



MARANews



January, 2020
Volume 58 Issue 1



<http://www.w1mv.org>



<https://www.facebook.com/w1mvmaral/>



<https://twitter.com/search?q=Massasoit%20Amateur%20Radio%20Association&src=typd>

Next meeting is February 18th, 2020 at 6:30am at the Bridgewater EOC. Talk-in is on 147.180+ (See below for a map)

Membership Renewal: With the beginning of each year comes the time for membership renewal and the payment of dues. You can bring your payment to the next meeting or send to our post office box at MARA P.O. Box 428 Bridgewater, MA 02324. Our smiling treasurer will be happy to see or hear from you. **The website has been updated with our current roster of paid members. If there are corrections, please drop an email to maranews@w1mv.org**

Presidents Notes

MARA Facebook page: Our Massasoit Amateur Radio Association Facebook page with club events, meetings, photos, etc. are occasionally updated so that it may be another resource for us on which to spark interest in our club, amateur radio and keep members informed of what we are doing outside of our club meetings and in our community. If you go to the "about" tab on our page you can find our <http://www.w1mv.org/> web page for our present and past newsletters and other club information. Please send Phil N1XTB n1xtb@powersrvcs.com or Wendy KC1GTR kc1gtr.mara.@gmail.com any articles or photos you would like to see in our MARA newsletter, W1MV-MARA Website and Facebook page. Jeff N1ZZN has created a link to twitter to help get the word out even more!

Secretary's Notes - MARA Meeting 01/21/2019 - Wendy White-KC1GTR

Open: WA1BEE - Allen Hiltz called the meeting to order at 6:30pm

Attendance: 12 were present including 4 elected officers.

President - WA1BEE - Allen Hiltz

Vice President - N1ZZN - Jeff Lehmann

Secretary - KC1GTR - Wendy White

Treasurer - N1XTB - Phil McNamara



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WAITOM – Thomas Luckman Jr.
AG1B - Richard Metcalf
N1RTS - Robert Sisson
KB1TEE – Rick Emord

N1IQI - Loren Pimentel
KA1YL - Connie Franciosi
KC1CFO - Denise Sisson
KC1ITF – Mark H

Secretary Notes - KC1GTR - Wendy White

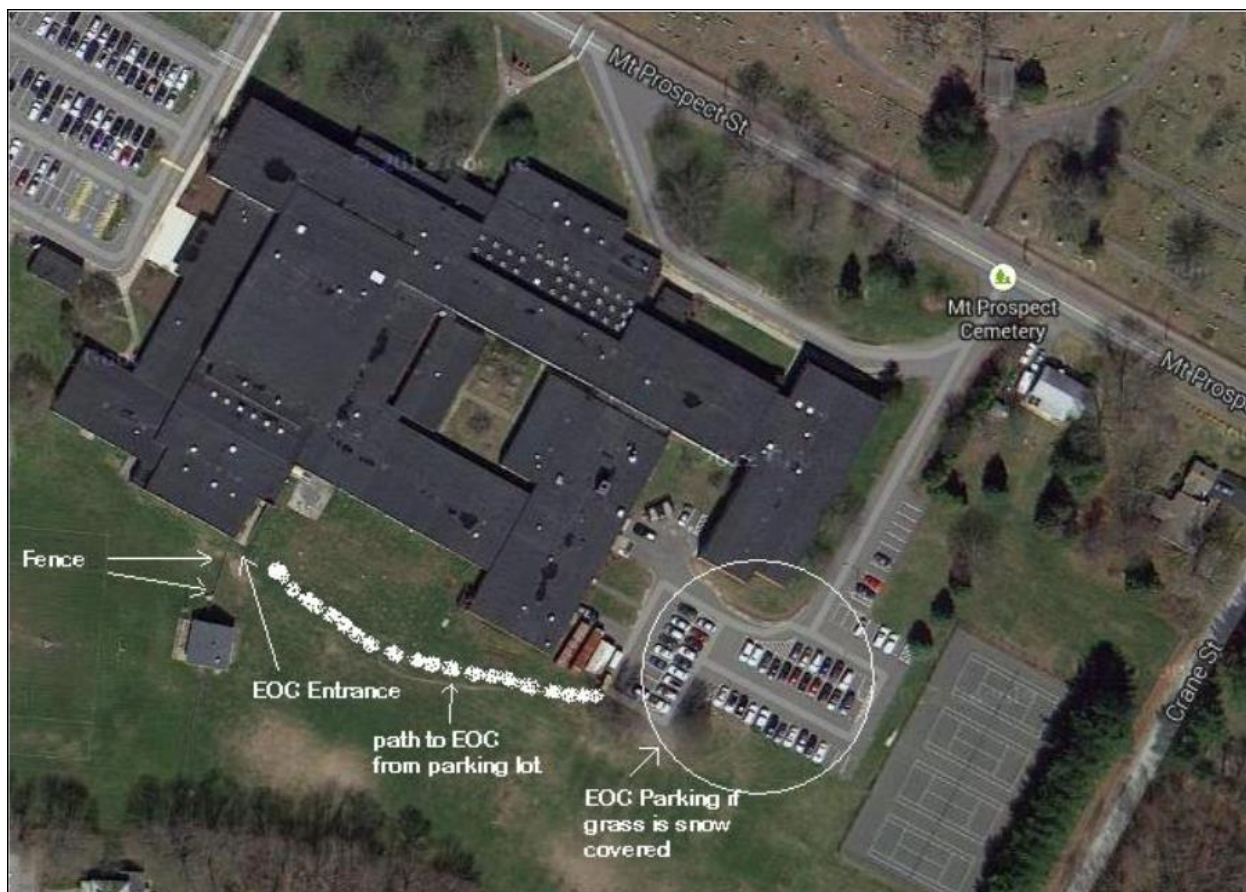
Wendy was late and the minutes were not done. We will go over next month.

Club Treasurer – We will go over next month.

Repeater Report – N1ZZN – Jeff said that there is a CAT5 Cable Connector that needs to be replaced. Mesh network needs some work. Motion to accept Repeater report was made by KB1TEE - Rick and the motion was seconded by KC1CFO – Denise. All in favor, 0 opposed.

There were no new member applications.

Old Business – WAITOM – Tom said we can use the EOC until July. If we want to continue, we will vote on it. Chief said we could have the meetings there and he acquired the permits for us to be there. Custodial approved. Facilities Manager was not agreeable with this but the people who approve or deny our request, approved it. Below is a map of the facility. WAITOM – Tom will come and open the building for us. If there is ever a time he cannot, he will let us know.



