



**ARRL**  
Affiliated

[www.arrl.org](http://www.arrl.org)



**SEMARC**  
**WØCGM**

[www.semarc.org](http://www.semarc.org)

### FIRESIDE CHAT

The Fireside Chat is held on the first and third Tuesday of the month. This month it is on Tuesday December 7<sup>th</sup> and Tuesday December 21<sup>st</sup> at 7:00 p.m. It will be a Webex virtual meeting at:

<https://richardlroberts.my.webex.com/meet/rrobert>

The format is open and will be without an agenda or focus. It will be a great opportunity for both new and experienced hams to ask questions and share experiences. Please join us!

### SEMARC BOARD MEETING

Our next meeting for the board is December 14<sup>th</sup>. We plan to have a virtual meeting. Joe Hibberd will send out an email to all members the day before with instructions on how to join in on the meeting.

**Note: No Board Meeting in January**

### REGULAR MEMBER MEETING

**Note: No Membership Meeting In December & January**

*The members of SEMARC wish to extend their sincere condolences on the passing of SARA PRESIDENT and SEMARC member Joe Heitzinger's (KCØOIO) father*



### Note from the Prez, RYC KDØZWM



Your daily dose of Duluth history from Zenith City Press:

### November 12, 1869: First telegraph exchange between Duluth and St. Paul



On this day in Duluth in 1869, the first telegraph messages were exchanged between St. Paul and Duluth. At noon, St. Paul mayor James T. Maxwell sent this message: "To Duluth City. St. Paul City, head of the Great River, sends greetings to Duluth, her sister of the Lakes and Gateway to the Seas."

Ryc Lyden, KDØZWM, AuxComm

### SEMARC Annual Business Meeting

Will be held on January 11, 2022 at the Green Mill Restaurant in Hastings. Mark your calendar now to save the date.

### MEMBERSHIP RENEWALS 2022

Membership in SEMARC runs from January 1 to December 31.

[Cont. on page 2](#)

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### MEMBER MEETING PROGRAM SURVEY

The Board is always looking for program ideas for the member meetings. What would you like to see for programs this year? Please send your ideas to Dick Roberts [n0uc@comcast.net](mailto:n0uc@comcast.net) and he will bring your ideas to the Board meeting.

### ARES REPORT

Just a reminder that our ARES repeater frequencies are 147.180, PL 74.4 in Newport, or PL 100 in Forest Lake.

### INFORMAL CW ROUND-TABLE NET

Every Wednesday evening at 1900 hours on 28.110 MHz

### WEDNESDAY NIGHT 2M NET

Our club holds a 2-meter net every Wednesday at 8:00 p.m. It is an informal, but controlled, net on the 146.985 repeater. We are in the need for several alternate Net Control Stations who can fill in when one of the scheduled NCS is not available.

If you are interested, please contact:

Dick Roberts at  
[n0uc@comcast.net](mailto:n0uc@comcast.net)

### THE DIGITAL CORNER

Digital Net follows SEMARC net on Wed pm.

Go to [www.w1hkj.com](http://www.w1hkj.com) for software & help.

Fldigi v. 3.23.09 Flmsg v. 2.0.17  
Flamp v. 2.1.03 Flwrap v. 1.3.4

Meet on 146.985 and QSY to 144.950.

Mode is BPSK125. Other modes possible.

Sign up with N0UC  
[n0uc@comcast.net](mailto:n0uc@comcast.net) for net bulletins & help.

Due to the recurrence of COVID-19 in Minnesota, the board of directors decided to return to a virtual meeting for the November 30 membership meeting.

Log in to <https://richardlroberts.my.webex.com/meet/rlrobert> for the meeting.

Watch for updates and more information in the Sunday Bulletin email message.

### New Member Benefits of ARRL Membership

Some of the benefits of joining ARRL are affordable insurance on your radio equipment, awards, e-mail forwarding, license renewal, technical information and regulatory information.

<https://www.arrl.org/member-benefits>

<https://www.arrl.org/get-on-the-air>

With **more than 160,000 members**, ARRL is the largest organization of radio amateurs in the world.

New US Members can get printed **On The Air** geared for new hams or **QST** magazines starting at \$49 via standard mail. Also included are the digital versions of both.

Also check out SEMARC's UseFul Links page at [http://www.semarc.org/P10\\_UL.htm](http://www.semarc.org/P10_UL.htm)

### November VE Session Report

We had two candidates show up. One new Extra and one who passed Tech, General, & Extra. Reminder last month was the last test session for the year. December's meeting will be at the North Pole for Breakfast.

