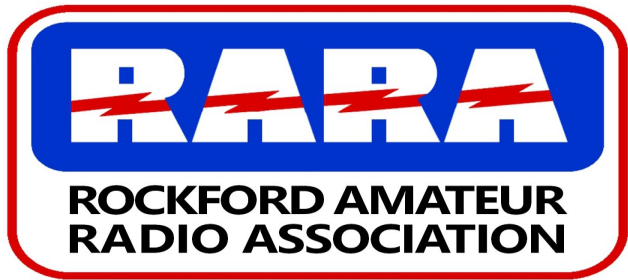


HAMRAG

Visit our website for more club and area ham information at <http://w9axd.org>, or join us on Facebook at this [LINK](#)



RARA Mission Statement

A member association with common interest of public service to the community through the use of amateur radio.

June 2020

INSIDE THIS ISSUE

Presidents Message

Fellow Members of RARA,

Hi All,

I hope that this finds you all in good health, and that you have managed to stay away from the virus. Many of us are just to old to deal with that thing. I'm speaking for myself here since I'm 77 years young at this point. On top of that as many of you know, I am currently undergoing radiation for prostate cancer. I sure could have picked a better time for this, but I've got to say the people at the cancer center at OSF have been just great. I will be half way there by the time you get this. I just had 19 of 40.

Enough about my personal problems. I'm still doing ok. I've been running the health and wellness for all hams in the area put on by RARA. I'm doing Tuesday at 7 on the 610 and Bill KC9OJP is doing the Thursday night net on the 195 also at 7pm.

We held our first meeting on the air for the MAY meeting at 7pm before Jimmy's Friday Night Fun net. As a result, we basically came up with two contests for Field Day for the area.

For the General and above Hams, they can set up in the back yard and compete with the rest of the world as normal, but give us their score so they can be recognized as to how they competed with the area hams.

For the Techs Bill KC9OJP and Jimmy KC9GOL have come up with a plan that uses only frequencies available to Techs. Bill tells about it else where here in the Rag. (page 3)

Remember Field Day is all about Talking on the air and having fun.

73

Larry AC9GO

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ARRL FIELD DAY
June 27-28

**NEXT
MEETING**

**Friday
June 12th
7:00 PM**

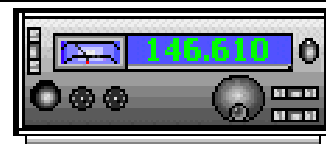
Live

On AIR

**146.610
Repeater**

RARA is looking for a new Web Master:

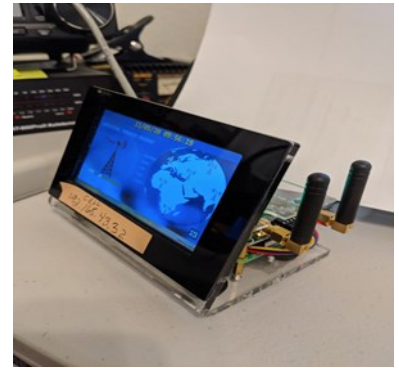
If you have some skills at managing a Web site and would like the opportunity to create one from the ground up, talk to one of the Officers or Directors at the next meeting.



Running Duplex Hotspots on Multiple Modes.

Ham radio hotspots enable you to use the digital modes like DMR, D-Star, Fusion, and others, to have QSO's around the world. This document discusses the use of a duplex hotspot for scanning multiple digital modes.

You may be aware that conventional hotspots usually have a single outside antenna to send and receive the RF signal. They are operating in the Simplex mode. Duplex hot spots usually will have two antennas, one for the transmit frequency and the other for receive frequency. This MMDVM modem has the Raspberry Pi 3B computer and a 4.2 inch screen and currently sells for around \$165 US dollars. Of course you can build your own for less.



A duplex hotspot can also be used to create your own personal repeater. Since the power output is in the milliwatt range, it will only serve over a short distance. We won't pursue the repeater application in this document.

We will cover the duplex hotspot when used with two handy-talkies (HTs) so you can scan and transmit on either of two digital modes. For example, you can program the hotspot to scan to monitor a DMR HT and a Fusion HT on your favorite channels.

To simplify the setup, plug the Raspberry Pi computer into an Ethernet cable that is plugged into your router. Then use an app like "AdvancedIP Scanner" to learn the IP address of the connection. Enter that address in a browser window to display the Pi-Star pages.

