooning. April's program has yet to be determined.

**Communications/PR:** Nothing new to report. The Static Sheet is looking for articles.

**Membership:** The membership list is being scrubbed and updated.

Continued...

Awards: The Bob Evans award will be presented at

the Hamfest.

**Christmas Party:** No report

Chili Feed/Auction: No report

Questions, comments, additions?: None were

presented

Adjournment was motioned by Ron Hobbs, NOXWI 2<sup>nd</sup> by Chuck Hoveland, WOIBG and adjourned at: 7:42 p.m.

#### Repeaters you may not know about!

Craig Rose (KC0YHU) reminds us that we have 10M and 6M repeaters in the Des Moines area.

**IOM:** W0AK 29.520- Offset: .100 Tone: 103.5

**6M:** N0INX 53.250- Offset: 1.7 Tone: 110.9

See you on the air!

You now have the option of paying for up to 3 years when renewing your membership in the DMRAA:

I Year = \$20

2 Years = \$40

3 Years = \$60

See Bill Claypool NØUQ for details.

# February Board Meeting Minutes

#### Minutes - February 7, 2012

The meeting convened at 7:02 p.m. with the following people in attendance:

#### **Club Officers:**

President: Kevin Sanders, KOKDS

Present

Vice President: George Noble, KK7FM

Present

Treasurer: Bill Claypool, NUOQ Out of Town

Secretary: Kirk Nelson, WL7CLI

Present

#### **Board Members:**

Bruce Brumm, KCOZMT Present

Ron Hobbs, NOXWI Present

Chuck Hoveland, W0IBG Present

Dennis O'Brien, KAODOS Present

Craig Rose, KCOYHU Sick, emailed

Ben Sinclair, KCOZMX Present

#### **Guests:**

Dean R Madsen, NOXR

Scott Kirstein, NOOOD

#### **Review of Last Meeting Minutes:**

The January Board Meeting minutes were read and approved with correction to the date of the February ARES meeting being the 6<sup>th</sup> and not the 2<sup>nd</sup>.

#### **Treasurer's Report:**

\$9,306.21

#### **Unfinished Business:**

Hamfest: The Hamfest is scheduled for April 21, 2012 at the State Fair Grounds. All prizes have been ordered by Bruce Brumm, KCOZMT. Radio City will be in attendance and brining the last of the prizes with them. The total for the prizes is \$520.64. D&L and WBOW and several other venders that have attended in the past will not be in attendance this year due to the conflict with Kansas City. The State Fair Office has asked for a copy of the club's insurance.

**Field Day:** The paperwork requesting Shelter #1 at the Polk County Fort Des Moines Park has been submitted on 2/6/2012. The park is located South of

Army Post Road off of SE 5<sup>th</sup> Street.

#### **New Business:**

None presented

Polk County ARES update: ARES meetings will be held at the Polk County EOC at 7:00 PM on 2/6/2012, 4/16/2012, 7/16/2012 and 10/15/2012.

#### **Subcommittee Reports:**

Hamfest: See Unfinished Business.

Field Day: See Unfinished Business.

**Repeaters & Packet:** Dean Madsen, NOXR has constructing the coax stubs for the packet radios and has the equipment ready for installation at Lutheran Hospital. A work day will be scheduled to install the radios.

**Education:** On the first night of the Technician class 9 students were enrolled through the Waukee school system.

**Program:** February's program will be by the National Weather Service on SkyWarn and storm spotting to be held in the Chorus Practice hall. The March program will be on High Altitude Ballooning.

Continued...

Communications/PR: Nothing new.

**Membership:** The membership list was sent to the club's Board Members for review and updates.

Awards: The Bob Evans award will be presented at

the Hamfest.

**Christmas Party:** No report

Chili Feed/Auction: No report

Questions, comments, additions?: None were

presented

The meeting adjourned at: 7:37 p.m.

#### The DMRAA Packet station is back up and running!

After years of operating from the old Nursing School building at Lutheran Hospital the equipment had to be removed. Last fall Lutheran Hospital made the decision to tear down the old building. Other than being used for storage, the DMRAA Packet station was about the only thing operational in the building. While we were displaced from the old building we were not left out in the cold; we are now located in the "Penthouse." While moving the equipment was not something we wanted to do, I feel the move was for the best.

The equipment is now located in a climate controlled room, running on the hospital's emergency backed up power system and the antennas are at a higher elevation then before. Dean Madsen, NOXR went through the equipment and it has been cleaned, serviced and upgraded in some cases.

On Saturday March 10th Dean Madsen, N0XR, Bob Jimmerson, KA0OMM Bill Spencer, KC0LUL and Kirk Nelson, WL7CLI hoisted and installed the equipment.

It is now operating on **147.555**, **145.010** and **446.025**. Dean Madsen, NOXR is still trouble shooting 147.450 and the 9600 port.

### DES MOINES RADIO AMATEURS ASSOCIATION

The Static sheet is bi-monthly (six per year) publication of the Des Moines Radio Amateurs Association. It is provided via email to the membership of the DMRAA. Please feel free to forward to prospective club members and interested Amateur Radio Operators.

The DMRAA is affiliated with the ARRL,

The national association for Amateur Radio.



\$40 2 years

\$60 3 years

Des Moines Radio Amateurs Assn.

P.O. Box 88

Des Moines, IA 50301

DMRAA.com

E-mail: info@dmraa.com



### Membership Application

Name:			
Address:			
City:	, State:	Zip:	
Phone Number: ()	Email:	_	
Call Sign:	Class: (E) (A	Class: (E) (A) (G) (T)	
ARRL Member? Y/N What are your primary interests in	amateur radio?		
What are you interested in learning	about?		
How would you like to volunteer wi	th the club?		
Dues: \$20 Single		Mail application and payment to:	

P.O. Box 88 Des Moines, IA 50301

**DMRAA** 

Email: info@dmraa.com