DES MOINES RADIO AMATEURS ASSOCIATION

STATIC SHEET

OFFICERS

- Bruce Brumm KCØZMT
 President
- Brad Boeckmann KC9DMQ
 Vice-President
- Alisa Payton KNØWME
 Secretary
- Bill Claypool NUØQ
 Treasurer

BOARD

- Mark Globushutz KØMJG
- Ray Harden WØRAY
- Bob Johnson, WØSMS
- Scott Kirstein NØOOD
- Ron Overholser KDØTTO
- Mike Waldron AEØMW

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PAGE I

FEBRUARY 2018

SKYWARN Spotter Training *Why do I need to take training?*

DMRAA sponsored SKY-WARN training is always in the month of February. It is open to the public but DMRAA leadership encourages all amateur operators to participate in this yearly offering. This 90-minute class is presented by a meteorologist from the Des Moines Weather Service office in Johnston.

Initially taking this class helps the spotter identify storm features that could help save your life and lives of others. Once you have the basics you'll be able to join a large group of registered weather spotters that help provide "ground truth" information to the Weather Service so they may accu-





rately dispence timely information to the served agencies, aviation, media and the general public. This training is offered year-

ly to the Des Moines Radio Amateurs Association and we encourage all members to take the training every year.

7:00 PM Recital Hall, 3rd floor Plymouth Congregational Church 42nd & Ingersoll Des Moines, IA



Full Schedule of ARES Activities

It is snowing and being optimistic we must look forward to warmer days. Better weather lends itself to more outdoor activities and service to others. Polk County Amateur Radio Emergency Service very often provides radio communication to many outdoor events and this year will be no exception. A list of these follows. Notably this year will be that last year for the annual Dam to Dam half marathon. ARES has been an in tragal part of this event for many years. If you've always wanted to work

this event your last opportunity will be June 2md.

Now would be a good time to have a look at DMRAA.com/ ARES and consider signing up for some of the listed events. For you new amateur operators these events offer a very easy entry into EMCOM and public service. We are always eager to help new folks get started. Let us know how we can help you.



2018 ARES Events

Fight for Air Climb, Sunday April 8th, 2018 Drake 1/2 Marathon, Sunday April 22th, 2018 Market to Market, Saturday May 12th, 2018 Dam to Dam Half Marathon, Saturday June 2nd, 2018 ARRL Field Day, June 23rd -24th, 2019 Iowa State Fair Parade, August 8th, 2018 Head of the Des Moines Rowing Regatta September 29th, 2018 Des Moines Marathon, October 21st, 2018 Living History Farms Fun Race, November 17th, 2018 Sign-up online at DMRAA.com/

Sign-up online at DMRAA.com/ ARES

Upcoming Meetings



Come enjoy the fellowship

DMRAA meetings are the 4th Tuesday of the month. Be sure and mark your calendars!

SKYWARN Spotter Training

The National Weather Service will conduct their annual Spotter training at the February meeting. All amateurs are invited and encouraged to attend. General Public is also welcome. Please join us.

> 7:00 PM Recital Hall, 3rd floor Plymouth Congregational Church 42nd & Ingersoll Des Moines, IA

> > Weather-Ready Nation

March 27th, 2018 **PowerFilms Solar**

Join us March 27th for a presentation by PowerFilms a solar manufacturing company located in Ames. PowerFilm has been very helpful to Polk County ARES in providing a solar panel for the new ARES trailer. This panel fully maintains the batter system in the trailer. An inovator in flexible solar panels their discussion will be timely and informative.

7:00 PM Waveland Room (2nd floor) Plymouth Congregational Church, 42nd & Ingresoll

The DMRAA meetings provide an excellent opportunity to meet new friends and enjoy fellow hams. Please feel free to invite newly licensed amateurs to attend.

Future Meetings

Brad & Scott are looking for meeting ideas and presenters. Please feel free to make suggestions and offer to help with a presentation. Brad Boeckmann KC9DMQ <u>brad.boeckmann@gmail.com</u> Scott Kirstein, NØOOD n0ood@arrl.net



You can Help?