KC1ITF – Mark – joined the meeting, welcome.

WA1BEE – Allen voiced his opinions regarding the meetings at the EOC. Time, ease of access, etc. We will see how it goes over the next couple of months. And will keep our slot at the Library blocked out for the year.



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Start time will be 6:30 for social time and the meeting will start at 7:00pm. KC1CFO - Denise made a motion to move the meeting to the EOC and KB1TEE - Rick seconded the motion. All in favor, 0 opposed. March we can vote permanency of the move.

Skywarn Training - need to push a little for new classes to be held locally. EB Cert members are all interested in attending and that is around 10 new members.

New Business - Special Event - Sachem Rock commemorating the purchase of the Bridgewater's. Hold it at the Council of aging in E. Bridgewater. Allen will check for dates.

Sachem Rock Farm

Courtesy Wikipedia

Sachem Rock Farm is a historic farm at 355 Plymouth Street in [East Bridgewater, Massachusetts](#), United States. The farm location is important for a variety of reasons. Its earliest historical association is with the [Wampanoag people](#), who are known to have used the area, particularly around Sachem Rock, a granite outcrop that is the property's high point, prior to European contact. Sachem Rock itself is historically significant as the site of a meeting in 1649 between English settlers from the [Plymouth Colony](#), including [Myles Standish](#), with the Wampanoag sachem [Massasoit](#). In this meeting the colonists purchased rights to a large tract of land, including East and [West Bridgewater](#), [Bridgewater](#), and [Brockton](#).^[2]

The land around Sachem Rock was settled by 1665, with a farm and gristmill nearby on the [Satucket River](#), and has seen agricultural uses ever since. The oldest buildings to survive are a complex of barns and other outbuildings-built c. 1870 by Thomas Hewitt. The Hewitt farmhouse, built in 1869, burned down in 1926, and was replaced by the present two-story Colonial Revival wood frame house by Henry Moorhouse. The property was purchased by the Town of East Bridgewater in 1998,^[2] and is now open to the public. Around 2012, the town [renovated](#) the two-story Colonial Revival wood frame house, and replaced and connected a nearby barn, creating [The Center at Sachem Rock](#) which houses the town's Council on Aging. The facility is rented out as a function hall. Also on the property, during the planting months, residents maintain small gardening plots used for the [East Bridgewater Community Gardens](#).

The farm was listed on the [National Register of Historic Places](#) in 2006.^[1] It is expected to yield archaeologically significant finds concerning its pre-contact uses, as well as the sites of houses, outbuildings, and industrial mills from the colonial period through the 19th century.^[2]

KB1TEE - Rick volunteered his tower and can bring it down and set it up for us. KC1CFO - Denise suggested a date in May or June. Any information gathered please send to WA1BEE - Allen and CC KC1GTR. KB1TEE - Rick made a motion to move forward with special event commemorating the purchase of the Bridgewater's. WAITOM - Tom seconded the motion. All in favor, 0 opposed.



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Facebook page needs some TLC. Currently Jeff Lehmann and Barry are the admins. Wendy needs someone to add her as the admin so she can help bring it current.

Whitman Amateur Club is holding a meeting at the Knights of Columbus on February 5th at 7:00pm – they will be discussing the goings on regarding the ARRL.

KB1TEE – Rick USTNR Group is requesting the use of the MARA repeater on April 25th from 8:00am to 4:00pm.

June 5th and 6th Museum – 8:00 on the ship.

August 18th – Annual Cookout at Rick's – monthly meeting will be held there.

September 19th Launching of the ship – NE1PL – 8:00am to 4:00pm.

USS Wisconsin – December 5th in Virginia.

No new news to be discussed, KB1TEE – Rick made a motion to close the meeting and KC1CFO – Denise seconded the motion. All in favor, 0 opposed.

The K7RA Solar Update

02/14/2020

Courtesy ARRL

There were no sunspots over this reporting week, February 6-12. Average daily solar flux declined over one point to 71.1. Average planetary A index increased from 6.7 to 8.3.

Predicted solar flux for the next 45 days is 70 on February 14-21, 73 on February 22, 74 on February 23-29, 72 on March 1-3, 71 on March 4-11, 72 on March 12-18, 73 on March 19-20, 74 on March 21-27, and 72 on March 28-29.

Predicted planetary A index is 5 on February 14-17, 8 on February 18-20, 5 on February 21-24, 10 on February 25-26, 5 on February 27-29, 8 on March 1-3, 5 on March 4-22, 10 on March 23-24, 5 on March 25-27, and 8 on March 28-29.

Geomagnetic activity forecast for the period February 14 until March 18, 2020 from F.K. Janda, OK1HH.

Geomagnetic field will be

Quiet on: February 15-16, 20-23, March

Quiet to unsettled on: February 14, 19, 24, 28, March 1-4, 7-11

Quiet to active on: February (17-18, 27, 29), March 6

Unsettled to active on: (February 25-26, March 5)

active to disturbed: none predicted!

Solar wind will intensify on February (14-15, 18-20, 27,) 28 (-29,) March (3,) 4-5, (6-10,) 11



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Parenthesis means lower probability of activity enhancement.

Ken, N4SO, writes from Alabama's Gulf Coast, "On 17 meters and the digital mode FT8, the band is open all day to Brazil, Argentina, Italy, Spain, Poland, and European Russia. (This is only a sampling of countries from the first hour, Saturday morning on or about 1200 UTC.) This propagation continues all day to South America and all parts of Europe. These openings are every day with openings also to Japan and to Philippines.

"Seventeen meters is one of the best bands for Europe with continuous signals during the daytime. It is also one of the best bands for Japan starting at about 2300 UTC. This propagation is also reliable every day."

If you would like to make a comment or have a tip for our readers, email the author at k7ra@arrrl.net.

For more information concerning radio propagation, see <http://www.arrrl.org/propagation> and the ARRL Technical Information Service at <http://arrrl.org/propagation-of-rf-signals>. For an explanation of numbers used in this bulletin, see <http://arrrl.org/the-sun-the-earth-the-ionosphere>.