Thanks Everyone,

Dan Franz WDØGUP.

Any questions call the club hot line at 651-769-0358 or email  
[wd0gup@hotmail.com](mailto:wd0gup@hotmail.com).

VE News, we will be normalizing VE operations as it relates to COVID. For the time being I will still preregister candidates and VE's. That means no walk-ins but we also will not have head count restrictions. I also have incorporated a self-survey and ask anyone that answers yes to any of the questions to call me.

Thanks to all VE's that helped us get through this tough COVID time.

Thanks,

Dan Franz. WDØGUP

### Planning Calendar

December 14 <sup>th</sup> (T) Board Meeting	Jan. 11 <sup>th</sup> (T) <b>Annual Business Meeting</b>
December 18 <sup>th</sup> (S) B'fast - <b>NO VE TEST</b>	January 15 <sup>th</sup> (S) VE Session & B'fast
December <b>No Club Meeting</b>	January <b>No Club Meeting</b>

### SEMARC VE Sessions

VE exam sessions are held every 3rd Saturday. The next VE session is on January 15<sup>th</sup>. Exams are held at 9:00 am at Zion Lutheran Church. Call 651-769-0358 for information, to register or to arrange for special needs. Information is posted on the webpages also. **No testing in December.**

## Board Election

At the October membership meeting the current board members were re-elected. They are Ryc Lyden KDØZWM, President; Dave Larson KEØHAL, Vice President; Joe Hibberd W3QLC, Secretary, Dave Blume KDØIRF, Treasurer; Dan Franz WDØGUP, Member-at-large; and Dave Schultz KBØSED, Trustee. Dick Roberts NØUC and Skip Jackson KSØJ remain as Members-at-Large for one more year.

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## Recently SEMARC conducted a survey of members

It covered such subjects as meetings, programs, radio nets, field activities and general comments. Your input to the survey was helpful for the Board of Directors to plan activities in 2022.

Some of our new members said they want to learn some general operating procedures. The best way to learn that is to participate in our radio events, such as Winter Field Day on January 29-30. We will try to provide at least one radio event each month. Come on out, watch and listen to experienced hams, and try your hand at the controls.

Other members expressed a desire for assistance with setting up their shack or installing an antenna. SEMARC has a Member Assistance Program to help you get on the air.

Contact Joe Hibberd W3QLC at [joehibberd11@gmail.com](mailto:joehibberd11@gmail.com)

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## Did you know ...

The SEMARC webpage contains links to many websites that are helpful to new hams and experienced ones.

Visit [www.semarc.org/P10\\_UL.htm](http://www.semarc.org/P10_UL.htm).

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## New Club members can:

Keep in touch, post amateur related articles, sell amateur related items or asked for help and/or questions of other members.

This is a private network for our member's only and does not allow incoming or outgoing traffic to other networks.

Members will be getting an email requesting them to join and they can opt in or out. This will occur in the first week of December.

Dick NØUC

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[Cont. from page 2](#) - Membership Renewals 2022

## Membership Renewals 2022

Membership in SEMARC runs from January 1 to December 31. You may renew or extend your membership at any time. Annual Dues are \$20/year for a regular membership. Family memberships are \$30/year. Full-time students are just \$10. Youth under 18 years old are free. Membership applications are available at [www.semarc.org/files/Forms/Member\\_Appl\\_2022.pdf](http://www.semarc.org/files/Forms/Member_Appl_2022.pdf).

[\(Or print from the newsletter\)](#)

Please complete the form so that we have your current information. You can drop off the form at the next meeting or mail it to the club office identified on the form. Thank you for your support of SEMARC.

**Joe Hibberd, W3QLC Secretary**

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## AFMARS

See below, contact information for Randy, he's the Point of Contact (POC) to start the application process to join the U.S. Air Force Military Auxiliary Radio System (MARS).

Randy Wabik  
AFW5T / AFS54C / AFA5ZV  
5th Comm Wing Training Officer  
54th Comm Group Commander  
EM: [afa5zv@gmail.com](mailto:afa5zv@gmail.com)

Thanks!