Are you interested in helping the club? There are many ways you can help -- assisting with an event, taking a few pictures or even writing a piece for this newsletter.

Past Meetings





January Meeting

The monthly DMMRA was well presented and attended. Ray, WØRAY spoke on the latest developments in the realm on Multi Mode Digital. This technology allows several different digital protocols to be used on the same repeater. This includes DMR, D-Star, P25 and C4FM. The presentation included demonstrations.



If you have any suggestions for future meetings, please contact Vice-President Brad Boeckmann KC9DMQ at info@dmraa.com



Giving back through community service

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



Polk County ARES

Happy New Year! Hopefully you had a chance for resting up and charging batteries – your radio's as well as your own – and ready for another exciting season of ARES activities.

We still have a little time before the events season hits us in high gear, but out first event is the Fight for air Climb on Sunday, April 8th. We still have some opportunities to sign up to help out with this IN-DOOR event. Our next event is the Drake Half Marathon on April 22nd the day after the DMRAA Hamfest. That will be a busy "radio weekend," but it's a relatively short event, and Bruce, KCØZMT, promises that the weather will cooperate this vear.

The other events are listed on the DMRAA website – along with an opportunity to sign up online. Please feel free to visit the site and sign up for any (or all) of the events for the year. Now would also be a good time to remind you that if you would like to become more involved in leading and organizing an event this season, let me know and we can find an opportunity for you to take on that responsibility.

As I look for volunteers to take the lead on events, of particular need is the Iowa State Fair Parade. Don Price, KCØMTF, has told me that he is stepping down from the leadership position for that event. I'd like to thank him for his leadership on this event over the years and the time he has spent serving both the participants and spectators. Thanks, Don.



New TV mounted in EMCOM 1



Thanks, as well, to each of you for all you do to support ARES . . .

Scott, NØOOD



Polk County ARES Meetings

Polk County EOC at 1907 Carpenter Avenue Des Moines, IA



ARES MEETINGS DATES 2018

7:00 PM

Monday, April 9th Monday, July 9th Monday October 8th

Polk County Emergency Operations Center 1907 Carpenter Des Moines, IA

2018 ARES Events

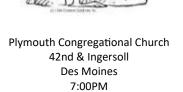
Fight for Air Climb, Sunday April 8th, 2018 Drake 1/2 Marathon, Sunday April 22th, 2018 Market to Market, Saturday May 12th, 2018 Dam to Dam Half Marathon, Saturday June 2nd, 2018

ARRL Field Day, June 23rd -24th, 2019 Iowa State Fair Parade, August 8th, 2018 Head of the Des Moines Rowing Regatta September 29th, 2018 Des Moines Marathon, October 21st, 2018

Living History Farms Fun Race, November 17th, 2018

Sign-up online at **DMRAA.com/ARES**

2017 DMRAA Calendar



Calendar 2017 General Meetings and Events

23 January, 2018 27 February, 2018 27 March, 2018 21 April, 2018 Hamfest 24 April, 2018 22 May, 2018 23-24 June, 2018 ARRL DMRAA Field Day 26 June, 2018 24 July, 2018 28 August, 2018 25 September, 2018

Board Meeting Dates



of paying for up to 3 years when renewing your membership in the DMRAA. 1 Year = \$20 2 Years = \$40 3 Years = \$60

See Scott Kirstein NØOOD for details. Dues are calendar year

As I pen this note, we've received 6 inches of snow, with a few more inches forecast. The temperature is only in the teens. We're definitely wrapped in the arms of winter. While the weather is lousy and you're trapped indoors with cabin fever, do some spring cleaning! Reorganize that go-box or bag, charge all your batteries and update the firmware on your radios. Make sure you have the most current repeater frequencies programmed into your rigs. The DMRAA maintains a list at the URL below. (Thanks to Tom Reis, NOVPR for keeping it current.)

http://dmraa.com/

<u>repeaters</u> Another important thing to do is periodic signal checks for your radios. Make sure your antennas and radios are properly matched and can correctly communicate. Spring will soon be here, so make good use of the down time. There will soon be plenty of opportunities to participate in ARES events and exercises like Field Day. Stay busy!

