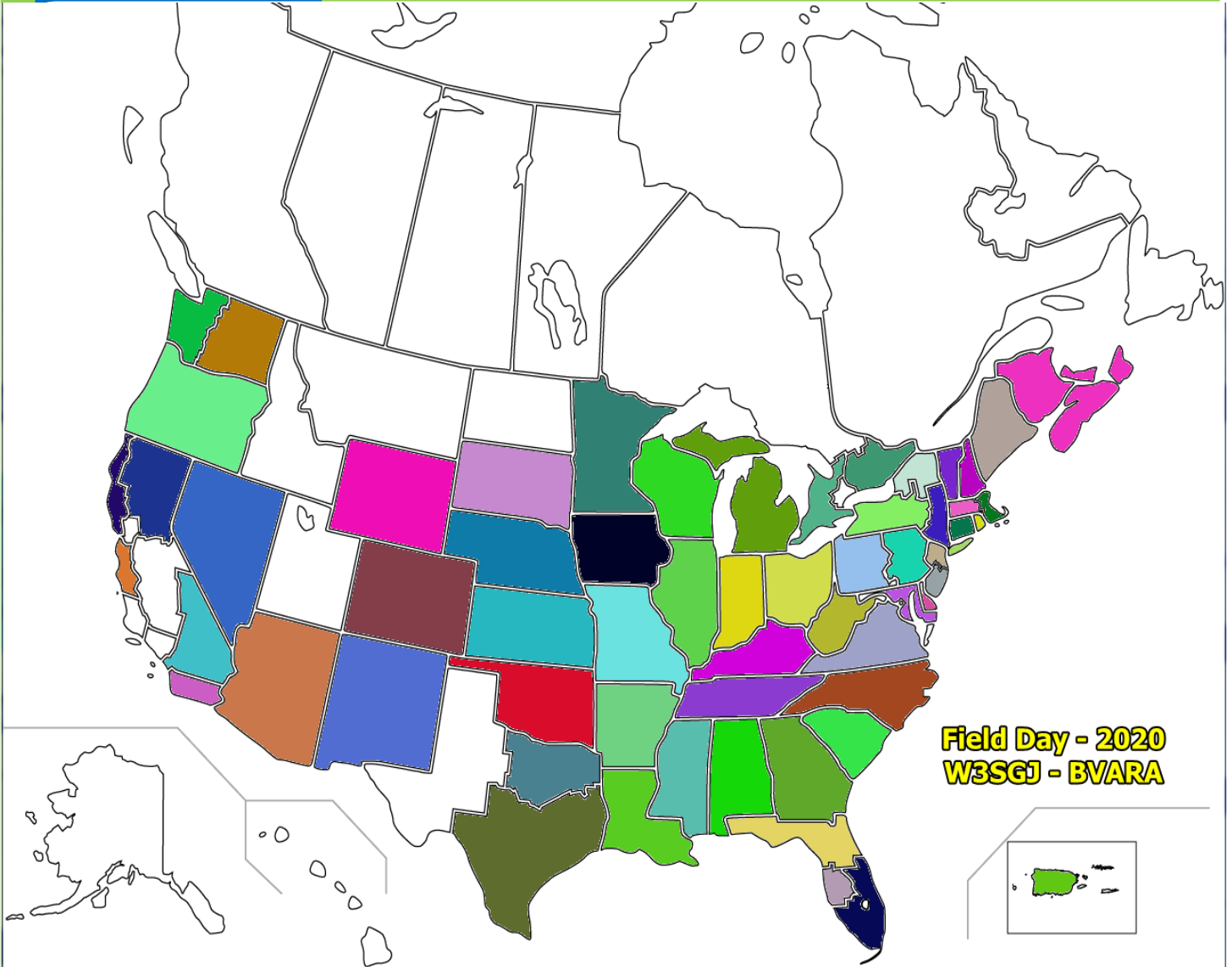


THE eQRM

JULY 2020



The BVARA in Beaver County Pennsylvania

Beaver Valley Amateur Radio Association

W3SGJ

Repeater 145.310

PL 131.8

On the cover: The colored-in sections of this map show the 45 states, 60 US sections and 3 Canadian sections the BVARA contacted during Field Day this year. There are more details on page 6 of this eQRM issue.