The duplex hotspot will require some changes to the Pi-Star programming. Begin by switching the "Control Mode" on the top of the "Configuration" page to "Duplex Repeater" and click on "Apply Changes".

Control Software	
Setting	Value
Controller Software:	<input type="radio"/> DStarRepeater <input checked="" type="radio"/> MMDVMHost (DV-Mega Minimum Firmware 3.07 Required)
Controller Mode:	<input type="radio"/> Simplex Node <input checked="" type="radio"/> Duplex Repeater (or Half-Duplex on Hotspots)

At the bottom of the "MMDVM Configuration" frame you will be required to select the type of screen display being used. In this example a "Nextion" 4.2 inch screen is used and the port is "Modem".

DMKZNXDN:	<input type="checkbox"/>	Uses / prefix on DMKGateway
POCSAG:	<input type="checkbox"/>	POCSAG Paging Features
MMDVM Display Type:	Nextion	Port: Modem
		Nextion Layout: G4KLX

Next, on the same "General Configuration" page, separate the transmit and receive frequencies by 10 Mhz instead of the normal 5Mhz, then "Apply Changes". This will reduce the chance of crossover between your HTs when transmitting.

General Configuration	
Setting	Value
Hostname:	duplex42 Do not add suffixes such as .local
Node Callsign:	AE9EE
CCS7/DMR ID:	3102913
Radio Frequency RX:	431.550.000 MHz
Radio Frequency TX:	421.550.000 MHz

Since this hotspot is transmitting on the 421.550 frequency as shown above, you will need to add a Digital Contact in your code plugs in each of your HTs for that frequency. Remember, the transmit frequency from your hotspot will be the RECEIVE frequency in your HT. The same applies to the HTs transmit frequencies. They will be set to the RECEIVE frequency on your hotspot.

Just below the frequency setting in Pi-Star is the "Radio/Modem Type" selection box. You need to set that to the type of modem you have, in this example it is a MMDVM hotspot dual hat. Then select "Apply Changes".

URL:	http://www.qrz.com/db/AE9E	<input checked="" type="radio"/> Auto <input type="radio"/> Manual
Radio/Modem Type:	MMDVM_HS_Hat_Dual Hat (VR2VYE) for Pi (GPIO)	
Node Type:	<input type="radio"/> Private <input checked="" type="radio"/> Public	

Establish a separate “Zone” and “Channels” in your code plugs in your HTs. If the hotspot is physically close to the HTs, set their power output to their lowest power setting. In addition, you may need to increase the Squelch on your HTs if you hear any cross-over noise during test transmissions on either HT.

The settings in Pi-Star should initially be set to a Parrot channel so you can test the Duplex Hotspot with both of the Fusion and DMR HTs easily. Select “Apply Changes”.

Your DMR code plug should allow you to select the 9990 parrot channel. Make sure it is set as a “Private” channel so it will work properly.

If your Fusion radio has “AMS” Automatic Mode Select, turn it off in the programming and select “DN” digital mode instead.

Before leaving the Pi-Star Configure page select the “Expert” menu item at the top. Then, select the “MMDVM Host”. Within the first “General” box at the top of the page, put a “1” in the “Duplex” box and “Apply Changes”.

General	
Callsign	AE9EE
Id	3102913
Timeout	240
Duplex	1
RFModeHang	300
NetModeHang	300
Display	Nextion
Daemon	1

At the bottom of the “Configuration” page is the “Wireless Configuration” box. You can enter the WiFi channels you may be using with this hotspot. It will hold as many as 10 SSID addresses. The hot spot will then search for the strongest nearby signal from those entered and connect to that signal. This enables you to use your cell phone as a WiFi connection when operating mobile.

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2020 RARA Field Days VHF Exercise

KC9OJP and KC9GOL will be working a remote station in Lena IL. Using the call WX9WAS.

They will be running an exercise to test the capabilities of Rockford Amateurs to make contacts using VHF on QTH, mobile and HT. They will monitor the .610, .390 and .195 repeaters for traffic along with simplex on 146.430 and 10 meters on 28.375 usb.

They will also putting out calls on VHF, and 10 Meters both voice and JS8 Call.