<u>President's Soapbox</u>

A couple of people have inquired regarding the status of the proposed repeater purchase at Alleman. We're still waiting on the tower owner to provide what is essentially an operational agreement for continued presence there.

The group that manages the club resources (repeaters, antennas, money, etc.) is the club board. As you know, elections are coming up in May. We have positions available. The nominating committee is working hard on gathering and presenting a slate of qualified candidates. While we all have diverse opinions and skill sets. one of the most valuable qualities of the board that I have observed during my various tenures is the ability the govern by consensus. It is very rare that there is dissent or negative discourse on any subject. When there is, further detail and discussion usually clears up any misunderstandings and the votes are nearly universally

unanimous. This does not mean that we are led by "yes men". Quite the contrary -- we have a diverse group which appears to more-thanadequately represent the breadth of the club's membership. The feedback we receive regarding our actions is generally positive. If you would like to serve the club in any manner, please let me or one of the board members know. We can always use the help and fresh input.

While on the topic of service, I'd like to thank Kevin Sanders, K0KDS, for his valued service to the club. Other responsibilities have dictated that he step away from his current role on the board. Over the years, Kevin has served in several roles -- on the board, PR/communications, and including that of president. Please take the time to thank him and the others that serve the club.

Bruce Brumm KCØZMT "Yesterday, my XYL said she'd hurt me if I didn't give up ham radio. Over."





Don't forget to pay your 2018 DMRAA Dues

· · · · · ·					
	AMES				
	Sunday	147.240+	F	7:00pm	Story County ARES Net
1	Wednesday	147.375+	⊦t 4.8	9:00pm	Cyclone Amateur Radio Club
	BOONE				
	Sunday	146.850-		8:00pm	Boone County ARES Net
	CRESTON				
Have you	Sunday	443.400+	t 151.4	8:30pm	SW Iowa Amateur Radio Assn.
ecked into a	DES MOINES	5			
•	Sunday	145.390-	t 4.8	7:00 pm	Saylorville Fellowship Net
t lately? 🗲	Sunday	29.670-	t103.5	7:30 pm	lowa Ten Meter Net
	Sunday	146.610-	t 4.8	8:00 pm	Central Iowa ARES Net
	Sunday	146.940-	t 4.8	follows ARES net	Central Iowa Technical Net
	Sunday	443.400	t 5 .4	8:30 pm	SW Iowa Amateur Radio Assn Ne
RES Nets serve	Monday	146.940-	t 4.8	7:00 pm	DMRAA information Net
veral purposes	Wednesday	53.250-		8:30 pm	Iowa 6 Meter Net I.7mhz-
	Thursday	146.940-	t 4.8	7:00 pm	Polk County ARES Net
Operator training	INDIANOLA				
raining of Net	Saturday	146.60-	t 4.8	7:30am	Warren County ARES Net
ontrol operators	PERRY				
	Monday	145.190-		8:00pm	Dallas County ARES Net
ease check in l	Monday	145.190-		follows ARES net	HARC Net
	STATEWIDE	_			
	Sunday	444.725+		7:30 pm	Iowa DMR User Group Net
	Monday—Saturday			n (6:00pm summer)	Iowa 75 Meter Traffic Net
	Sunday	3,970	5:30pm (6:00pm su	ummer)	lowa Traffic and Emergency Net

Amateur Radio Testing Sessions

Boone

Area Nets

Des Moines 1:00pm

March. 18 May 20 July 15 September 16 November 18

Registration starts at 12:30 PM (no admittance after 1pm) Location: Johnstone Supply Classroom (2nd floor) 11000 Justin Drive Urbandale, IA 50322