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Check into our nets

Wednesday 2 Meter

8:30PM on 145.310 MHz PL 131.8

Wednesday 10 Meter

9:00PM on 28.470 MHz

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Who We Are

2020 BVARA OFFICERS

President: Jack Spencer, KZ3Z

Vice President: Dan Grazulis, KB3VSP

2nd Vice Pres.: Doug Hanna, N4YKQ

Treasurer: Pam Spencer, W3PMS

Secretary: Norm Trunick, K3NJT

Director: Tony Pavilonis, W6PEF

Director: Bob Winkle, N3AZZ

Trustee: Rich Soltesz, K3SOM



MONTHLY MEETINGS

E-Board meetings are now held the Saturday before the monthly club meeting.

VE testing begins at 5:00 PM.

Regular meetings are at 6:30 PM

All meetings are held at the Beaver County Emergency Services Center
351 14th Street
Ambridge, PA 15003
on the second Thursday of every month (unless otherwise stated).

Club Meetings 2020

Jul 09 Yes, back to the 911

Aug Club Picnic TBA

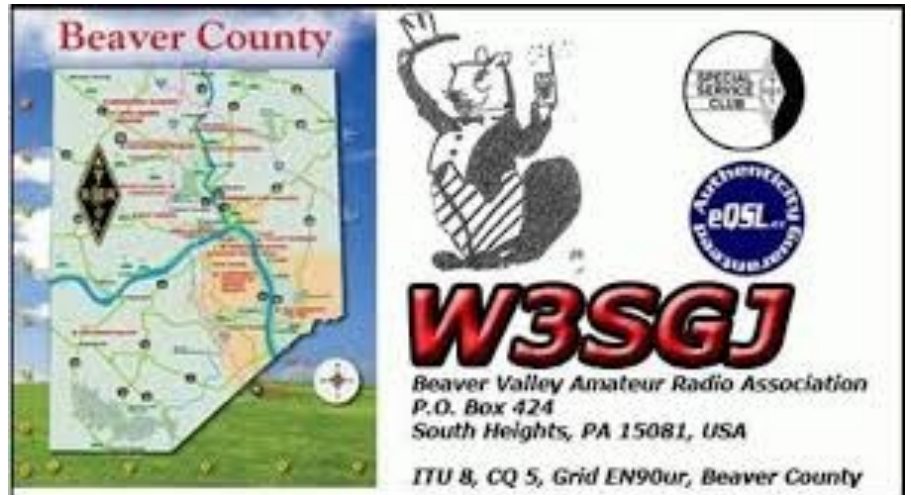
Sep 10

Oct 08

Nov 12

Dec Club Christmas Party

See Page 13 for more information!!!



This Month

July Special Session:

Speakers: BVARA Club Members and You
Topic: Roundtable Help with Questions from You

What's It All About:

New to ham radio? Are you wondering about new digital modes with your equipment? Maybe you have questions about antennas, setting up your station, how to make an HF contact, or how to interface your computer to your ham equipment. Perhaps your questions are even more basic like rules and regulations, which bands are best to use, where to find operating resources like band plans, what to do after you make contacts and how do you save or conveniently create a useful log. Maybe you have problems with annoying noise or need help in selecting some equipment. The list goes on and on . . .

Since our initial roundtable discussion in November 2019, some changes have been planned in our roundtable format that will enable you to more easily seek the answers to questions you have about ham radio and operating a station. On July 9th, 2020 after our monthly club meeting, our second roundtable discussion with your participation is planned. You don't have to be a member of the BVARA; you may just have a question or two that's been bothering you about our ham radio hobby. In fact, you could be new to the hobby or a seasoned veteran with questions. Whether it's technical or about rules/regulations or operating or equipment, we want to help you. We'll start our roundtable around 7:15 PM at the Beaver County Emergency Services Center at 351 14th Street, Ambridge, PA 15003.

Please join us with your questions!

Rich Soltesz - K3SOM
Extra Class Ham,
BVARA Trustee,
BVARA VE Liaison



More this Month

Weekly

The Freedom Square Diner in Monaca has a great wait staff. Come let them take your order.

Thursday Morning Breakfast
(or you can have lunch)



The BVARA meets every Thursday at the Freedom Square Diner in Center Township, just to the right of the Cinemark Center Township Marketplace at 09:30 AM. All radio amateurs and those interested in amateur radio are

encouraged to come join us at our Thursday morning breakfast.