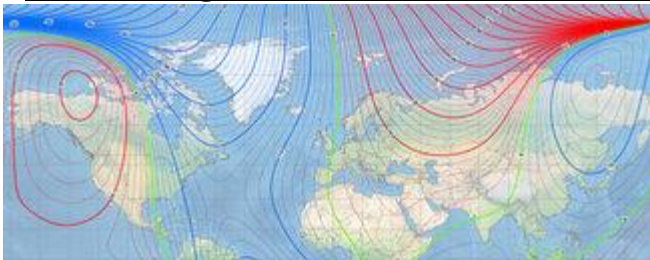
An archive of past propagation bulletins is at <http://arrrl.org/w1aw-bulletins-archive-propagation>. More good information and tutorials on propagation are at <http://k9la.us/>.

Monthly propagation charts between four USA regions and twelve overseas locations are at <http://arrrl.org/propagation>.

Instructions for starting or ending email distribution of ARRL bulletins are at <http://arrrl.org/bulletins>.

Sunspot numbers for February 6 through 12, 2020 were 0, 0, 0, 0, 0, 0, and 0, with a mean of 0. 10.7 cm flux was 71.3, 70.8, 72, 70.6, 70.2, 71.1, and 71.6, with a mean of 71.1. Estimated planetary A indices were 15, 15, 6, 7, 5, 6, and 4, with a mean of 8.3. Middle latitude A index was 13, 11, 4, 5, 4, 6, and 4, with a mean of 6.7.

World Magnetic Model 2020 Released



Courtesy of NOAA NCEI

The latest version of the World Magnetic Model (WMM), one of the key tools developed to model the change in Earth's magnetic field, has been released. Developed by NCEI and the British Geological Survey, with support from the Cooperative Institute for Research in Environmental Sciences (CIRES), the WMM is a representation of the planet's magnetic field that gives compasses dependable accuracy.



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The WMM now includes “Blackout Zones” around the magnetic poles, as defined by the strength of the horizontal field. Between 2000 and 6000 nanotesla (nT) horizontal field strength is the “Caution Zone” where compasses may start to become prone to errors. The area around the pole between 2000 and 0nT is the “Unreliable Zone” where compasses may become inaccurate.

Smartphone and consumer electronics companies rely on the WMM to provide consumers with accurate compass apps, maps, and GPS services. The WMM is also the standard navigation tool for the Federal Aviation Administration, U.S. Department of Defense, North Atlantic Treaty Organization (NATO), and more.

A new and updated version of the WMM is released every five years. The latest [WMM2020](#) model will extend to 2025.

Drifting Poles

Since Earth’s magnetic field is created by its moving, molten iron core, its poles aren’t stationary and they wander independently of each other. Since its first formal discovery in 1831, the north magnetic pole has traveled around 1,400 miles (2,250 km). This wandering has been generally quite slow, allowing scientists to keep track of its position fairly easily. Since the turn of the century, this speed has increased.

The WMM2020 forecasts that the northern magnetic pole will continue drifting toward Russia, although at a slowly decreasing speed—down to about 40 km per year compared to the average speed of 55 km over the past twenty years.

Uses of the WMM

The military uses the WMM for undersea and aircraft navigation, parachute deployment, and more. Other governmental organizations, such as NASA, the Federal Aviation Administration, U.S. Forest Service, and many more use the technology for surveying and mapping, satellite/antenna tracking, and air traffic management.

Airport runways are perhaps the most visible example of a navigation aid updated to match shifts in Earth’s magnetic field. Airports around the country use the data to [give runways numerical names](#), which pilots refer to on the ground.

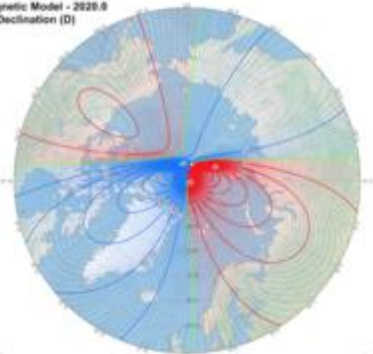
“The declination has changed just over 2.5 degrees over the past 22 years since Denver opened,” Heath Montgomery, the international airport’s former spokesperson, said after a previous WMM update.



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US/UK World Magnetic Model - 2020.0
Main Field Declination (D)



Global map of declination and the dip pole locations for 2020. Courtesy of NOAA NCEI/CIRES.

New England Area Ham - - - Electronic Flea Market DATES 2020 – to follow

New England Area Ham - Electronic Flea Market *** DATES *** 2020 -> ***
Page 3 Electronic distribution only. This page has the overflow if any
from the paper version.