[Cont. next page](#)

## USAF MARS

### *Our mission. Our challenge.*

In addition to providing high frequency (HF) radio contingency communications support to the Department of Defense, MARS operators support other elements of the U.S. government. For example, we actively participate in the National Communications System Shared Resources (SHARES) HF Radio Program, which promotes interoperability among more than 100 federal, state and private sector entities in support of national security & emergency preparedness. U.S. Air Force MARS members are experienced radio operators who communicate on military frequencies using both voice and digital modes. We voluntarily devote our time and resources to ensure that the Defense Department has reliable contingency communications capability if needed, regardless of circumstance. AFMARS operators also provide support to individual military installations as well as the National Command Authority.

AFMARS primary operational requirement is to establish AFMARS communication nets, configured to support a broad spectrum of potential applications over a wide range of territorial and organizational entities. Wing HF Nets, the Military Support Net, TRANSGLOBAL HF nets are the backbone of the AFMARS HF communication network.

Our work is challenging and highly rewarding, every day.

USAF MARS is an Auxiliary Unit of  
Hq Air Combat Command CCC/CYZ  
Air Forces Cyber

AFMARS is organized, mirroring USAF organizations, as 10 Wings. Within the collective Wings are 50+ Groups, each composed of a state, territory or territorial island grouping.

1st AFMARS Communications Wing  
CT - MA - ME - NH - RI - VT

2nd AFMARS Communications Wing  
NJ - NY

3rd AFMARS Communications Wing  
DE, MD & DC - PA - VA - WV

4th AFMARS Communications Wing  
AL - FL - GA - KY - MS - NC - SC - TN - PR & VI

5th AFMARS Communications Wing  
IL - IN - MI - MN - OH - WI

6th AFMARS Communications Wing  
AR - LA - NM - OK - TX

7th AFMARS Communications Wing  
IA - KS - MO - NE

8th AFMARS Communications Wing  
CO - MT - ND - SD - WY - UT

9th AFMARS Communications Wing  
AZ - CA - NV - HI - Guam & Pacific Islands

10th AFMARS Communications Wing  
AK - ID - OR - WA

Email to [join@afmars-mil.us](mailto:join@afmars-mil.us)  
All queries answered same day

Call 888-778-6277  
Recordings about AFMARS  
and membership application

AFMARS Form 100-1 Effective March 2021  
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## AIR FORCE MARS



Your  
United  
States  
Air Force  
Military  
Auxiliary  
Radio  
System

Providing Contingency Radio Communications as  
directed by the United States Department of Defense



USAF AIR COMBAT COMMAND

## QUALIFY AND APPLY

**You:** Are a US Citizen or Resident Alien,  
18 years or older, holding a current FCC  
Amateur Radio License.

**Your radio station:** Has an HF radio and antenna covering  
1.8-30 Mhz USB, minimum 100 Watts  
PEP RF output which can be made to operate outside Amateur Radio bands, and is capable of operating voice and digital modes on upper sideband as specified by HQ AFMARS. AFMARS-issued software requires a Windows 10 computer and a digital-capable radio or add-on digital converter.

**Apply:** Individual Volunteer Members are FCC-licensed amateur radio operators who are approved for MARS membership by HQ AFMARS through a formal vetting and training process which starts with your completed application and a copy of your FCC license emailed to [join@afmars-mil.us](mailto:join@afmars-mil.us) or paper copies mailed to:

AFMARS Recruiting Officer  
P.O. Box 652  
Round Rock, TX 78680

Email: [join@afmars-mil.us](mailto:join@afmars-mil.us) to request  
your application form and instructions  
or call 888-778-6277 for information

## PRIMARY ASSIGNMENT

Your primary assignment can be one of Group, Wing or National AFMARS HF daily nets. After becoming fully qualified, some members may be assigned to the 11th AFMARS MARS RADIO Squadron, the 12th AFMARS Military Support Network Squadron, one of the TransGlobal networks or a Base Support Team as their primary assignment. You will operate a minimum of 12 hours per calendar quarter in your primary assignment and participate in at least one COMEX joint Army-Air Force MARS exercise each year.

## YOUR TRAINING

You will receive personalized training, to be administered by your Wing Training Officer, during which you will learn:

- AFMARS network operations and message composition & handling
- Digital protocols
- Net Control Operations
- Communication Security and Protection of Personal Information
- Data encryption/decryption, and
- Take an open-book final test
- You must complete all training tasks within 6 months of the date of your membership approval

## AFMARS IS DIGITAL

The current Air Force approved data mode is: M110A.