** 10:00 AM virtual Brunch on our 145.31 MHz Repeater*



The eQRM urges all Beaver County licensed amateurs to participate in the County's RACES and ARES programs.

Any Beaver County Amateur that is interested in participating in the RACES/ARES programs can do so by checking into the Beaver County Public Service Net which meets every Monday evening at 8:30 PM local time on the WW3AAA 146.850 MHz repeater (131.8 PL)

See you Thursday at

RACES / ARES

The eQRM Urges All County Hams to Participate.



Field Day July 2020



Field Day 2020 - Summary of Results

Once again, the ARRL Field Day for the BVARA almost didn't happen. This year however, the culprit wasn't human error, the culprit was a corona virus identified as Covid-19. First detected in Wuhan, China in December 2019, as of July 5th, 79 people had died in Beaver County from the virus. In mid-March, the governor shut down all non-essential businesses and home confinement for nearly all residents. Not until June 12th was Beaver County moved to the 'Green' Phase of confinement. What about our County parks and our Field Day site? Barely a week before Field Day we were finally informed that we could set up at Shelter 1 at the Economy County Park. The ARRL at the last possible moment temporarily modified rules for 'D' Class stations to be included with their club results. Confusion, fear, caution, and other emotions were not helped by some politicians and medical 'experts' who seemed to have other motivations at play. The media fueled these emotions with their excessive coverage.

The weather on Friday through Monday was, in a word, hot. Temperatures were into the low 90s during the day and down to upper 60s at night with mid to high humidity. Later Saturday afternoon, over an inch of rain drenched us for about 40 minutes.

Early problems with a network connection at one station, a no-working auto tuner at another, and a wire that came out of a power pole connector at the third station caused some frustrations that we had to overcome. Flexibility was the best word to describe our activities. Our third station was added with a small portable vertical antenna with a base loading coil. Results were disappointing, so an end-fed wire antenna with a 9:1 matching network gave commendable results on 15 meters. Our 'kite' antenna from last year was upgraded with a substantial DX Engineering telescoping fiberglass pole. When combined with an SGC antenna coupler, it's performance on 20 meters enabled many sections to be added to our log, including EWA. Jack's 40-meter vertical didn't disappoint us until the static crashes began drowning

Field Day July 2020

out the stations late into the night. With an all-ICOM lineup of transceivers and Russian LBS band-pass filters from DX Engineering, inter-station interference was never detected. The N3FJP software and the high-power wireless hotspot and server with UPS backup worked flawlessly.

Few visitors stopped by due to the corona virus. The ARRL-WPA Affiliated Club Coordinator, John Lewis, AI3I stopped by to see how we were doing on Saturday during this challenging field operation. Sheriff Tony Guy visited us on Sunday to witness our activities first hand, offering words of support to us. With just four different operators logging in as needed, others helped with either logging activities, encouragement, or with food and beverages to sustain activities. Thanks to all who attended and helped to make Field Day work for the BVARA.

As is always the case, we learned some new lessons, we described what we were doing and why we do this every year to our few visitors, and had a great time as a result, despite the weather.

Rich – K3SOM

BVARA - W3SGJ 3A WPA Summary Comparison of Field Day Results

Performance to Compare	Possible*	2018	2019	2020
Number of States (+PR,+VI)	52	36	45	45
US Sections	71	53	64	60
Canadian Sections	12/13	3	9	3
Total ARRL Sections	83/84	56	73	63
Total Contacts	-----	280	320	267
Amateur Bands Used	-----	6	4	4
Operating Time (Hrs:Mins)	24:00	14:24	14:35	13:00
QSOs/Hour	-----	19.4	21.9	20.5

*In 2020 a new Canadian Section was added

Get your License or Upgrade

If you are interested in getting your first FCC license or upgrading your current amateur radio license, the Beaver Valley Amateur Radio Association holds VE Test sessions (Volunteer Examinations) the second Thursday of each month at the Nine One One center in Ambridge Pennsylvania prior to our BVARA Club meeting. If there is no meeting there is no test session. Please come take your test with us!

For more information, contact :
Rich Soltesz, K3SOM
(724) 847-0610
k3som@arrl.net



VE TEST SESSIONS

Beaver County Emergency Services Center 351 14th Street Ambridge, PA 15003.
Tests begin promptly at 5 pm on the same day as BVARA Club Meetings
(the second Thursday of the month).