2020						Contact			Source			
~~~~~												
18 Jan	Whitman MA	WARC @KoC Rt18	\$5@8:30	\$15/T@7		Chris N1CFB	508 224 8528					+
15 Feb	Marlboro MA	AARC @MidSch	\$20/T@6:30	\$5@9		Tim KA1OS	508 919 6136					F+
7 Mar	Chicopee MA	MtTARA @Castle	\$5@8:30	S@6:30		Brian N1FI	508 478 6790					+
29 Mar	Southington CT	@HS@8				Bruce WA1RR	203 704 7073					+
10,11 April	Lewiston ME	AARC @ Ramada				Ivan N1OXA	207 577 5152					+
26 April	Thompson CT	ECARC @Raceway	\$3@8	\$15/T		Jon KA1MPG	508 943 4467					+

## For you Flea Market Beginner's

Flea Market Madness! A Beginner's Guide to Buying and SellingTake a trade show, a family reunion, a factory outlet mall, a multifamily garage sale, and spring break at Daytona Beach.... Add a liberal dose of ham radio and computers.... And you've got a modern hamfest. Enjoy. Here's how!By Kirk A. Kleinschmidt, NT0Z, 16928 Grove St, Little Falls, MN 56345, [kirk@cloudnet.com](mailto:kirk@cloudnet.com)Like everything that incorporates technology, ham radio is experiencing its share of changes. Radios are smaller and have features we only dreamed of a mere decade ago. Sunspot cycles come and go (thankfully, the present cycle is perking up!), and a new crop of ham operators is making its



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mark on the hobby. To those with tunnel vision, the sky might seem to be falling. But change is one of the few constants in the universe, and no matter how the technological details ebb and flow, some aspects of our hobby remain the same. Camaraderie, for example, is still an Amateur Radio hallmark. So is the tendency to gather for face-to-face meetings and fun—enhanced, perhaps, by ham radio's geographic diversity. The get-togethers detailed here are called hamfests by some, flea markets by others, and swap meets by a few. The names are interchangeable. If you're a newcomer to the hobby, it's possible that you've never participated in one of these age-old Amateur Radio get-togethers. If so, you're in for a pleasant surprise. Why not pay a visit to your local hamfest? You're sure to have a good time, and you'll probably come away with a few more friends, a few new treasures and a slightly thinner pocketbook. In this article you'll learn some hamfest lore, how to find hamfests in your area, and how to successfully buy and sell Amateur Radio (and related) gear at these amazing ham radio get-togethers. Hamfest flea markets are social events where you're likely to run into almost anyone. Photo courtesy of Rick Lindquist, N1RL. Hamfests—What's in it for Me? Where can you find hundreds (sometimes thousands) of fellow hams, tons of bargain-priced radio and computer gear (including hard-to-find components and electronic assemblies), interesting forums and lectures, ham radio exams, and tasty grilled bratwurst sandwiches? Hamfests, of course. The exact mix of the things you're likely to find depends a lot on the kind of hamfest you're attending, its size, and to some extent, the region of the country. Large multiday hamfests such as the annual Dayton Hamvention, or the many ARRL Division Conventions, attract thousands of hobbyists. Small regional or local hamfests may draw only a hundred. At Dayton, you'll find more than a dozen specialized forums; at a small hamfest in northern Minnesota, you probably won't find any. You will have fun, however, at both extremes. August QST: Flea Market Madness! A Beginner's Guide to Buying and Selling - Page 1 ARRL 1998 QST/QEX/NCJ CD Ci ht (C) 1999 b Th AiR di R ILI Nearly every hamfest has a swap fest or flea market where individuals and commercial dealers hawk their wares. Generally, flea markets on both coasts will have more exotic hardware such as microwave assemblies and transistors, but prices overall will tend to be higher. Smaller Midwestern hamfests may not offer as much high-tech stuff, but you'll usually find a surplus of good, used HF gear. A transceiver that will fetch \$700 in New England might sell for \$500 in Iowa. Many hamfests and flea markets—much to the chagrin of some—are piled high with computer stuff, from obsolete parts to new systems. Computer technology is forever merged with Amateur Radio, so worrying about the number of computer vendors at hamfests is a moot point.





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Why not take a look at everything? CW keys, old and new. So many keys, so little time! Photo courtesy of Rick Lindquist, N1RL. When and Where? Information on upcoming hamfests is available from several sources. Members of your local ham club will probably be "in the know." Hamfests tend to be annual events, publicized well in advance. Check your club's newsletter, packet BBS or Web page for announcements. Nationally, hundreds of hamfests and Amateur Radio events are listed in the "Hamfest Calendar" and "Coming Conventions" sections in QST. Listings usually appear a month or two in advance. You can browse QST's hamfest listings electronically at <http://www.arrl.org/hamfests.html>. When it comes to locations, you're likely to find hamfests held at hotels, schools, parks, National Guard armories, fairgrounds, or civic centers. Organizers usually host events at identifiable and accessible locations (although sometimes you'll wonder!).

**Tips for Smart Shoppers** Because we think of hams as friends, it's difficult to think that we could never run into a bum deal at a hamfest. After all, these people are fellow hams! Although most individuals and commercial outlets selling hamfest gear are on the level, smart shopping and a healthy dose of preventive caution will help you avoid unwelcome surprises. Here are a few tips for buying used radio or computer gear at hamfests:

- Budget your money. If you're at all typical, you don't have an unlimited budget for ham radio acquisitions. For some, going to a hamfest is like going to the candy store. If you're not careful, you'll go home with plenty of "candy" and no mortgage money. That's why it's a good idea to plan your spending in advance. Perhaps you can bring along a few pieces of gear to sell or swap—just in case you find a big-ticket item you just "have to have."

"August QST: Flea Market Madness! A Beginner's Guide to Buying and Selling - Page 2 ARRL 1998 QST/QEX/NCJ CD Ci ht (C) 1999 b Th AiR di R lLI

- Negotiating skills are helpful. If your expectation of ham radio flea markets is reminiscent of open-air Byzantine street markets, then you'll probably do just fine. Haggling over the price of used gear or components—in a friendly and generally reasonable manner—is appropriate and expected. Don't take the negotiating stage too far, however. If someone is selling a \$5000 transceiver for \$50, some out-of-control hamfest shopper will, no doubt, offer \$45.
- Arrive early or stay late. The best hamfest deals are usually made in the first and last hours of each event. Getting to the hamfest early will allow you to snap up some of the best merchandise. If you wait too long, your favorite stuff may be all gone. Alternately, if you play the waiting game, sellers will be quick to discount stuff that did not sell previously.