Contact: Rick Allen NØCFL (515) 795-2162 n0cfl@arrl.net

Ames

Wed. Mar. 7 — 7:00 PM Sat. Apr. 7 — 10:00 AM

Location ISU Campus – Building and Room TBA

Contact: George Oster, NP2N 515-233-3535

9:00am

April 14, 2018 June 9, 2018 August 11, 2018 October 13, 2018 December 8, 2018

Time: 9:00 AM Location: Conference room behind the cafeteria at the Boone County Hospital, 1015 Union St, Boone, Iowa

Contact: Steve NØNEU (515) 432-4006

Marshalltown 9:00am

March 3, 2018 May 5, 2018 August 4, 2018 December 1,2018

Check-In: 9:30 AM Exam Starts: 10:00AM Location: RACOM Corporation 201 West State Street Marshalltown, IA

Contact: Brian Krumm, NØMXK n0mxk@arrl.net 641-752-9658

Time to find a new home for your extra gear? This Buy, Sell & Trade page may be your answer. This service is offered to DMRAA members.

Contact info@DMRAA.com





Time to Eat?

Buy / Sell

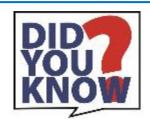
You could be selling your excess gear on this page.

info@dmraa.com

Be sure and check the Xtra Buy / Sell page at DMRAA.com for current listings.



Tip Want to add a $\mathbf{Ø}$ to your call sign text? On a standard desktop key board hold the ctrl key and type 0216 on the numeric keypad. This is a Microsoft shortcut. In MS Word you can also use the Symbol Ω found in the insert menu. The Ø is found in the list of symbols.



The DMRAA.COM website sees on average 150 unique visitors a week. There are 190 visits and they perform over 650 actions per week. These visitors spend approximately 4 minutes enjoying the information available for and about the DMRAA. Check us out at **DMRAA.COM**

Are you checking the website?

Timely news and notices are posted on the DMRAA website. dmraa.com

DES MOINES RADIO AMATEURS' ASSOCIATION

Hungry and looking to meet local hams? On Fridays at the Buffet City 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 information while enjoying a nice selection of Chinese cuisine. The group (around 20) usually arrives around 11:45 and breaks up at about 1:00. All are welcome, including family members.

Caution! Considerable amount of amateur radio topics will be discussed.

WAK . DES MOINES, IOWA, UNITED STATES



Strays





Digital Mobile Radio is really catching on in Iowa. There are over 40 DMR repeaters and the number is growing. We now have the ability to connect with the National Weather Service during severe weather on DMR. There are well over 500 registered DMR users in the State of Iowa and over 85,000 world-wide. Using a readily available \$75 radio you could talk to any of them. Maybe it is time for you to give it a try. With so many folks using DMR, why don't you ask one for a demo?



DMRAA Stainless Steel



We still have Limited Edition 30-ounce DMRAA Stainless Steel Travel Mugs available. These will make great gifts for anyone on your lists, and at \$20.00 each, will support the DMRAA as well. Contact Scott, NØOOD

ARES Reflective Vests

Polk County ARES now has several Class 3 Level 2 Safety Vests available for purchase. These are better quality surveyor type vests with sleeves and several pockets in sizes m thru 3XL. They have the words "RADIO COMMUNICATIONS" on the back.