They will be looking for contacts from different parts of the county so operators can try to connect from both their QTH's and Mobile. When making contact let them know what repeaters they tried, the type of radio used (HT, Mobile, QTH)

Below is the schedule for the event:

June 27th

1:00-2:00 VHF Only

3:00 – 4:00 VHF and 10 Meters

6:00 – 8:00 VHF and 10 Meters

8:00 – 10:00 JS8 Call on 28.200 usb

June 28th

9:00 – 10:00 VHF Only

10:00 – 11:00 VHF and 10 Meters

12:00 – 1:00 JS8 Call on 28.200 usb

AMATEUR RADIO EXAM NOTICE

There will no longer be testing available in Rockford.

Contact Brandon for more information as to the Freeport IL testing times and location.

Brandon J McGrew bmacmagoo@hotmail.com There is also testing available in Janesville.

Contact wi9fry@gmail.com For mote info.

2020 RARA Officers and Board

Officers:

President - Larry Schubert, AC9GO, 815-624-7772, larry.schubert@gmail.com
Vice President - Dan Hallstrom, KB9LOJ, 815-229-7526, hallstrom@gmx.com
Secretary - Jennifer Van Zieleghe, KD9FMJ, 815-222-4221, jenleek@usa.com
Treasurer - Gordon Seaman, KC9NEX, 815-262-0294, kc9nex@gmail.com
Repeater Chairman - Kurt Eversole, KE9N, 815-389-2784, kurt.eversole@gmail.com

Directors: Bill Callow, 815-298-1923, KC9OJP, bill5002@comcast.net

James Curtis, 779-537-2233, KC9GOL, jimhcurtis7818@yahoo.com

Jeffrey Metters, KD9MEC, 815-670-5506, jeffmetters@gmail.com

Mark Broman, 815-218-5514, N9CNW, markbromab@hotmail.com

Hamrag Editor - Jeffrey Metters, KD9MEC, 815-670-5506, jeffmetters@gmail.com

Webmaster - open—need help—

Repeater License Trustee - Gordon Seaman, KC9NEX, 815-262-0294, kc9nex@gmail.com

Local Events and Information

UPCOMING EVENTS

JUNE 12th 2020 - On Live Radio 7pm - 146.610

JUNE 27-28 2020— ARRL Field Day



RARA Repeater Information

Both repeaters (146.610 and 147.000 (both have a pl 114.8)) will function with both digital and analog radio signals, but the repeaters require time to determine whether the signal is digital or analog. To operate the repeater properly you must first be sure the frequency is clear, then key and hold the microphone button down for **1-2 seconds**. Then begin speaking. If you fail to do this, the first part of your message will be lost.

Area Nets

Monday Night RARA Information Net - The purpose of the net is to disseminate RARA related information as well as other Amateur Radio related information. As a club sponsored activity, please check in with Jimmy, KC9GCR, (net control). **146.610 - offset (pl 114.8)** RARA repeater at 8:00 pm, every Monday, except on holidays.

Friday Night Fun Net - Every Friday night at 8:00 pm on the **146.610 - offset (pl 114.8)** RARA repeater with Jimmy, KC9GCR, as net control.

Tuesday Night Health Net—**146.610** hosted by Larry AC9GO, 7 pm

Thursday Night Health Net— **147.195** hosted by Bill KC9OJP, 7 pm

RARA Membership Form

If you would like to join the Rockford Amateur Radio Association, please fill out the form below and mail it (with the membership fee payment) to the address shown at the bottom of the form. If you would like to join at our next meeting (see cover for meeting details), fill out the form and bring the form with your payment to the meeting and see our treasurer. **Thank you for your support!**



MEMBERSHIP APPLICATION

website: w9axd.org

Membership Type: New (New memberships after July 1st are 1/2 price) Renewal

Annual Fees: \$20 - Student (up to age 24)

\$35 - Adult (25-61 years old) \$25 - Senior (Starts the year you will turn 62)

Above rate includes the
RARA monthly newsletter, HamRag (website download)
HamRag via USPS: \$12 extra

Name: _____

Call Sign: _____

Email Address: _____

Address: _____

Town: _____ State: _____ Zip: _____

Home Phone #: _____ Work #: _____

Cell #: _____ Ext: _____

Radio Interests: _____

May we make your phone and e-mail available for other RARA members only? Yes No

Comments: _____

RETURN THE COMPLETED FORM TO:
ROCKFORD AMATEUR RADIO ASSOCIATION
P.O. BOX 8465
ROCKFORD, ILLINOIS 61126

All membership applications to become either a new member or to be reinstated as a member of RARA must be approved by the RARA board.

Approved: _____ Membership Year ____/____/____ to ____/____/____