- Always test expensive gear. If you're buying a major item such as a transceiver or receiver, make sure you're able to plug the thing in somewhere to see if it works. As mentioned previously, most sellers



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represent their merchandise accurately, but it never hurts to power up a potential acquisition. • Returns? In a similar vein, make sure you get the seller's name, address and phone number—just in case. Although you don't expect to have major problems with a piece of gear you've thoroughly inspected and casually tested, it never hurts to be prepared. If the seller is truly compassionate, you may be able to negotiate a return policy. It never hurts to try! As buyer or seller, never be afraid to negotiate. The posted price is almost never the final price! Out With the Old and in With the New If you're looking to upgrade your station equipment or accessories and you don't have tons of extra cash, why not take advantage of "flea market fever" by selling your existing gear at a hamfest to finance all or part of your new setup? Whether you're a total greenhorn when it comes to hamfest salesmanship, or a somewhat seasoned veteran, the following tips will help you make the most of what is sometimes an intimidating experience: Selling stuff to other humans (well, hams!) face to face. Everyone wants a good deal (that's why they buy gear at hamfests in the first place!)—but you, the seller, need to make out okay, too. A win-win scenario is what you're looking for. Tricks of the Trade Selling ham gear for premium prices usually involves more than simply driving a hard bargain. Here's how to turn an average hamfest into an excellent sales experience: • Appearance. That means, you, your table and your gear! Think of your hamfest table as a storefront. If you walked into August QST: Flea Market Madness! A Beginner's Guide to Buying and Selling - Page 3 ARRL 1998 QST/QEX/NCJ CD Ci ht (C) 1999 b Th AiR di R ILI

your local Wal-Mart and found dirty, crusty merchandise strewn across the aisles and greasy-haired employees clothed in ripped up overalls, you'd probably turn around and walk out. Everyone feels comfortable shopping at Wal-Mart because the store is clean and brightly lit, the employees are neat, clean and friendly, and so on. The moral of this story? Make your hamfest table look like "the Wal-Mart table!" Clean up your gear, display it neatly and make index card signs for big-ticket items, listing the details and the price. Dress casually and presentably. • Setup and location. Hamfests are like trade shows in the sense that the location of your table can sometimes make a difference in the number of potential customers who walk by. This is more important for large events, where you don't want to get stuck in some out-of-the-way corner or hallway with limited visibility and traffic. Having ac or dc power available at your table can often help you make sales. Most hamfest buyers are afraid of buying a rig that has problems or doesn't work as claimed. Being able to demonstrate gear on the spot can be a big benefit. In addition, chattering radios and other gadgets in operation at your table attract more shoppers. • Realistic pricing. This is a



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biggie! It's a hamfest, folks! Don't price your used (and sometimes abused) gear as though you were suddenly promoted to sales manager for Neiman Marcus! Remember the win-win scenario? Sentimental attachment doesn't promote sales. Be reasonable—that's how to sell stuff at hamfests. • Talk it over. Many flea market attendees are tire kickers, but with a little salesmanship, many a tire kicker has been "persuaded" to take home merchandise. People like to joke, laugh and have fun (even hams!), so be sure to blurt something out when you catch someone peeking at the stuff on your table. This breaks the ice and sets the stage for friendly chatter—and potential sales. • Negotiating. Nearly every flea market price is at least somewhat negotiable. People will ask you to sell your stuff for less than your asking price, they'll ask you for "volume discounts," and they'll ask you to accept trades. You should at least be comfortable in jockeying your prices a bit, and if you can take a trade, that's just fine. It's your show, but by being flexible you'll be more successful. A 10 to 15% reduction in price seems about right. Anything more turns haggling into railroading! Don't wait for your customers to start haggling—you can get the ball rolling by offering a deal of your own. It works! • Terms and guarantees. To ease buyers' fears of getting ripped off, represent your gear honestly and offer reasonable terms. Some sellers offer a five-day money-back guarantee, especially for big-ticket items, holding onto a customer's payment to make sure he or she is happy with the deal. Why would you want an unhappy ham customer (friend), anyway? • Miscellaneous tips. (1) Arrive early! Many of your best sales will be to other sellers who relish the opportunity to examine everyone's stuff before the masses get through the gates. If you set up as early as possible, you won't have to try to sell and set up at the same time, and you'll be free to search for your own goodies to buy! (2) Be prepared for weather changes if your event is outdoors. (3) Bring a friend or helper so you're not tied to your table for the whole show. (4) Bring lots of change and dollar bills. (5) Accept local checks only or checks from buyers you know personally. August QST: Flea Market Madness! A Beginner's Guide to Buying and Selling - Page 4 ARRL 1998 QST/QEX/NCJ CD Ci ht (C) 1999 b Th AiR di R ILI

You'll find used transceivers in abundance but make your choices carefully. Photo courtesy of Rick Lindquist, N1RL. Good Luck! Hamfests are a wonderful part of Amateur Radio. They will sustain you through thick and thin. They will open doors to new pursuits. And they will expose you to interesting and handy-to-know friends and fellow hams. If you've never attended, get busy! If you live near a large metropolitan area, you can find at least one nearby hamfest almost





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every weekend. If you're in a more remote area, you'll have to plan ahead. Whatever it takes, you owe it to yourself to see what it's all about. You'll see me there, pawing through the weird stuff under the tables.... The author, a ham since age 13, was a QST editor from 1988 through 1994. During his time in New England's "hamfest alley," Kirk dragged home dozens of "unbelievable" flea market finds. He now lives in Minnesota's lake country where he works as a technical writing/technical marketing consultant and freelance writer. He's a regular contributor to QST.

**Buying Your First HF Rig at a Hamfest**

Choosing your first rig can be confusing! The vast array of radios—new and used—is bewildering at best. Should you buy a brand-new whiz-bang rig with all the bells and whistles? Or perhaps a midrange rig in that cozy 4 to 8-year-old span where gear is still "awesome enough," yet much more affordable? You could also buy a brand new "beginner's rig," a relatively affordable modern radio that sports only the most essential functions. Or, if your budget is tight, you could get lucky and come up with a well-cared-for older rig from the 1970s through the mid-1980s. There are additional considerations. Do you even want a transceiver? Or will a separate transmitter-receiver pair be more to your liking? Are tubes okay, or do you need "solid state all the way"? Will the wall socket always power your rig, or is dc power desirable? And what about size? Big, small or in between? Warranty? Service? It's not always an easy choice!