All classes of amateur radio license tests are administered.



*** regular location at the 911 Center ***

ALL candidates MUST bring ALL of the following:

1. 2 forms of I.D. - one MUST be a photo I.D.
2. A pencil AND a pen with blue or black ink.
3. The original AND a photocopy of any valid ham license.
4. The original AND a photocopy of any C.S.C.E.
5. The test fee of \$15 - cash, check, or money order.

New License and Upgrades

BVARA VE Testing



Testing this month :

You're invited, come test with us!

* Testing for July 2020

We have received word from the Beaver County Emergency Services Center (911 Center) that we can use their facility for our July VE testing as well as our BVARA monthly meeting. I suggest that members should **wear a mask** similar to the ones people wear to go to the grocery store or other businesses. As always, if you are running a fever or feel ill, please spare others from possible infection by not attending.

Our June VE Test Session went very well :

Our June VE Test Session had 14 candidates of which 12 achieved their goals of either obtaining a new ham license or upgrading their existing license. Because of the restrictions caused by the corona virus, our testing was conducted at an elementary school parking lot. Each candidate wore a face mask and did not leave their vehicle. Vehicles were specially parked with an empty vehicle space on either side.



New License and Upgrades

BVARA VE Testing

June VE Test Session Results :

Congratulations to all 12 candidates including :

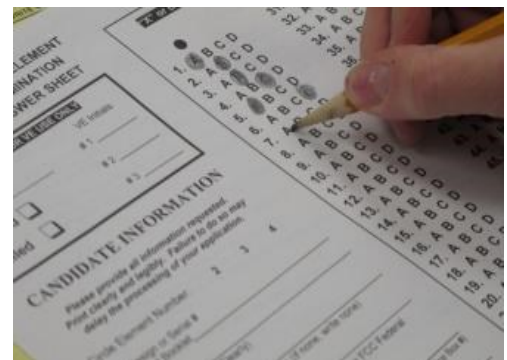
Andy Snyder – KC3PMQ, Glenshaw, PA, Technician
Dave Anderson – KC3PMR, Sewickley, PA, Technician
Ted Freed – KC3PMS, Beaver Falls, PA, Technician
John Platt – KC3PMT, Pittsburgh, PA, Technician
Dan Rodgick – KC3PMU, Imperial, PA, Technician
Doug Kimble – KC3OHE, Hookstown, PA, General
Mike McClean – N3TYK, New Brighton, PA, General
Joe Pekala – KC3OXG, McKees Rocks, PA, General
Ken Taylor – W2SAT, Stroudsburg, PA, General
Dan Wilkes – KA3QIF, Coraopolis, PA, General
Lou Costanzo – KE8KVE, Dallas, WV, Extra
Mocun Ye – KE8LXD, Cleveland, OH, Extra

All of this testing would not have been possible without the help of these Extra-Class VE Team members.

Bob Winkle - N3AZZ,
Bart Stack - KB3NFM, and
Tony Pavilonis - K3AHP

Special thanks go out to Dan Grazulis - KB3VSP and Jim Allen - KC3IXE for their first-class help.

73 from Rich Soltesz - K3SOM, VE Liaison



Membership Information

By becoming a BVARA member you help secure the future of Amateur Radio in Beaver County. Additionally, the BVARA receives a portion of each ARRL membership you purchase!

Join the BVARA and ARRL

Sign up for:	Price	
<input type="checkbox"/> BVARA full membership	20.00	_____
<input type="checkbox"/> BVARA student membership	15.00	_____
<input type="checkbox"/> BVARA associate membership	10.00	_____
<input type="checkbox"/> BVARA Child under 21 at home membership	5.00	_____
<input type="checkbox"/> One year ARRL membership	49.00	_____
A Club Donation		_____
ARRL Member? Yes No	Total Enclosed	_____

Your License Class (If you have one.)