Cost is \$20. Contact Tom, NØVPR <u>n0vpr@arrl.net</u>

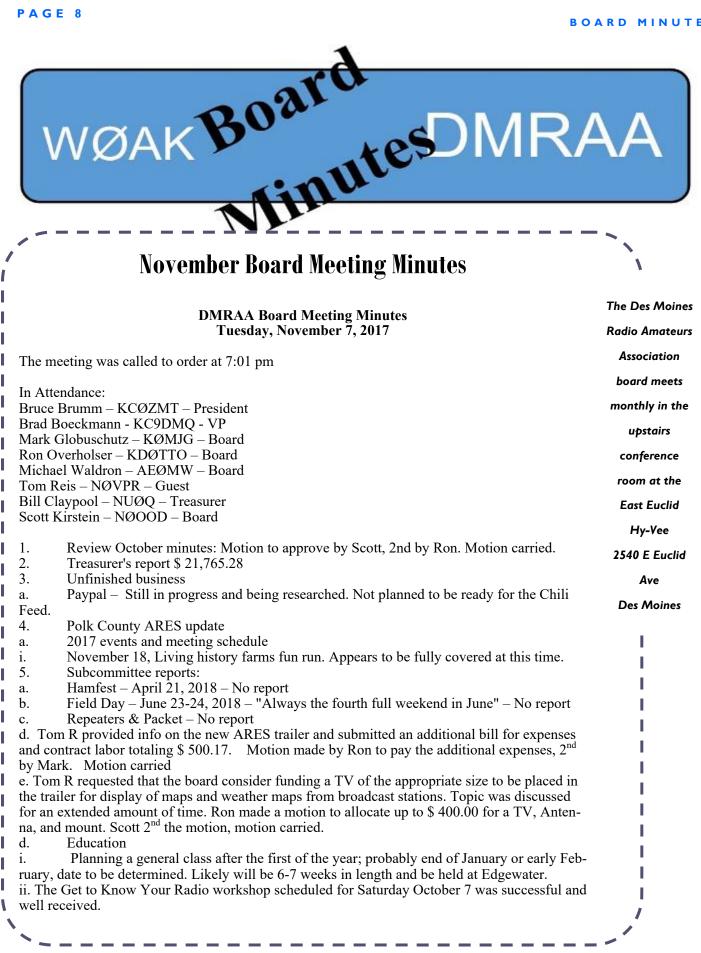
Note: You need not be a Polk County ARES or DMRAA member to purchase a vest.





Static Sheet Deadlines

Item submission deadline	Publish Date (Email sent)	Web edition posted
February 1 st	February 15 th	February 20 th
April 1 st	April 15 th	April 20 th
June 1 st	June 15 th	June 20 th
August 1 st	August 15 th	August 20 th
October 1 st	October 15 th	October 20 th
December 1 st	December 15 th	December 20 th

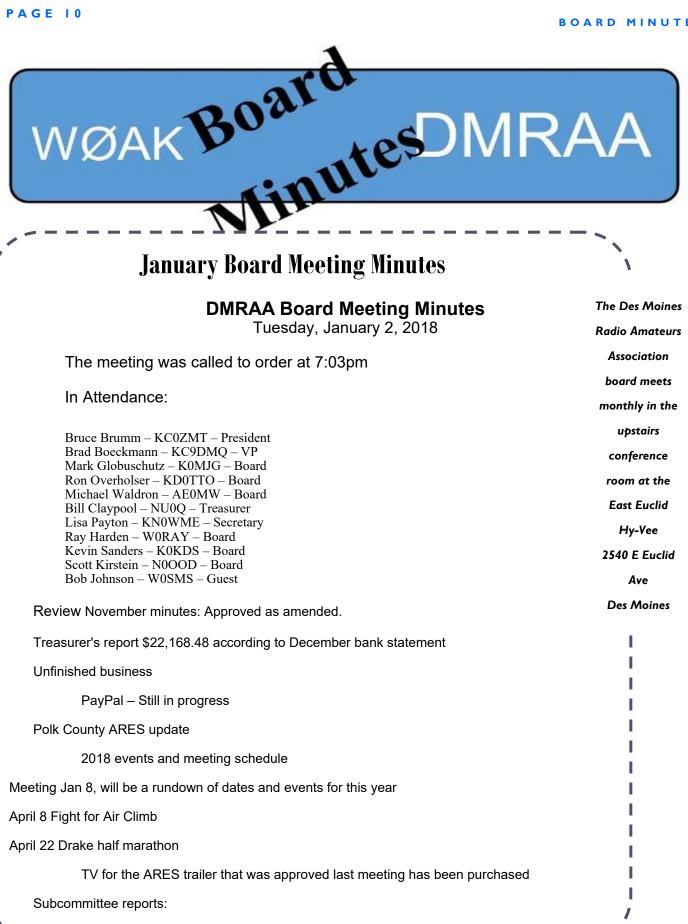


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November Board Meeting Minutes cont.