**Radio Buying Tips**

- Think about what you'll actually do with your shiny new (or lovingly used) radio. Analyze your interests, the bands you'll be using, the modes you'll be using, the power output you require (or can afford), and so on. If you'll always use SSB, buying a rig with an expensive built-in CW filter may be a waste of time and money.
- Shield yourself from the glare of hundreds of shiny, beckoning pushbuttons and gizmo switches. "Creeping feature-itis" can strike anyone, anywhere! Your first rig won't be your last, so go easy until you've had a chance to explore your new hobby a bit further. Then, with some experience under your belt, go for the gusto if you need more radio.
- Before trekking to the nearest hamfest, check out the "Product Review" column in QST. Nearly every mainstream radio made since the late 1960s has been reviewed there. You'll also get performance specs, features, a look at the controls and connectors—the whole nine yards. The League's Radio Buyer's Sourcebooks, Volumes 1 (1981-1991) and 2 (1991-1993), available from your local Amateur Radio dealer or from the ARRL, save you the trouble of looking through all those back issues. Each features the most popular rigs and accessories reviewed in QST over the years.
- Buying from a dealer—whether the rig's new or used—can be safer than buying from an individual. In addition to hardware, dealers offer information, service and a bit of security. Make sure the dealer you choose has a reasonable return



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period (a modest restocking fee is acceptable) and try to purchase your rig with a credit card, if possible. You'll be protected if the rig turns out to be a lemon.

**Used Rigs to Consider** If you've decided to buy a used rig (for whatever reason), the radios listed here (far from comprehensive) are as affordable as any you'll find, work well on today's crowded bands, and can handle most specialty modes (check carefully to be sure they'll meet your needs):

- **ICOM:** Models IC-701, IC-720, IC-730, IC-740, IC-745 and IC-751(A). Prices range from \$250 for the IC-701 to about \$600 for the IC-751 or IC-751(A). They're all solid state and have many built-in features.
- **Kenwood:** Models TS-120, TS-130, TS-140, TS-180 and TS-430. Prices range from \$300 to \$600. They're all solid-state.
- **August QST: Flea Market Madness! A Beginner's Guide to Buying and Selling - Page 5**
- **ARRL 1998 QST/QEX/NCJ CD** contains (C) 1999 by Thomas A. R. Ili and have many built-in features. Kenwood rigs with at least one tube: Models TS-520, TS-530 and TS-820. These are older and may require some "tweaking".
- **Ten-Tec:** Models 540, 544, Argosy, Argonaut (QRP, 5-W output), Omni series, Century 21 and 22 (Morse code only) and the Scout (compact beginner's radio; frequency limited, but a nice performer). Ten-Tec radios all are solid state, made in the United States and feature smooth, full break-in CW keying. Prices range from \$100 to \$500.
- **Yaesu:** Models FT-107, FT-301, FT-707, FT-980 and FT-747. All solid state. Tube models: the popular FT-101 series (older, may need "tweaking"), FT-102 and FT-901. Prices: \$200-\$700.
- **Older rigs:** These tube-type radios still can offer good performance—if they're working properly—although some operating flexibility is sacrificed. Look for Drake's TR-4 transceiver and the T4/R4 series transmitter-receiver combos, Heath kit's HW and SB series (will probably need "fixing") and Henry Radio's Tempo One and Tempo 2020 (both made by Yaesu and imported by Henry Radio), among others.—NT0Z

## **HAM RADIO LOCAL AREA NETS**

Any additions or corrections, contact John – N1UMJ at: [N1UMJ@arrl.net](mailto:N1UMJ@arrl.net).

All Frequencies are in MHz and 6 Meters (50.0 MHz and up.) are FM Mode unless otherwise noted.

Sunday:

- 8:30 AM WA1NPO – WARPSN Net, Whitman ARC Rptr, 147.225 +, PL 67.0
- 8:45 AM New England phone net, 3.945 +/- LSB

Daily:

- 7:00 PM NE Cracker Barrel Net, Matt – W1AEM, NCO, 3.921.00 MHz LSB Pilgrim Amateur Wireless Assoc. 10 Meter Net
- 7:00 PM 28.375.0 USB Cape & Island Traffic Net, Mon. Tue. Thur.
- 7:00 PM Plymouth N1ZIZ Rptr, 146.685 – PL 131.8
- 7:30 PM Falmouth N1YHS Rptr, 147.375 + PL 110.9 Genesis ARC CW Training Net
- 8:00 PM Eastern MA 2 Mtr Traffic Net, Boston W1BOS Rptr, 145.230 – PL 88.5



# MARANews



- 8:00 PM Norfolk County Radio Association Net, , Walpole Rptr, 146.895 – PL 123.0
- Monday:
- 6:00 AM Cape and Islands Weather Net, M-S, Dennis K1PBO Rptr, 146.955 – PL 88.5
- 8:00 PM Fairhaven Weather Net, SEMARA Rptr, 147.000 + PL 67.0
- 8:00 PM Norfolk County Emergency Preparedness Net, Walpole Rptr, 146.895 – PL 123.0
- 8:30 PM New England DMR net, DMR-MARC repeaters talk group 3181 New England Falmouth ARA Net, Falmouth K1RK Rptr, 146.655 – PL 88.5
- 9:00 PM Boston ARC Rag Chew Net, Boston W1BOS Rptr, 145.230 – PL 88.5
- Tuesday:
- 7:30 PM Plymouth N1ZIZ Rptr, 146.685 – PL 131.8
- 8:00 PM Fairhaven Weather Net, SEMARA Rptr, 147.000 + PL 67.0
- 8:00 PM Massasoit ARA Net, , Bridgewater W1MV Rptr, 147.180 + PL 67.0 (Except 3rd Tue!) Genesis ARC 2 Mtr Rag-Chew Net,
- 8:00 PM Norwood Amateur Radio Club Net, Norwood Rptr, 147.210 + PL 100.0 220 MHz Day! Try to find a 220 Repeater near you and give a call out!
- Wednesday:
- 7:00 PM Blackstone Valley ARC, 2 Mtr Simplex Net, 146.565
- 8:00 PM Cape and Islands ARES Net, Dennis K1PBO Rptr, 146.955 – PL 88.5
- 8:00 PM Fairhaven Weather Net, SEMARA Rptr, 147.000 + PL 67.0
- 8:00 PM Whitman ARC 10 Meter Rag-Chew Net, 28.333.0 USB - Except 1st Wed!
- 9:00 PM Waltham Wranglers Swap Net., Waltham W1MHL Rptr , 146.64 – PL 136.5
- Thursday:
- 7:00 PM Genesis ARC CW Training Net, Plymouth N1ZIZ Rptr, 146.685 – PL 131.8 10 Mtr
- 8:00 PM Fairhaven Weather Net, SEMARA Rptr, 147.000 + PL 67.0
- 8:00 PM General Class Rag-Chew Net, 29.470.0 FM
- 8:30 PM Sturdy Mem. Hosp. ARC ARES Practice Net, K1SMH Rptr, 147.195 + PL 127.3 900 MHz Day! Try to find a 900 Repeater near you and give a call out!
- Friday:
- 8:00 PM Fairhaven Weather Net, SEMARA Rptr, 147.000 + PL 67.0
- Saturday:
- 8:00 PM South Shore Skywarn Net, Bridgewater W1MV Rptr, 147.180 + PL 67.0

*VKEMCOMM* Echolink Conference node: 270177/IRLP 9508 (due to *WX-TALK* Echolink conference node: 7203/IRLP 9219 outage) Refer to: <http://www.voipwx.net/>





# MARA News



## Massasoit Amateur Radio Association Executive Board

President - Allen Hiltz - WA1BEE

Vice President Jeff Lehmann - N1ZZN

Secretary Wendy White - KC1GTR

Treasurer: Phil McNamara N1XTB

Call Sign Trustee: Phil McNamara N1XTB

**2M Repeater**

147.180+ (Tone 67.0)

**440 Repeater**

444.550+ (Tone 88.5)

**APRS Node**

Node 144.39 W1MV-1

**Packet BBS**

145.09 N1XTB-4

**Packet Node Brockton**

145.09 W1JOE-7 (BROCK)