<input type="checkbox"/> Technician	Name _____
<input type="checkbox"/> General	Address _____
<input type="checkbox"/> Advanced	_____
<input type="checkbox"/> Extra Class	Email _____
	Phone _____
	Your Call sign _____
	Your Signature _____

Make check or money order payable to:

The Beaver Valley Amateur Radio Association, P.O. Box 424

South Heights, Pa 15081

Hamfests & General Announcements

Cancelled till further notice



Somerset County Amateur Radio Club
P O Box 1241
Somerset, PA 15501-1241

[Home](#) [Hamfest](#) [Membership](#) [Services](#) [Calendar](#) [Photos](#) [Swap Page](#) [Meet Our Members](#) [Links](#) [About Us](#)

Hamfest

2020 Hamfest July 19, 2020 CANCELLED

Upon the recommendation of the Hamfest Chairman the hamfest this year was cancelled by the membership. The risk of infection and the unknowns of group size and other restrictions were the primary concerns.



2020 Flyer

[Click HERE for a PDF copy](#)

FIRST THREE PRIZES FROM KJI ELECTRONICS
FIRST PRIZE Icom IC-7300 HF/50Mhz Transceiver
SECOND PRIZE Yaesu FTM - 7250DR 50W C4FM/FM Dual Band Mobile
THIRD PRIZE MFJ - 4230MV Power Supply

2019 Hamfest July 21, 2019

FIRST FOUR PRIZES FROM KJI ELECTRONICS
FIRST PRIZE Yaesu FT-891 HF/50Mhz All Mode Mobile Won by Thomas W3TLN
SECOND PRIZE Yaesu FTM - 7250DR 50W C4FM/FM Dual Band Mobile Won by Jim NJ3T
THIRD PRIZE MFJ - 4230MV Power Supply Won by Curt KC3HJP
FOURTH PRIZE FT - 4XR Dual Band M HT Won by Pete WA3TGG

Bits and Pieces

Hello all,

We are certainly living in some extraordinary times. The June **Beaver Valley Amateur Radio Association** testing session is one example. The VE test session was held in an elementary school parking lot. Things went very well. Of the fourteen guests that tested, twelve passed! Great job everyone! A special thank you to all who followed the CoVid 19 demanded rules while testing and those that supported the VE test session. This example of outstanding cooperation is what sets Hams apart from most others. Sincerely the BVARA thanks you all.



We have received word from the Beaver County Emergency Services Center that the BVARA **can hold** a regular Club meeting in the 911Center as well as our VE test session for the month of July 2020. Masks will be required as well as social distancing. As always, if you are running a fever or feel ill, please spare others from possible infection by not attending.

Field Day 2020 will be one for the record book of the BVARA. Hot weather, rain, powerful storms, masks, social distancing and technical difficulties are some benchmarks not seen in past field days. All in all things were okay. The wonderful people, good food, great Ham comradery and determination kept things going and proved to be great fun in the end.

This issue of the BVARA eQRM contains a lot of information. You may want to look it over more than once to ensure you know what has been written. What isn't contained is the monthly ARRL Contest Corral and Propagation reports, they were not available at the time of publishing. Maybe they will be available for next month's issue.

I encourage you to participate in some meaningful radio related way for you. Please continue to be prudent but not panicked about this virus. Good luck to all, enjoy our hobby and be safe.

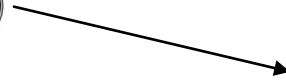
Be courteous on the air, be safe and have fun with your hobby.

Till next month, 73 KC3BXC.

It's Your Dime

Remember back when you could communicate by "Pay Phone" for ten cents? This page is for anyone who wants to communicate with the BVARA community and beyond. Please send me your article that you would like posted on this page. Please, only topics and language in good taste. As the editor I reserve the option to post it or ignore it. Send your dime to me at:

kc3bxc.73@gmail.com



They start 'em young in Ham Radio at the Hanna House...

Here is a photo of N4YKQ Doug Hanna's three year old grand daughter at the mic. When was the last time you invited a prospective ham to your shack? This is how we build a future for Amateur Radio. Invite someone young or grown up to your shack soon.

73 KC3BXC monitoring.....

Of Interest to All

By H. Ward Silver

Ham radio invokes a wide range of visions. Maybe you have a mental image of a ham radio operator (or *ham*) from a movie or newspaper article. But hams are a varied lot — from go-getter emergency communicators to casual chatters to workshop tinkerers. Everyone has a place, and you do, too.

Hams use all sorts of radios and antennas on a wide variety of frequencies to communicate with other hams across town and around the world. They use ham radio for personal enjoyment, for keeping in touch with friends and family, for emergency communications, and for experimenting with radios and radio equipment. They communicate using microphones, telegraph or Morse keys, computers, cameras, lasers, and even their own satellites.