Air Force MARS message traffic travels via :  
HF Radio USB  
ALE HF Radio  
WinLink

## WE ARE PREPARED

Our service to Air Force MARS is challenging. We are motivated to participate each week by checking into nets, creating & sending practice or exercise message traffic while maintaining our required training and operational proficiency. This is the service we provide to DoD. We recruit, train and organize to meet the challenge every day. It takes about one to two hours each week, on average, to maintain our membership commitment. We look forward to signing on to our daily wing nets, which convene morning and evening, every day. We receive and originate message traffic and sometimes relay messages when propagation limitations require it. All transmissions are encrypted to assure data security. That routine practice makes operating during a formal exercise or a real incident responsive, precise, and efficient. We train each and every day so that when it counts, AFMARS can assure accurate & timely communications in any contingency or crisis.

SERIOUS RADIO FOR SERIOUS HAMS

WE ARE MASTERS OF THE HF DOMAIN



### DAVE LARSON KEØHAL THUMBNAIL AUTOBIOGRAPHY

I was born in La Crosse, Wisconsin and graduated from high school in 1968.

Being extremely interested in aviation, I was lucky enough to participate in a federally sponsored aviation class for local high school students and went on to become licensed as a private pilot at the age of eighteen. Then I enlisted in the United States Army for the Helicopter Pilot training program. I graduated from flight school in 1970 and was appointed as a Warrant Officer. Thirty days later, I was in Vietnam and assigned to the famous 1<sup>st</sup> Cavalry Division. I flew UH-1 (Huey) helicopters supporting my heroes the infantry. After a year I went home and received an early out from the Army.

A week after I returned home, I started college, and joined the Wisconsin Army National Guard in Madison, Wisconsin to continue my aviation career. After graduation from the University of Wisconsin-La Crosse in 1975 with a degree in accounting, I landed a job with the Defense Contract Audit Agency (an agency under the Department of Defense) and moved to the Twin Cities. I also transferred to the Minnesota Army National Guard flying out of Holman Field in St. Paul.

I retired from the Army in 1991 as a Master Army Aviator, and then retired from my civilian job in 2005. I kept busy volunteering as an Emergency Medical Technician, Police Reserve Officer, and Police Community Service Officer. I am now a member of the Cottage Grove Public Safety Board.

I earned my Amateur Radio license in December 2015 and now have Extra Operator Privileges. I am currently the SEMARC Vice President and a Volunteer Examiner.

I very much enjoy portable operations and began participating in Parks on the Air this year. Amateur radio has so many facets that anyone can find something they want to become involved with. I am always learning something new and enjoy helping new hams get started in the hobby.

I am happily married with one son. My other hobbies include camping, fishing, deer hunting and the shooting sports.

### **NOTICE:**

146.985 repeater is out of service for repair and users should switch to the 147.18 South with 74.4 tone or 147.18 north with 100 tone till further notice. Our Wednesday will be held there.

Dick, NØUC

Membership meetings are held in **Cottage Grove** at the  
**Zion Lutheran Church 8500 Hillside Trail South**

We meet on the LAST Tuesday of the month at 7:00 p.m. **Except December & January**

New members, especially those who passed one of our VE exam sessions, are encouraged to attend so that we can meet you in person.

We hope to see you there.

(As is our tradition anyone with a birthday in the meeting month is asked to bring cookies or other snack to share.)

Here is a [new section](#) for NEW HAMS studying for a license test with SEMARC & as a refresher for licensed hams wanting to check their knowledge -

Sponsored by **Dan WDØGUP**

Here you go...

Every month we will present three random questions from the VE exams:

Test your knowledge.

This information is widely available on the internet.

The questions are in no particular order and I would Like you to answer each question in three parts:

**First:** What is the correct answer

**Second:** What test did it come from (tech, gen or Extra)

**Third:** Did you know the answer or did you use the internet to find it?

**1 - Which of the following propagation types is most commonly associated with occasional strong over the horizon signals on the 10, 6, and 2 meter bands?**

- a - Sporadic E
- b - Backscatter
- c - D layer absorption
- d - Gray line propagation

**2 - What is the deviation ratio of an FM-Phone signal having a maximum frequency swing of plus-or-minus 5 khz when the maximum modulation frequency is 3 kHz?**

- a - 0.167
- b - 60
- c - 0.6
- d - 1.67

**3 - What is the approximate length for a 1/4 wave vertical antenna cut for 28.5 MHz?**

- a - 8 feet
- b - 16 feet
- c - 21 feet
- d - 11 feet

If you wish to have answers checked  
please email [Dan Franz, WDØGUP](#)