**MARA Web page**

<http://www.w1mv.org/>

**Facebook**

<https://www.facebook.com/w1mvmaraf>

**Newsletter Editor**

[kc1gtr.mara@gmail.com](mailto:kc1gtr.mara@gmail.com)

**ARC Web Page**

<http://www.walnpo.org>

**Qsl via**

[www.eqsl.cc](http://www.eqsl.cc)

**Skywarn**

<http://wx1box.org> and  
[www.powersrvcs.org/w1gmf/skywarn.htm](http://www.powersrvcs.org/w1gmf/skywarn.htm)

**Mailing Address**

P.O. Box 428 Bridgewater, MA 02324

**Monthly meetings** are held the 3rd Tuesday of each month at 6:30PM at the Bridgewater Public Library in Bridgewater Center. Talk-in-is on 147.180+

Our **Meetings-On-The-Air** are held all other Tuesday evenings at 8PM on 147.180+ and includes the Westlink News Report with the latest news about happenings in the world of Amateur Radio.

The **South Shore Skywarn Net** is held every Saturday evening at 8PM local time on 147.180+ and is open to all hams.

**VE Exams** are held the 2nd Saturday of every month, in Braintree contact Steve Cohen, W1OD via email [w1od@arrl.net](mailto:w1od@arrl.net). Walk-ins are no longer permitted. We will be hosting VE exams at 8:45 at the Watson building. If you know of anyone planning to take an exam, please have them drop a note to Steve to confirm a reservation.

<http://www.hamradiolicenseexam.com/index.html>



# MARANews



In the News  
Courtesy ARRL

## FCC Formally Adopts Proposals to Remove Amateur 3-GHz Band, Invites Comments

12/17/2019

At its December 12 meeting, the FCC formally adopted a *Notice of Proposed Rulemaking* ([NPRM](#)) in WT Docket 19-348 and invited comments on its plan to remove “existing non-federal secondary radiolocation and amateur allocations” in the 3.3 – 3.55 GHz band and relocate incumbent non-federal operations. The FCC said it’s seeking comment on appropriate “transition mechanisms” to make that happen. ARRL has indicated that it will file comments in opposition to the proposal. The amateur 9-centimeter allocation is 3.3 – 3.5 GHz. The *NPRM* comes in response to the MOBILE NOW [Making Opportunities for Broadband Investment and Limiting Excessive and Needless Obstacles to Wireless] Act, approved by the 115th Congress to make available new spectrum for mobile and fixed wireless broadband use.

“By proposing to delete the existing non-federal secondary allocations from the 3.3 – 3.55 GHz band, we are taking an important initial step towards satisfying Congress’s directives and making as much as 250 megahertz of spectrum potentially available for advanced wireless services, including 5G,” the FCC said in the Introduction to its *NPRM*.

Currently, the entire 3.1 – 3.55 GHz band is allocated for both federal and non-federal radiolocation services, with non-federal users operating on a secondary basis to federal radiolocation services, which have a primary allocation, the *NPRM* explains.

The FCC said it is seeking comment on relocating non-federal licensees to another band. With respect to amateur operations, the FCC invited comments on whether sufficient amateur spectrum exists in other bands that can support the operations currently conducted at 3.3 – 3.5 GHz. The 3.40 – 3.41 GHz segment is earmarked for amateur satellite communication. “We seek comment on the extent to which the band is used for this purpose, whether existing satellites can operate on other amateur satellite bands, and on an appropriate timeframe for terminating these operations in this band,” the FCC said. If non-federal licensees are relocated to 3.1 – 3.3 GHz band, the FCC proposes that they continue to operate on a secondary basis to federal operations, consistent with current band allocations.

Some comments began to arrive before the FCC formally adopted the *NPRM*, as it points out in a footnote. Kevin Milner, KD0MA, the secretary/treasurer of the Ski Country Amateur Radio Club in Colorado, has argued that the club’s equipment cannot be re-channeled below 3.4 GHz, and the club is seeking relocation costs. Devin Ulibarri, W7ND, told the FCC that amateur networks in the current band cannot move easily into other amateur allocations because there is no readily available commercial equipment to support the bandwidth, the FCC recounted.

In the event the proposed amendments are adopted, the FCC “seeks comment on relocation options and on transition and protection mechanisms for incumbent non-federal operations.”



# MARANews



Also at its December 12 meeting, the FCC considered [another NPRM](#) in WT Docket 19-138 that would “take a fresh and comprehensive look” at the rules for the 5.9 GHz band and propose, among other things, to make the lower 45 MHz of the band available for unlicensed operations and to permit “cellular vehicle-to-everything” (C-V2X) operations in the upper 20 MHz of the band. The FCC is *not* proposing to delete or otherwise amend the amateur allocation, which would continue as a secondary allocation.

The Amateur Radio Emergency Data Network ([AREDN](#)) has [offered its voice](#) in challenging the FCC proposals on the two bands, saying their adoption would “eliminate our use of the most-effective resource hams have to build its networks.”

“The AREDN Project is able to leverage low-cost commercial devices solely because they are designed to operate on adjacent allocations,” AREDN said on its website. “Moving to other allocations would be difficult if not impossible without a complete redesign, manufacture, purchase, and installation of new custom amateur hardware and software..., raising the price out of reach for the typical ham.”

Interested parties may file short comments on WT Docket 19-348 via the FCC’s [Electronic Comment Filing Service \(Express\)](#). Visit the FCC [“How to Comment on FCC Proceedings”](#) page for information on filing extended comments.

## Emergency Management

### [If you’re an individual Emergency Communication volunteer...-](#)

You need to be trained. In order to provide support in the event of an emergency—or even in a non-emergency situation—you need to have the proper training and [licensing](#). Learn more about the ARRL [Emergency Communications Training](#) course.

You need to be equipped with sustaining skills. What if when you get to a location, there is no food and the sleeping conditions are undesirable? Before you leave on your assignment, you need to make sure you have coping skills that enable you to be able to do your job operating under the conditions you are assigned to—from hardship conditions to making sure you’re able to work the equipment.

You need to prepare your family for your absence. When you leave home and head for a disaster area, your family must be both physically and mentally able to cope. After a disaster, when a volunteer comes home, he or she can be confronted by some mental health issues, for which there are several resources. Many volunteers experience everything from fatigue or exhaustion to depression.

How can you volunteer, become a member of your local ARES, CERT, RACES or local emergency management organization? Then try the [American Red Cross](#) or Web sites like [Ready.gov](#).





# MARANews



## Future ARRL Contest Dates

### ARRL Contest Dates – Years 2020 - 2021

Contest Name	2020 (day of month)	2021 (day of month)