 e. Programming January – Multi mode radios – Ray Harden – W0RAY February 27 – Weather Service Training – need to verify this with Tom & the Church September – at least 50 attended the presentation on DMR by Tom Reis & friends October – TBD v. a program has been identified for the March meeting but Bruce could not remember what it was. v. November 21 – Chili Feed/Auction Admission will remain the same at \$6 with soft drinks costing \$0.50 Ron will pick up necessary supplies. Auctioneer has been confirmed, Chili makers lined up. Need a couple of people to help the auctioneer with displaying items and recording bids. Need help setting up at about 3pm and tearing down after. Chili feed is at 6pm. The auction starts at 7. Need someone to check in early arrivals. 	
 vi. December 12 – Christmas Party – Date confirmed. Dennis to arrange for the ham. He has not heard from the Bell Choir. Help may be needed to set up. f. Communications & Public Relations – No report g. Membership – list needs to be updated again h. Awards – given at Christmas party. We need a champion to coordinate. Possibly the last three recipients. (Dean, Ron and Kurt) 	The Des Moines Radio Amateurs Association board meets monthly in the
6. New Business	upstairs
a. (Repeat from last months minutes) There has been an offer tendered to the club to purchase the repeater at Alleman 145.310. After much discussion on cost/benefit of purchasing Scott made a motion to make the purchase, including making arrangements for necessary repairs and upgrades. Total expenditure is expected to be about \$5,000. The motion was 2nd by Kevin and carried. There is also an expected power cost of about \$7.50 per month.	conference room at the East Euclid Hy-Vee
b. Upgrade of the Broadlawns Hospital repeater was discussed. In order to save a significant amount of money, it needs to be ordered by December 31. Cost is slightly more than \$300.00 but the actual price has not been identified. Mike W. made a motion to authorize the expense up to \$400.00. Ron 2^{nd} the motion. Motion carried.	2540 E Euclid Ave Des Moines
Motion to adjourn by Ron. 2nd by Scott. Motion carried at 7:56pm.	



Hamfest - April 21, 2018

STATIC SHEET

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/ 	January Board Meeting Minutes cont.	Ň
	Info has been sent to the ARRL and approved, Notification needs to be sent to the vendors.	i i
	Bruce is working on flier	I.
	Motion to purchase prize, not to exceed \$350 by Bruce, 2nd by Scott, passed.	
	Field Day – June 23-24, 2018 – "Always the fourth full weekend in June"	i
	Scott will check at Yellow Banks and reserve the space	1
	Repeaters & Packet	
1	Waiting to hear from tower company at Alleman	
	Broadlawn's fusion repeater was upgraded. Motion to approve increased cost, up to \$600, was made by Mike, 2nd by Scott, motion passed.	The Des Moines Radio Amateurs
İ.	D-Star – computer is down, but the repeater is still operational	Association
ļ	Education	board meets
	A general class has been scheduled for February and March at Edgewater. There have been	monthly in the
	four inquiries, no registrations yet. Will use 5 registrations as a minimum to hold the class, with a maximum attendance of 12. Programming	upstairs conference
	January – Multi mode radios – Ray Harden – WØRAY	room at the
	February – Weather Service Training, has been confirmed with Tom and the church	East Euclid
	March – TBD	Hy-Vee
ì		2540 E Euclid
	Communications & Public Relations – Nothing to report	Ave
ļ	Membership – Still needs to be updated	Des Moines
	Awards – There were no nominations for the Winthrop Mager award	1
l	New Business	
	Ray has a Multimode repeater setup that he has been testing successfully. Would like to find a place with a tower and internet capabilities to put up. After discussion, it was decided to revisit	
	the options after his presentation at the January club meeting. 146.755 and 444.200 are the cur- rent vhf/uhf frequencies.	i i
	Secretary KN0WME misplaced the key to the mailbox, need to talk to Bill about whether to add the secretary's name to the post office paperwork, and/or get another key.	I
	Secretary KNØWME will not be at the February or March board meetings.	1
	Motion to adjourn by Scott. 2nd by Mark. Motion carried at 7:54pm.	
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This guide available at DMRAA.com/ARES