New hams with correct answers at the end  
of this section series will win

*(at the clubs discretion)*

A brand new ICOM IC-7851

**OR**

A *hearty congratulations!* from the club



UNITED STATES OF AMERICA  
FEDERAL COMMUNICATIONS COMMISSION  
AMATEUR RADIO LICENSE

FCC Registration Number (FRN): [REDACTED]

Special Conditions / Endorsements  
NONE

Grant Date	Effective Date	Print Date	Expiration Date
05-13-2016	05-13-2016	05-13-2016	05-13-2026

File Number	Operator Privileges	Station Privileges
[REDACTED]	Amateur Extra	PRIMARY

THIS LICENSE IS NOT TRANSFERABLE

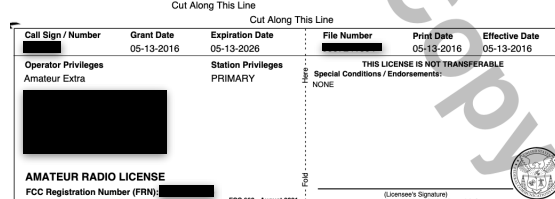
(Licensee's Signature) \_\_\_\_\_

FCC 660 - August 2021

Cut Along This Line

Licensee: This is your ra authorization in sizes suitable for your wallet a for framing. Carefully cut documents along the line indicated and sign immediately upon receipt. They are not valid until signed.

The Commission suggests that the wallet size version be laminated (or another similar document protection process) after signing. The Commission has found under certain circumstances laser print is subject to displacement.



Call Sign / Number [REDACTED] Grant Date 05-13-2016 Expiration Date 05-13-2026 File Number [REDACTED] Print Date 05-13-2016 Effective Date 05-13-2016

Operator Privileges	Station Privileges	Special Conditions / Endorsements
Amateur Extra	PRIMARY	NONE

THIS LICENSE IS NOT TRANSFERABLE

AMATEUR RADIO LICENSE  
FCC Registration Number (FRN): [REDACTED]

FCC 660 - August 2021

Cut Along This Line

## **PARKS ON THE AIR (POTA) REFERENCES**

After my presentation at the SEMARC October member meeting, some members asked me to provide information on Websites for POTA. These are the main websites to use:

<https://parksontheair.com/>

<https://pota.app/#/>

Good YouTube channels that contain POTA information and are enjoyable to watch (in my opinion) are as follows:

<https://www.youtube.com/c/KB9VBRAntennas>

<https://www.youtube.com/c/OutdoorsOnTheAir>

<https://www.youtube.com/c/K8MRDRADIOSTUFF>

[https://www.youtube.com/results?search\\_query=ham+radio+cq](https://www.youtube.com/results?search_query=ham+radio+cq)

There are many additional good references, so do some research and I'm sure you will find what you need.

Dave Larson, KEØHAL



**Mike Diehl @w8lid · 6/18/21**

...

**Got the @zwoasi ASlair mounted. Why didn't any of you tell me that astronomy was going to require more cables than ham radio? There's still two more I need to add too.**



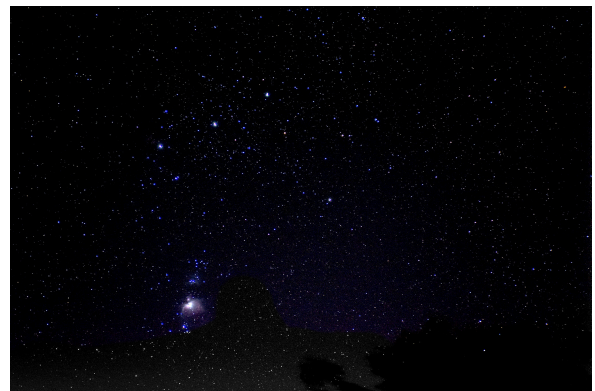
I follow Mike Diehl W8LID on Twitter. One smart guy. The attached photo and comment were too good to pass and with Mike's permission I just had to share it. Mike always has very interesting posts and great astro photos. Also does ham radio, computer and a variety of other interests.

I encourage you to check him out.

My son Matt KC9DKU started doing some astrophotography this year. He has some nice equipment. A couple months ago I began playing with it too. I was surprised with the results that could be accomplished with only a DSLR. (Ham Radio & Astrophotography adds up to some expensive hobbies!)

If anyone in the club has experience combining ham radio with other hobbies please consider writing a small piece to include in our newsletter.