Hams meet on the air and in person. Ham radio clubs and organizations are devoted to every conceivable purpose. They have special ham radio flea markets and host conventions, large and small. Hams as young as six years old and centenarians have been hams since before ham radio licenses. Some have a technical background, but most do not. One thing all these diverse individuals do have, however, is an interest in radio that can express itself in many different ways.

Hams enjoy three different aspects of ham radio — the technology, operating, and social points of view. Your interest in the hobby may be technical; you may want to use ham radio for a specific purpose; or you may just want to join the fun. All are perfectly valid reasons for getting a ham radio license.

Using electronics and technology

Ham radio is full of electronics and technology. To start with, transmitting and receiving radio signals is a very electronics-intensive endeavor. After you open the hood on ham radio, you're exposed to everything from basic direct-current electronics to cutting-edge radio-frequency techniques. Everything from analog electronics to the very latest in digital signal processing and computing is available in ham radio. You can be into the hobby for more than 30 years and still never meet anyone who is an expert on it all.

You may choose to design and build your own equipment or assemble a station from factory-built components, just like an audiophile might do. All that you need for either path is widely available in stores and on the Web. Hams delight in a do-it-yourself ethic known as *homebrewing* and help each other out to build and maintain their stations.

Hams also develop their own software and use the Internet along with radios to create novel hybrid systems. Hams developed packet radio by adapting data transmission protocols used over computer networks to amateur radio links. Packet radio is now widely used in many commercial applications. By combining GPS radiolocation technology with the Web and amateur mobile radios, the Automatic Position Reporting System (APRS) was developed and is now widely used.

Voice and Morse code communications are still the most popular technologies by which hams talk to each other, but computer-based digital operation is gaining fast. The most common home station con-

Of Interest to All

figuration today is a hybrid of the computer and radio. Some of the newer radios are exploring software-defined radio (SDR) technology that allows reconfiguration of the circuitry that processes radio signals under software control.

Along with the equipment and computers, hams are students of antennas and *propagation*, which is the means by which radio signals bounce around from place to place. Hams take an interest in solar cycles, sunspots, and how they affect the Earth's ionosphere. For hams, weather takes on a whole new importance, generating static or fronts along which radio signals can sometimes travel long distances. Antennas, with which signals are launched to take advantage of all this propagation, provide a fertile universe for the station builder and experimenter.

Antenna experimentation is a hotbed of activity for hams. New designs are created every day and hams have contributed many advances and refinements to the antenna designer's art. Antenna systems range from small patches of printed circuit board material to multiple towers festooned with large rotating arrays. All you need is some wire, a feedline, and a soldering iron.

Hams also use radio technology in support of hobbies such as radio control (R/C), model rocketry, and meteorology. Hams have special frequencies for R/C operation in the 6-meter band, away from the crowded unlicensed R/C frequencies. Miniature ham radio video transmitters are frequently flown in model aircraft, rockets, and balloons, beaming back pictures from heights of hundreds and thousands of feet. Ham radio data links are also used in support of astronomy, aviation, auto racing and rallies, and many other pastimes.

Whatever part of electronic and computing technology you most enjoy, it's all used in ham radio somewhere . . . and sometimes all at once!

Operating a ham radio: Making contacts

If you were to tune a radio across the ham bands, what would you hear hams doing? Contacts run the range from simple conversation to on-the-air meetings to contesting (recording the highest number of contacts).

Ragchews

By far the most common type of activity for hams is just engaging in conversation, which is called *chewing the rag*; such contacts are called *ragchews*. Ragchews take place between continents or across town. You don't have to know another ham to have a great ragchew — ham radio is a very friendly hobby with little class snobbery or distinctions. Just make contact and start talking!

Nets

Nets (an abbreviation for networks) are organized on-the-air meetings scheduled for hams with a similar interest or purpose. Some of the nets you can find are

*col2mark*tabmark* **Traffic nets:** These are part of the North American system that moves text messages or *traffic* via ham radio. Operators meet to exchange or *relay* messages, sometimes handling dozens in a day. Messages range from the mundane to emergency health-and-welfare.