DMRAA Frequency Programming Guide

Ch	Name	Frequency	Tone	Location	_ocation Use		
1	WØAK	146.940-	114.8	Des Moines	LOCAL Repeater DMRAA Local Club Repeater		
2	WØAK	146.985-	114.8	Des Moines	LOCAL Repeater DMRAA Local Club Repeater		
3	WØAK	145.130-	114.8	Des Moines	LOCAL Repeater DMRAA Local Club Repeater (47)		
4	NØINX	146.610-	114.8	Grimes	Local Repeater Linked to Scranton 444,300, Williams 444,500 (1*)		
5	NØINX	443.400+	151.4	Grimes	LOCAL Repeater Linked to several repeaters in SW lowa (1*)		
6	KØDSM	444.100+	151.4	Des Moines	LOCAL Repeater Polk County ARES		
7	KØDSM	444.050+	151.4	Des Moines	LOCAL Repeater Polk County ARES		
8	WØKWM	146.820-	114.8	Des Moines	Local Repeater		
9			i ii				
10	NØOOD	443.925+	151.4	Des Moines	Local Repeater		
11	KCØMTI	146.700-	114.8	Johnston	Local Repeater		
12	KCØMTI	442.800+	151.4	Johnston	Local Repeater		
13	WØKWM	444.575+	151.4	Alleman	Local Repeater		
14	KDØQED	145.390-	114.8	Saylorville	Local Repeater STAR 1		
15	KBØNFF	146.895-	114.8	Saylorville	Local Repeater STAR2		
16	KØSXY	145.310-	114.8	Alleman	Local Repeater Echolink (4*) (node sz1351) (4*)		
17	KØSXY	444.675+	114.8	Des Moines	LOCal Repeater Echolink (4*)(node 555013) (4*)		
18	NØBKB	147.045+	114.8	Casey	LOCAL Repeater Linked to SW Iowa Repeaters		
19	KAØMHJ	147.270+	114.8	Greenfield	Local Repeater Maybe lisked to uartors repeate s		
20	WØYL	147.240+	None	Ames	Local Repeater scarc		
21	WØISU	147.375+	114.8	Ames	Local Repeater		
22	KCØNFA	442.225+	151.4	Baxter	Local Repeater Linked to UHF system		
23	KDØFGV	146.640-	114.8	Indianola	Local Repeater W/CBM Echolink (4*)(hode 789684) (4*)		
24	KDØWFX	444.125+	114.8	Indianola	Local Repeater		
25	KBØTLM	146.850-	None	Boone	Local Repeater BARK		
26	KBØTLM	443.900+	None	Boone	Local Repeater BARK		
27	NØSFF	442.600+	151.4	Madrid	Local Repeater		
28	NØBKB	444.700+	151.4	Greenfield	Local Repeater Linked various ways		
29	KDØNEB	145.190-	114.8	Perry	Local Repeater HARC (4) (node 710459) (47)		
30	KDØNEB	444.375	151.4	Perry	Local Repeater (6*)		
30	SIMPLX	146.520		Simplex	National Simplex Calling Frequency		
31	NØVPR	442.575+	151.4	Portable	ARES Used for local events & emergencies (2*)		
32	KCØMTE	443.850+	151.4	Madrid	Local Repeater		
40	NØINX	224.540-	114.8	Grimes	Local Repeater 1600 KHz offset		
41	WDØFIA	224.980-	114.8		Local Repeater 1600 KHz offset		
42	KDØWPK	29.6700-	103.5	Des Moines			
Polk Co. ARES Simplex: Ch-101 ARES-1 146.490 Ch-102 ARES-2 146.430 Ch-103 ARES-3 147.420							
Ch-104 ARES-4 446.175 Ch-105 ARES-5 147.570 Ch-106 ARES-6 446.975							
1. These repeaters are generally monitored by KØDMX the Stywarn station at the National Weather Service office and take severe weather reports and provide							

 These repeaters are generally monitored by KØDMX, the Stywarn station at the National Weather Service office and take severe weather reports and provide warnings.