Roger AEØTE



One of my first photos. Orion's Belt and M42  
Nikon D7100 105mm lens f/4.5 22 exposures at 3 sec. ISO 3200

## ❄️ Winter Field Day ❄️

**Where:**

To be held at Fire Station #3 in Cottage Grove  
7500 Langley Avenue South  
Cottage Grove, MN 55016

**When:**

01/29/2022 - 01/30/2022

Setup begins around 10:00 am on Saturday - Concludes after 1:00 pm on Sunday

Winter Field Day runs for 24 hours during the last full weekend in January each year from 1900 UTC (2pm EST) Saturday to 1900 UTC (2pm EST) Sunday. For 2022 the dates are January 29th and 30th. Station set-up may commence no earlier than 1900 UTC (2pm EST) on the Friday before. Station setup may consume no more than 12 hours total. How & when you schedule/spend those 12 hours is up to you.

**Bands:** All Amateur bands, HF, VHF, & UHF except 12, 17, 30 and 60 meters.

**Modes:** Any mode that can faithfully transmit the exchange intact without a conversion table...

CW, SSB, AM, FM, DStar

Suggested Frequencies: (to make it easier to find each other)

HF CW – 1.810 - 1.820, 3.530 - 3.550, 7.030 - 7.050, 14.035 - 14.055, 21.030 - 21.050, 28.030 - 28.040

HF SSB – lowest 30 kHz of the US General Class Phone bands (160m-15m), 28.400-28.425MHz (10m)

6m/VHF/UHF – adjacent to, but not on, nationally recognized simplex calling channels

**Category:** Most likely as in the past, 2I (Indoors) Minnesota

David S Blume, KDØIRF



### Stillwater Amateur Radio Club

SARA has graciously welcomed SEMARC members to attend their events, and more...

[Round Robin Ragchew on the SARA repeater](#)

147.060 - info to access the repeater is here [WØJH Repeater](#)

Tuesday's - 7:00 pm - 8:00 pm      Wednesday's - 9:00 pm - 9:30 pm

[Social/Special Meetings](#)

Thursday Evenings: Social and informal "Eyeball QSO"  
sessions from 6PM to 8PM

### South East Metro Amateur Radio Club

Dick Roberts, NØUC  
1655 - 68th Street West  
Inver Grove Heights, MN 55077-2222  
651-208-0889



Welcome to the Washington County ARES website (ARES Unit 163MN01).... Face - to - face ARES activities are in suspension until further notice due to Covid-19.... Check the two ARES Digital Nets in Minnesota and participate; Info under the [Events tab](#) gives details.....60 Meter Interoperability exercises scheduled = see events tab and participate with us!!....The 147.180 Repeater is running at the Newport site (PL 74.4) and Forest Lake site(PL 100); we use this repeater for drills and activations. This covers the entire county and is in our WashCoARES Emergency Communications Plan... Support our Amateur Radio Clubs through your participation.

John Regan, KAØYHR

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## CLUB APPAREL

You have seen some members wearing SEMARC caps, shirts and jackets. If you would like to order one for yourself, visit our website at [ApparelOrderForm.pdf \(semarc.org\)](#), then contact our order coordinator Dan Franz at [wdOgup@hotmail.com](mailto:wdOgup@hotmail.com). Dan will accept your order and payment, then order the item(s) from our vendor Advanced Sportswear in Newport.

If you have questions, contact **Joe Hibberd** at [joehibberd11@gmail.com](mailto:joehibberd11@gmail.com).

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## REMEMBER

**Members** can advertise items for sale AND items you are looking for.

The fee for placing ads is a membership in the SEMARC club, a small price to pay for access to all the club benefits and the many club members and their friends in other clubs that may be looking for just what you have to offer.

Also we can use articles in any aspect of Ham Radio that is of interest to you that may benefit the rest of us.

For example, EME. I would love to try my hand at it but have neither the money nor access to sky to make it possible. And yes, portable for sky access would be possible, but the funds still hinder my desire.

But, this is a prime example of where someone could share their experiences and insights on having fun doing various unique aspects of the hobby.

Rambling over...

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## I have the following for sale:

Yaesu FTM-7250D - \$200

144/430 MHz dual band mobile, with C4FM communication modem. Three power levels up to 50 watts. Expanded coverage 108 - 579 MHz. Group ID and Group Monitor functions. 225 memories. Already programmed with most Metro repeaters. Excellent condition. \$200.

Joe Hibberd W3QLC