Of Interest to All

- **Emergency service nets:** Most of the time, these nets just meet for training and practice. When disasters or other emergencies strike, hams organize around these nets and provide crucial communications into and out of the stricken areas until normal links are restored.
- **Technical Service:** These nets are like radio call-in programs in which stations call with specific questions or problems. The net control station may help, but more frequently, one of the listening stations contributes the answer. Many are designed specifically to assist new hams.
- **ALE Mailboxes and Bulletin Boards:** If you could listen to Internet systems make contact and exchange data, this is what they'd sound like. Instead of transmitting 1s and 0s as voltages on wires, hams use tones. *ALE* stands for *Automatic Link Establishment* and means that a computer system is monitoring a frequency all the time so that others can connect to it and send or retrieve messages. Sailors and other travelers use ham radio where the Internet isn't available.

Swap Nets: In between the in-person hamfests and flea markets, in many areas a weekly swap net allows hams to list items for sale or things they need. A net control station moderates the process and business is generally conducted over the phone once the parties have been put in contact with each other.

DX-ing, contests, and awards

DX stands for *distance* and the lure of making contacts ever-farther from home has always been a part of ham radio. Hams compete to contact faraway stations and to log contacts with every country. They enjoy contacting islands and making personal friends in a foreign country. When conditions are right and the band is full of foreign accents, succumbing to the lure of DX is easy!

Ham radio's version of rugby, contests are events in which the point is to make as many contacts as possible, sometimes thousands, during the contest time period, by sending and receiving short messages. These exchanges are related to the purpose of the contest — to contact a specific area, use a certain band, find a special station, or just contact everybody.

Along with contests, thousands of special-event stations and awards are available for various operating accomplishments, such as contacting different countries or states. For example, in December 2003, the station W4B was set up at Kitty Hawk, North Carolina, and operated during the centennial of the Wright Brother's first flight.



Propagation information

VOACAP Online

VOACAP Online is an excellent, easy-to-use tool for hams to use that can provide helpful HF propagation predictions between any two points on the globe. By entering some basic information about your location and the target location, your output power and type of antenna as well as similar information for the target location, VOACAP predicts an hourly forecast of propagation probabilities from 10 to 80 meters in a color-coded circular format that is easy to interpret.

Let's start our 'tutorial' by looking at the 2015 7QAA DXpedition to Ngala Lodge on the shore of Lake Malawi that is currently planned to go into operation between March 11th and April 1st. Malawi is located in southeast Africa and is surrounded on three sides by Mozambique. Lake Malawi is quite long but the location has been determined with sufficient accuracy from information supplied by the DXpedition.

VOACAP Online is found at <http://www.voacap.com/prediction.html> and is very easy to use. A Google map is used to illustrate the two locations and the great circle path between them. In the first picture, the map shows the great-circle path with a distance of a little over 8,100 miles and a beam heading of 86 degrees. These points can be easily set by pull-down values in the second picture. For the Transmitter Site (red marker), Pittsburgh has been selected from the QTH pull-down. A three-element Yagi at 33 feet has been selected as the antenna, the transceiver power level of 100 watts is chosen, and SSB has also been selected from the pull-down choices.

That's it for the Transmitter Site. At the Receiver Site (blue marker) the choices are even simpler. 7Q Malawi could have been chosen from the pull-down choices, but instead, the blue marker on the map was physically moved by dragging and dropping the marker at the exact location given on the DXpedition web site page. Now the only other choice is the antenna that will be used by the DXpedition. Many times this is just a guess so the choice of a tri-band beam at 33 feet is selected for them.

VOACAP works with the latest solar data as well as historical averaged information. From the propagation params section, the only parameter that was changed was the minimum takeoff angle. This value was changed from 0.1 to 3 degrees to perhaps be more realistic of the hilly terrain around Beaver County. That's all the entry information that is needed!

As we look at the third picture, concentric color rings show the probability of a successful contact for each ham band and by the time of day (UTC). For Daylight Savings Time, four hours must be subtracted from UTC time to obtain the local time. As you move the cursor over the "wheel of colors" you can easily see in the center the prediction percentage for the band and time of day underneath the cursor.

One strategy is to go for the times of day and bands that are colored red. Then try the orange, yellow, green, and then blue. If no propagation is possible, join a local ground wave net! In only five minutes, you can create a fairly accurate propagation forecast for that favorite DX target of yours. By selecting 'Swap TX-RX' you can look at the reverse path. In a similar fashion, you can look at the propagation via long path and determine if that path is feasible for your antennas. Enjoy this free tool!