This repeater is a partable repeater and is used for various ARES events and emergencies. The location and coverage of the repeater will depend on the event.
 EchaLint* allows licensed Amateur Radio stations to communicate with one another over the Internet, using valce-over-IP [VoIP] technology. Allows worldwide connections to be made between stations, or from computer to station. <u>http://www.echalint.org/</u>

4. The YAESU DR-1 is a digital/conventional UHF or VHF repeater. It was developed for use with System Fusion. DR-1 will provide use of conventional FM and digital functions.

This guide is provided as suggested frequencies for local programming. There are many repeaters in lowa, please explore them all!

Updated 2/11/18

DMRAA Frequency Programming Guide

Digital

Zone Name	Call Sign	Frequency	Color	Location	Use
Des Moines W	NØINX	444.725+	1	Grimes	DMR Repeater (1)
DesMoinesC	WØKWM	443.500+	1	Des Moines	DMR Repeater (1)
Des Moines NW	NØVPR	443.100+	1	Johnston	DMR Repeater (1)
RayUHF	WØRAY	444.875+	1	Waukee	DMR Repeater (1)
Ray VHF	WØRAY	146.755-	1	Waukee	DMR Repeater (1)
Greenfield	NØBKB	444.550+	1	Grimes	DMR Repeater (1)
Ames	WØYR	443.975+	1	Ames	DMR Repeater (1)
NØVPR	NØVPR	442.575+	1	Portable	DMR Repeater (1)
Indianola	NØFAM	442.700+	1	Indianola	DMR Repeater (1)
CID	WØGQ	443.600+	1	Cedar Rapids	DMR Repeater (1)
Otho	KØKU	443.575+	1	Otho	DMR Repeater (1)
Victor	KØTSK	444.950+	1	Victor	DMR Repeater (1)
lowa City	KØGH	443.775+	1	lowa City	DMR Repeater (1)
HS1	-5	441.100+	1	107	DMR HotSpot (2)
HS2	-5	441.200+	1		DMR Repeater (2)
	-5	3	6		DMR HotSpot
	KDØIAN	443.175+	8	Grimes	D-Star Repeater (3)
	KDØIAN	147.105+		Grimes	D-Star Repeater (3)
				8.	
		8	-	8.	

1. DMR repeaters are typically connected via the internet to station locally and globally. Each repeater is capable of using two talky roups at once

2. DMR HotSpots are low power simplex repeaters that allow an individual user access in their own home. Typically, 20-40 mwoutput

3. D-Star is loam's digital protocol, these repeaters are linked to the internet gateway and allow the user to connect with stations locally and globally

This guide is provided as suggested frequencies for local programming. There are many repeaters in lowa, please explore them all!

Updated 2/11/18



Des Moines Radio Amateurs Assn. P.O. Box 88 Des Moines, IA 50301 DMRAA.org or DMRAA.com

DMRAA.org or DM

E-mail: info@dmraa.com

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.



Can you hear me now?

DMRAA Membership Application

Des Moine	es Radio Amateurs Asso	ociation
Name:		
Address:		
City:	, State:Z	ip:
Phone Number: ()	Email:	
Call Sign:	Class: (E) (A) (G) (Г)
ARRL Member:? Y / N What are your primary interests in amate What are you interested in learning abou How would you like to volunteer with the	t?	
Dues \$20 Single \$60 3 Years		THE LIMIT
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