<b>JANUARY</b>		
Straight Key Night	1	1
Kid's Day (Jan and Jun)	4	2
RTTY Roundup	4-5	2-3
January VHF Contest	18-20	16-18
<b>FEBRUARY</b>		
School Club Roundup (Winter/Spring Term)	10-14	8-12
DX Contest – CW	15-16	20-21
<b>MARCH</b>		
DX Contest – SSB	7-8	6-7
<b>APRIL</b>		
Rookie Roundup (SSB)	19	11
<b>MAY (no ARRL events)</b>		
<b>JUNE</b>		
June VHF Contest	13-15	12-14
Kid's Day (Jan and Jun)	20	19
Field Day (always 4 th full weekend)	27-28	26-27
<b>JULY</b>		
IARU HF World Championship	11-12	10-11
<b>AUGUST</b>		
222 MHz and Up Distance Contest	1-2	7-8
10 GHz & Up – Round 1	15-16	14-15
Rookie Roundup (RTTY)	16	15

## Future Events

Courtesy ARRL Newsletter, more to come next month.

The free *ARRL Events* app, which will be featured at [Orlando HamCation](#), is now available for both Apple iOS and Android devices. A web-browser version, optimized for nearly any browser or other mobile device type, is also available to view. Orlando HamCation 2020 takes place February 7 - 9 and has been sanctioned as the 2020 ARRL Northern Florida Section Convention. Hosted annually by the Orlando Amateur Radio Club, HamCation is one of the largest annual amateur radio gatherings in the US.



# MARANews



**Marvin Hoffman, WA4NC, will take over this spring as ARRL North Carolina Section Manager.** Hoffman, of Boone, was the sole nominee to succeed incumbent Section Manager Karl Bowman, W4CHX, of Raleigh, who decided not to run for a new term after serving since 2014. Because no challengers came forward by the nomination deadline, no contested SM elections took place during the winter election cycle. These incumbent Section Managers will begin new terms in 2020: John Fritze, K2QY, Eastern New York; George Miller, W3GWM, Eastern Pennsylvania; John Mark Robertson, K5JMR, Louisiana; Joe Speroni, AH0A, Pacific; Dave Kaltenborn, N8KBC, San Diego; Chris Stallkamp, KI0D, South Dakota, and Joe Palsa, K3WRY, Virginia. New 2-year terms of office begin on April 1.

**The fourth annual [AM Rally](#) operating event will take place February 1 - 3 (UTC).** The annual AM Rally encourages all operators to explore amateur radio's original voice mode by showcasing the various types of AM equipment in use today, ranging from early vacuum-tube rigs to the newest SDR-based transceivers. "Both new and experienced ops are discovering that AM can sound quite good, enhancing the enjoyment of contacts," said Clark Burgard, N1BCG, an enthusiastic promoter of the event. "The AM Rally provides a great reason to give it a try." The AM Rally is open to all radio amateurs capable of running full-carrier, amplitude modulation (standard AM) using any type of radio equipment -- modern, vintage, tube, solid-state, software-defined, military, boat anchor, broadcast, homebrew, or commercially manufactured -- are encouraged to join in the AM fun on 160, 80, 40, 20, 15, 10, and 6 meters. [Details](#) are on the AM Rally website or [contact](#) Burgard via email. The AM Rally is sponsored by ARRL, Radio Engineering Associates, and iNetRadio.



**An international team of 10 operators will be active as [W8S](#) from Swains Island from March 10 to March 25.** The DXpedition team will be active on all HF bands on CW, SSB, FT8, and RTTY. Operation will be from two separate camps on the island -- a Red Camp and a Blue Camp -- each with two stations. The four stations will be on the air 24/7. The station equipment complements are identical. Two stations will be dedicated for 160 and 80 meters. A WiFi network will link the Red and Blue camps to network all logging laptops. Hans Griessl, DL6JGN, and Ronald Stuy, PA3EWP, are co-leaders. Swains Island (Olohega) is an atoll in the Tokelau chain. Swains is a US territory and considered part of American Samoa. Swains Island is the 34th most-wanted DXCC entity, according to [Club](#)

[Log](#).

by: Johan Sheridan

Posted: Jan 20, 2020 / 04:57 PM EST / Updated: Jan 20, 2020 / 04:57 PM EST



# MARANews



HAM radio veteran Mark Pride demonstrates the capabilities of his radio system that he uses to communicate with other enthusiasts from around the world. (John Huff/The Portsmouth Herald via AP)

## Arizona Club Takes Advantage of Low Bands to Support 100-Mile Endurance Run

10/24/2019

The Coconino Amateur Radio Club ([CARC](#)) provided safety and coordination communications for the 100-mile Stagecoach Line Run over the September 21 – 22 weekend. This endurance run from Flagstaff to the Grand Canyon takes place every September. The 31-hour event pushes runners to the limit. The Stagecoach Line Run also tests Amateur Radio's capabilities and requires planning and commitment. Because of the geographical coverage required, the club's Amateur Radio support even took advantage of 160 meters, not a band typically associated with public service communication.

"Because we are in a solar minimum, a combination of bands and communication methods were required in order to track and maintain contact with the numerous stations," said Dan Shearer, N7YIQ, the club's Public Information Officer. "What worked well at 3 o'clock in the afternoon was not going to work at 2 in the morning." The club's communication infrastructure required a combination of HF and VHF/UHF equipment that included setting up portable repeaters and stations powered by generators and other power sources.

"When you add in the cold weather of the high desert in September and the possibility of rain and snow, this becomes a test of what Amateur Radio may be called upon to do to support a disaster somewhere in the nation,"





# MARANews



Shearer said.

CARC members invested more than 300 hours of their time in planning and supporting the race, helped by a few additional volunteers from Glendale and Prescott. Nineteen club members staffed eight sites, where volunteers set up camps and kept vigil through the night to track and make sure runners were accounted for throughout the race.

In addition to tracking runners into and out of each aid station, net control entered these times into an online spreadsheet as they progressed through the race, allowing runners to be located easily in case they did not make it to the next checkpoint.

During the event, CARC members helped locate two missing runners and helped save the life of another who developed severe asthma. Medical care and treatment during these types of extreme events poses a significant challenge, as EMS responses are delayed. "Much of the area between Flagstaff and the Grand Canyon is US Forest Service land, and travel through these areas by vehicles is slow," Shearer explained. Severe emergencies can only be handled by aircraft, if conditions permit."

During the race, 75 meters worked well during the day, but 160 meters was put into play after dark. Cross-band repeaters were placed at remote sites to allow access to existing repeaters. Although VHF and UHF were used, these links at times became unusable, and alternate forms and bands were required to maintain contact.

The Coconino Amateur Radio Club is an ARRL-affiliated club with about 50 members. It has a large ARES component that trains regularly and conducts SKYWARN and ARES® nets weekly.